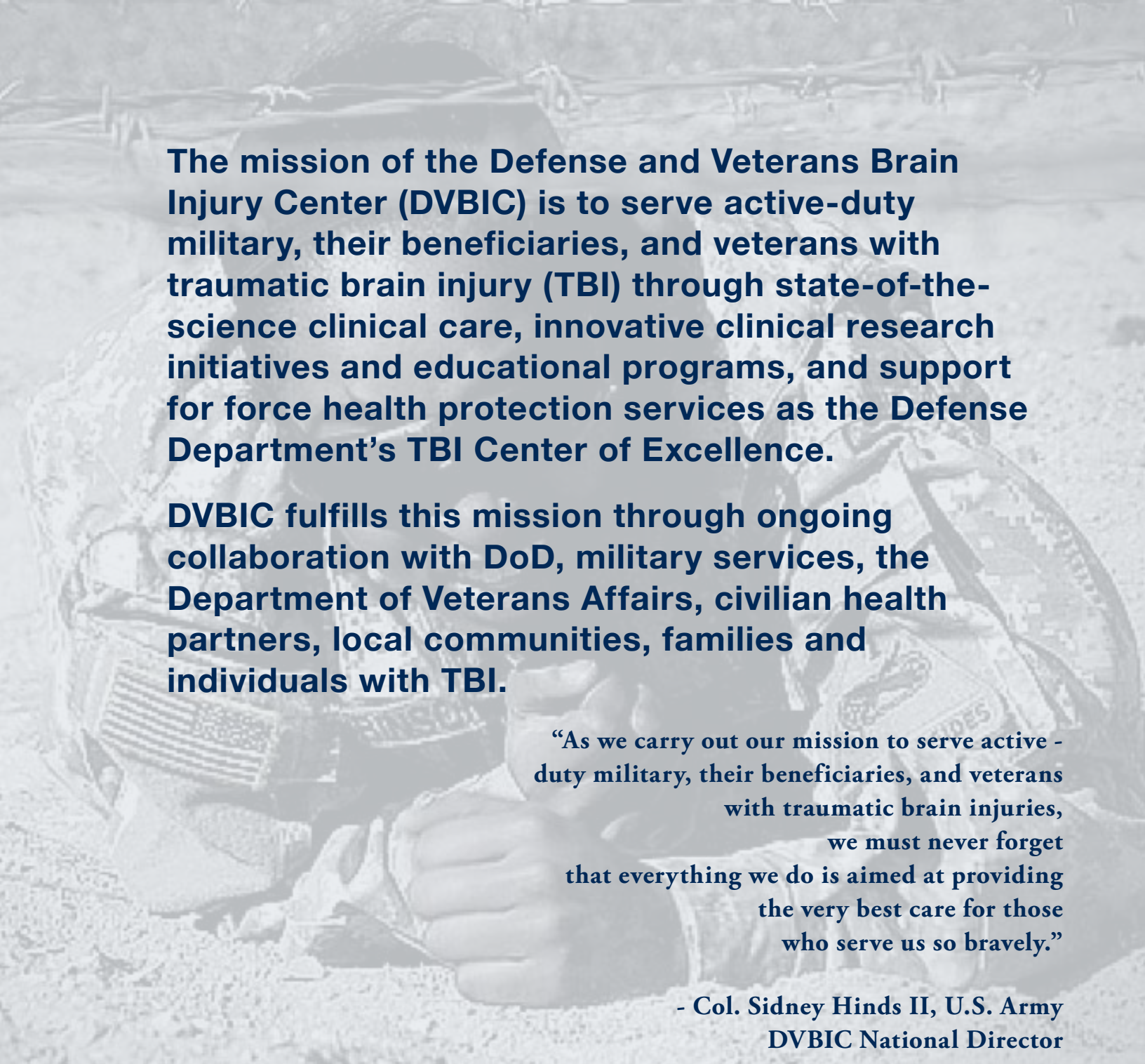


Defense and Veterans Brain Injury Center Annual Report 2015





The mission of the Defense and Veterans Brain Injury Center (DVBIC) is to serve active-duty military, their beneficiaries, and veterans with traumatic brain injury (TBI) through state-of-the-science clinical care, innovative clinical research initiatives and educational programs, and support for force health protection services as the Defense Department’s TBI Center of Excellence.

DVBIC fulfills this mission through ongoing collaboration with DoD, military services, the Department of Veterans Affairs, civilian health partners, local communities, families and individuals with TBI.

“As we carry out our mission to serve active - duty military, their beneficiaries, and veterans with traumatic brain injuries, we must never forget that everything we do is aimed at providing the very best care for those who serve us so bravely.”

**- Col. Sidney Hinds II, U.S. Army
DVBIC National Director**

Table of Contents

4 The Year in Review



6 Letter from the Director

- 8 Leadership
 - 9 DVBIC in the News
 - 10 2015 Awards
-

10 Divisions



12 Introduction

- 18 Clinical Affairs
 - 24 Research
 - 30 Education
 - 40 Chief of Staff
-

44 Network



46 Network Site Reports

- 61 International Outreach
-

62 Resources

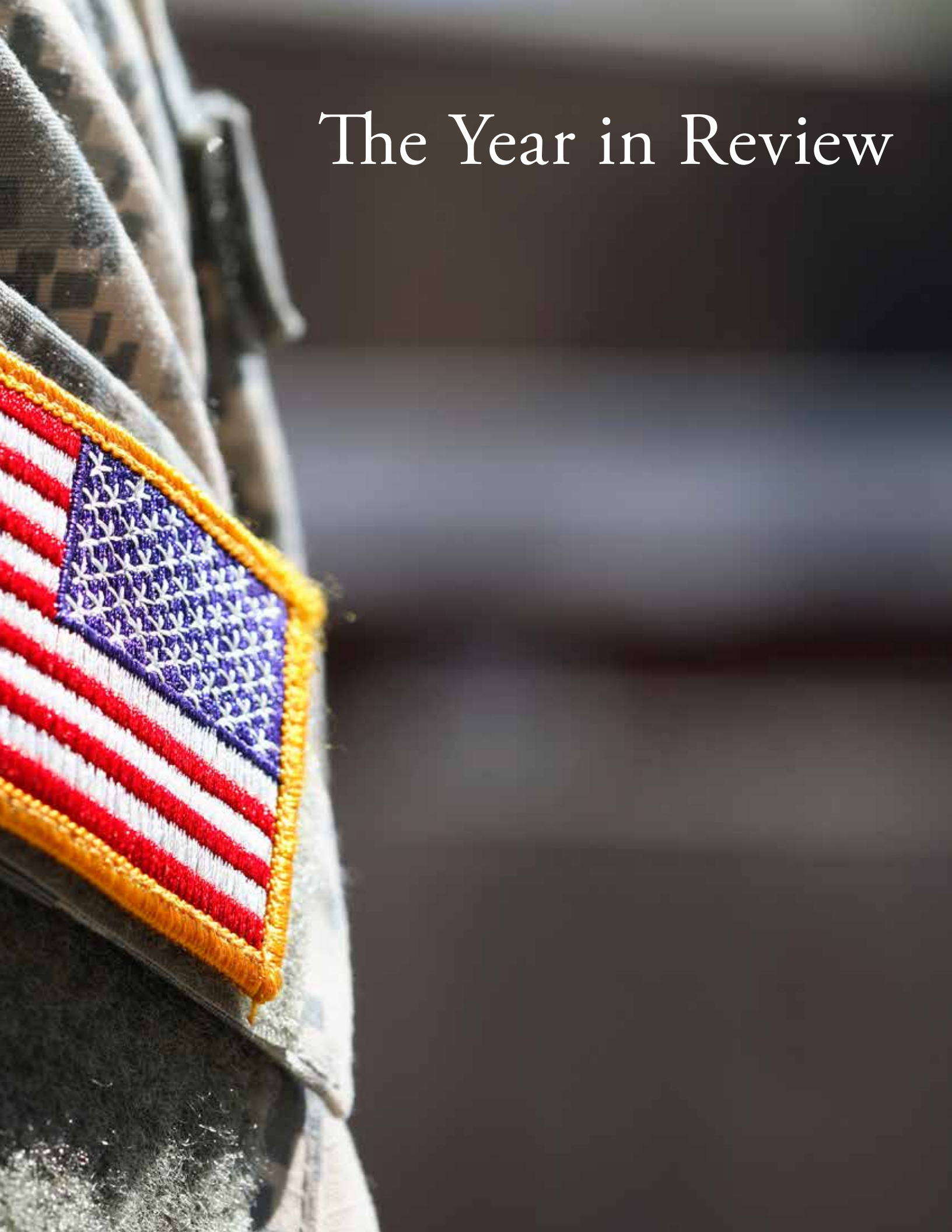


64 Resources

- 64 A Head for the Future
- 66 Practitioner and Patient Resources
- 67 Publications and Presentations
- 71 Acknowledging Collaborators



The Year in Review



Letter from the National Director

Dear Colleagues:

This has been another productive year in advancing our knowledge about traumatic brain injury (TBI), exporting state-of-the-science clinical practice recommendations, sharing important research and increasing awareness of TBI.

The Defense and Veterans Brain Injury Center (DVBIC) continued to strive for collaboration among all TBI stakeholders. This year marks the formalized agreement among the military services to unify clinical care, research and education under the TBI Pathway of Care (TPWoC). The Defense Department named DVBIC manager of the TPWoC, and DVBIC works with the services, Veterans Affairs (VA), and non-military, non-governmental collaborators to strengthen an outcomes-based care system and improve standardization throughout the Military Health System and veteran populations.

For those of you who have worked with TBI subject matter experts within the U.S. military, you may already know of the informal TBI Quad-Service Work Group, which has spearheaded development of up-to-date clinical recommendations over the past eight years. The TBI Advisory Committee (TAC) is the recognized and chartered natural progression of this work group and is governed by the Tri-Service Specialty Care Advisory Board of the Defense Health Agency Medical Operations Group. Composed of voting members and advisory members, the TAC adds value by decreasing variation and optimizing care through continuous performance improvement. The TAC expedites review and execution of TBI policies and programs to better the lives of our beneficiaries.

In the future, we look forward to a simplified process and tool for making research protocols visible and research data available to better

identify gaps and redundancies. In 2016, the entire TBI community will be watching as the VA and Defense Department field TBI clinical practice guidelines developed in 2015. We especially look forward to this new use of an evidence-based tool that features the clinical recommendation products DVBIC has championed with our many collaborators.

My final thoughts for 2015 are those of gratefulness and appreciation.

I am grateful for the partnerships that we have made and fostered this year with the VA, Health and Human Services, the National Intrepid Center of Excellence, and the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE). I am also grateful for our partnerships with external organizations, including the National Collegiate Athletic Association, National Football League, NFL Players Association, research joint program committees, Walter Reed Army Institute of Research, and the many other organizations and individuals with whom we've had the fortune to work. I deeply appreciate their commitment and willingness to support a unified effort for TBI.

I would like to thank all of those DVBIC and DCoE staff members — at the headquarters in Silver Spring, our 11 military treatment facilities and four VA medical centers — for all of their hard work to improve the lives of service members, veterans and family members in need of care and compassion because of TBI.

Finally, I appreciate the preparation for and enthusiastic support of a smooth transition in early 2016 from the U.S. Army Medical Research and Materiel Command to the Defense Health Agency.

With my humblest thanks and deepest respect,

Col. Sidney Hinds II, U.S. Army
National Director, DVBIC



Col. Sidney Hinds with Kevin Beachum, offensive tackle with the Pittsburgh Steelers. Col. Hinds visited several NFL practice facilities during 2015. DVBIC has partnered with the NFL and the NFL Players Association in seeking new approaches to the identification and treatment of TBI.

DVBIC photo by Carlson H. Gray

Leadership

National Director

Army Colonel Sidney R. Hinds, MD, MC, became DVBIC's national director on July 1, 2013. Previously, he was the deputy director of the Armed Forces Radiobiology Research Institute for Military Medical Operations, the in-theater neurologist in Afghanistan, and chief of Nuclear Medicine Services at Walter Reed National Military Medical Center. He was the nuclear medicine integration chief for the Base Realignment and Closure process that combined the former Walter Reed Army Medical Center and National Naval Medical Center.

As national director, Col. Hinds oversees all aspects of the organization's mission, which is to serve active duty military and veterans with traumatic brain injury through state-of-the-art medical care and care coordination, and innovative clinical research and educational programs.

Colonel Hinds, who is board certified in neurology and nuclear medicine, leads DVBIC with integrated multidisciplinary approaches to care.

While deployed to Afghanistan from February to July 2012, he oversaw standardization of care at 11 concussion care centers as the theater neurology consultant. Performing site visits allowed him to ensure that staff had appropriate training, education, and resources. He reviewed cases, shared best practices, and worked with theater providers to identify and close gaps in patient care.

From August 1990 to March 1991, Colonel Hinds was the executive officer, treatment platoon leader, and ambulance platoon leader of C Company, 224th Forward Support Battalion, 24th ID, in Saudi Arabia and Iraq. He completed the US Army Medical Department patient administration course and served at the Army Defense Medical Information System from 1991 to 1992.

Colonel Hinds has held multiple appointments and academic posts, including nuclear medicine consultant for the North Atlantic Regional Medical Command. He graduated from the United States Military Academy in 1988 and served as a Medical Service Corps Officer from 1988 until 1992. He received his MD from the University of Connecticut Health Center and was commissioned as an Army Captain in 1996.

Colonel Hinds completed his neurology internship and residency at the former Walter Reed Army Medical Center and the National Naval Medical Center from 1996 to 2000. He was the staff neurologist and then chief of neurology at Landstuhl Regional Medical Center from 2000 to 2004. He completed the Walter Reed Nuclear Medicine Fellowship Program in 2006 and has been a staff nuclear medicine physician in the national capital region since that time.

Colonel Hinds is the fifth national director of DVBIC, which is celebrating 21 years of service this year. A Department of Defense-funded collaboration with the Department of Veterans Affairs, DVBIC supports 16 care and treatment sites nationwide; conducts clinical research; educates service members, medical personnel and caregivers; and consolidates and reports all DoD TBI-related incidence and prevalence data.



Col. Sidney R. Hinds,
MD, MC

Deputy National Director

Katherine Helmick, DVBIC deputy director since 2012, brings considerable leadership, clinical, educational and research experience in the field of neuroscience to include more than 100 regional, national and international presentations and more than 15 peer-reviewed publications.

As deputy director, Ms. Helmick leads a senior level team of highly specialized and skilled professionals to guide and influence clinical care, clinical research and education missions of the DoD's TBI Center of Excellence.

Ms. Helmick holds bachelor's and master's degrees in nursing from Virginia Commonwealth University, as well as a Bachelor of Science in family and child development from Virginia Tech University. She has earned certifications as Adult Nurse Practitioner (ANP) through the American Nurses Credentialing Center and Neuroscience Registered Nurse (CNRN) through the American Board of Neuroscience Nursing.



**Katherine (“Kathy”) M. Helmick,
M.S., CRNP, ANP-BC, CNRN**

DVBIC in the News

The following examples highlight the media's coverage of DVBIC throughout 2015:

- Dr. Donald Marion, DVBIC senior clinical consultant, discusses cognitive assessments that play an important role in DoD concussion care. (<http://www.health.mil/News/Articles/2015/09/25/Cognitive-assessments-playing-an-important-role-in-DoD-concussion-care>) — Health.mil (September 25, 2015)
- Col. Hinds recognizes the quality of presenters at the DCoE Summit in September. (<http://www.health.mil/News/Articles/2015/09/11/Defense-Centers-of-Excellence-summit-seeks-to-improve-the-lives-of-service-members-veterans-families>) — Health.mil article (September 11, 2015)
- Lt. Cmdr. Cathleen Davies offers tips on avoiding head injuries. (http://issuu.com/leesburgtoday/docs/be_271b48be45830c) — Belvoir Eagle, by Amanda Stewart (July 9, 2015, p. A9)
- Richmond DVBIC regional education coordinator (REC), Randy Gross was the subject of an interview in March published on the DCoE blog to coincide with Brain Injury Awareness Month. (http://www.dcoe.mil/blog/15-03-09/Former_Army_Medic_Supports_Service_Members_with_TBI_Q_A.aspx)
- The JBER DVBIC REC, Patty Raymond Turner, was interviewed March 16, 2015, about TBI on the University of Alaska Anchorage (UAA) “Infomania” radio show. UAA has a high proportion of student veterans.
- Fort Carson DVBIC REC, Robin Wininger, was interviewed by radio host Coba Hoban during Brain Injury Awareness Month.
- Staff Sgt. Joseph Christian Hill, NCOIC, Behavioral Health Care Services, Aberdeen Proving Ground, discusses the relevance of TBI awareness and DVBIC's role in tracking numbers of service members who sustained a TBI. (<http://armymedicine.mil/Documents/Mar15-Mercury.pdf>) -- Army Medicine Mercury, vol. 42, No. 6. (March 2015)
- The DVBIC Deputy Director was interviewed, as a member of the virtual panel of experts and commentators on TBI issues, during the launch of Concussion TV (www.concussiontv.com), “an online clearinghouse for live and on-demand Concussion and Traumatic Brain Injury-related video programming.” (<http://concussiontv.com/Events/EICNetworkConcussionTVPortalLaunch.aspx>) – Concussion TV portal launch (Dec. 11, 2015)
- Vets may have brain scarring from war injuries, says WRNMMC radiologist specializing in the brain, according to a U.S. News & World Report article. DVBIC is named as a resource for more information on TBI. (<http://health.usnews.com/health-news/articles/2015-12-15/scans-show-many-injured-us-vets-may-have-brain-scarring>) — HealthDay, by Randy Dotinga (Dec. 15, 2015)

2015 Awards

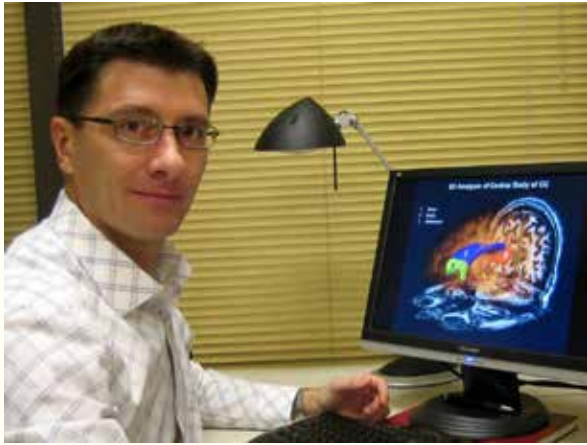


DVBIC Deputy Director Katherine Helmick holds the 2014 Arthur S. Flemming Award in June 2015, given annually to outstanding federal employees. In the photo, from left to right, are Dr. Kathryn Newcomer, director, Trachtenberg School of Public Policy and Public Administration and professor of Public Policy and Public Administration at The George Washington University; Ben Vinson III, dean, Columbian College of Arts and Sciences; and Robert G. McSwain, keynote speaker and acting director of Indian Health Services. (Photo courtesy of George Washington University Marketing and Creative Service)

Deputy Director Named 66th Annual Recipient of Arthur S. Flemming Award

In June 2015, the George Washington University recognized Katherine Helmick, DVBIC's deputy director, in the category of Social Science, Clinical Trials and Translational Research for her successful leadership in 2014 overseeing DVBIC's divisions. Ms. Helmick led the development of a unique clinical recommendation, "Progressive Return to Activity Following Acute Concussion/Mild Traumatic Brain Injury," founded on civilian and military lessons learned and clinical experience, that provided steps to return concussed patients back to duty with a supervised, logical and medically sound approach. According to George Washington University, the clinical recommendation "has been praised by the TBI community as having a monumental impact on patient recovery."

The Arthur S. Flemming Awards are coordinated by the Trachtenberg School of Public Policy and Public Administration at the George Washington University.



Dr. Rael Lange. (Photo courtesy of Dr. Rael Lange)



Dr. Rael Lange, left, shares the Nelson Butters Award with collaborator Dr. Grant Iverson (Photo courtesy of National Academy of Neuropsychology)

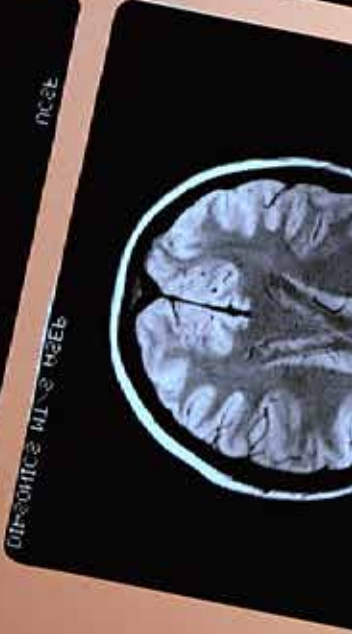
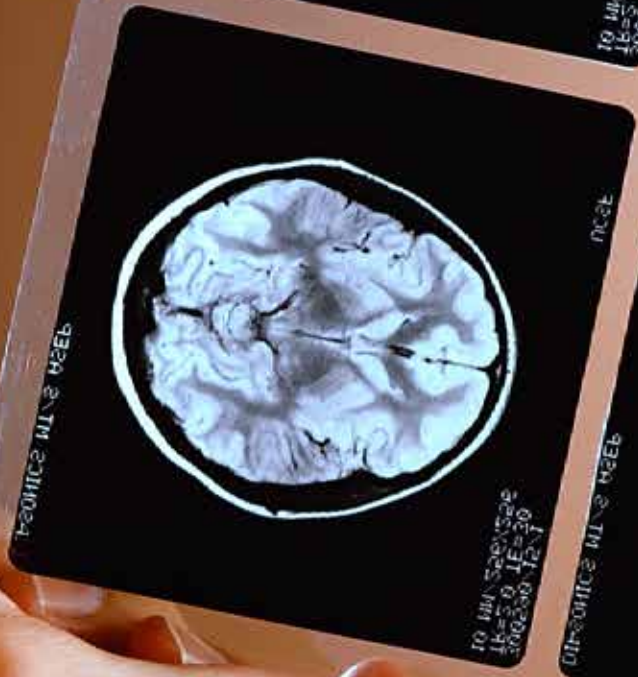
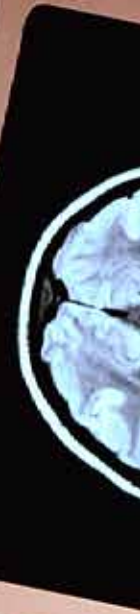
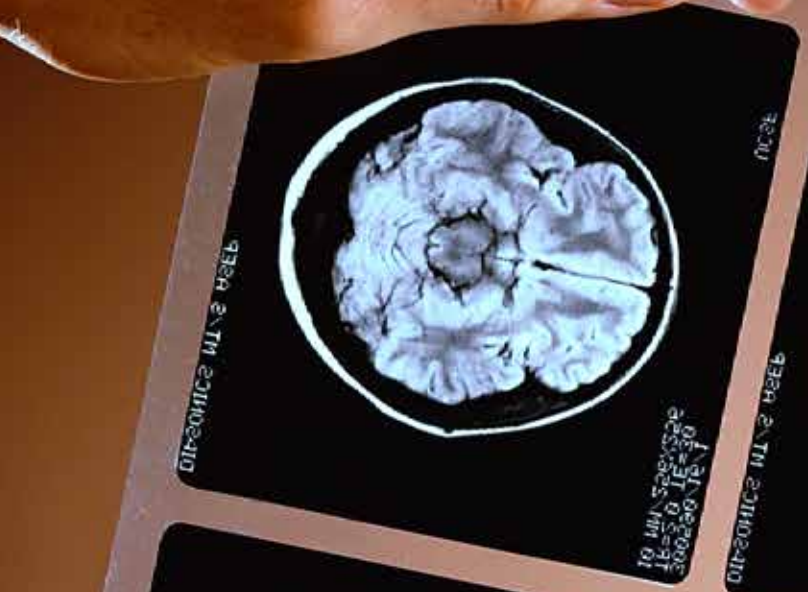
DVBIC Scientists Recognized for Professional Contributions in Research

The National Academy of Neuropsychology (NAN) awarded the Nelson Butters Award for Research Contributions to Clinical Neuropsychology to Dr. Rael Lange, senior scientific director for DVBIC's 15-year congressionally mandated TBI study at Walter Reed National Military Medical Center (WRNMMC), Dr. Grant Iverson, senior author and DVBIC consultant, and other collaborators.

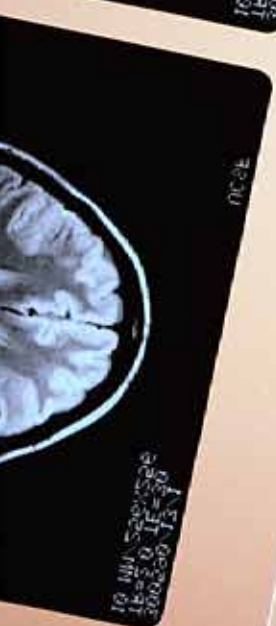
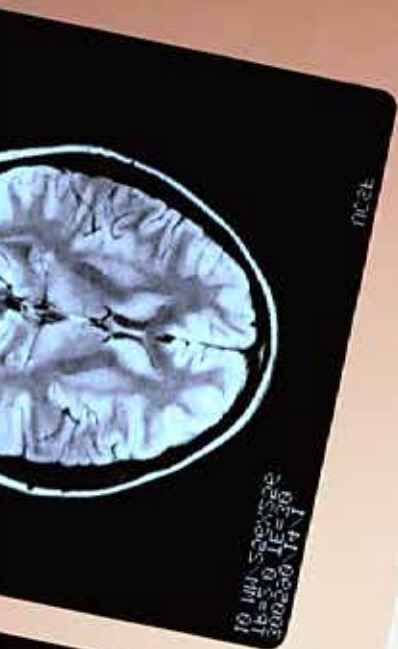
Presented at the NAN conference in November 2015, the award recognized the most influential scholarly paper published in *Archives of Clinical Neuropsychology* in 2014. The paper highlights Dr. Lange's civilian mild TBI data from his Vancouver lab at Vancouver General Hospital and the University of British Columbia.

“Typically we talk about TBI in four buckets, if you will,” stated Katherine Helmick, DVBIC deputy director referring to DVBIC's policy during a panel discussion during the launch of Concussion TV. “Mild traumatic brain injury, known as concussion, moderate traumatic brain injury, severe traumatic brain injury and penetrating brain injury.” Ms. Helmick outlined defense policy as it relates to concussion and TBI for service members, the research that is ongoing and what families should look for when a service member returns after a TBI injury, stressing that every concussion is not the same. “If you've seen one concussion, you've seen one concussion,” Ms. Helmick commented.

—Money News (Canada), (Dec. 17, 2015)



Divisions



Introduction

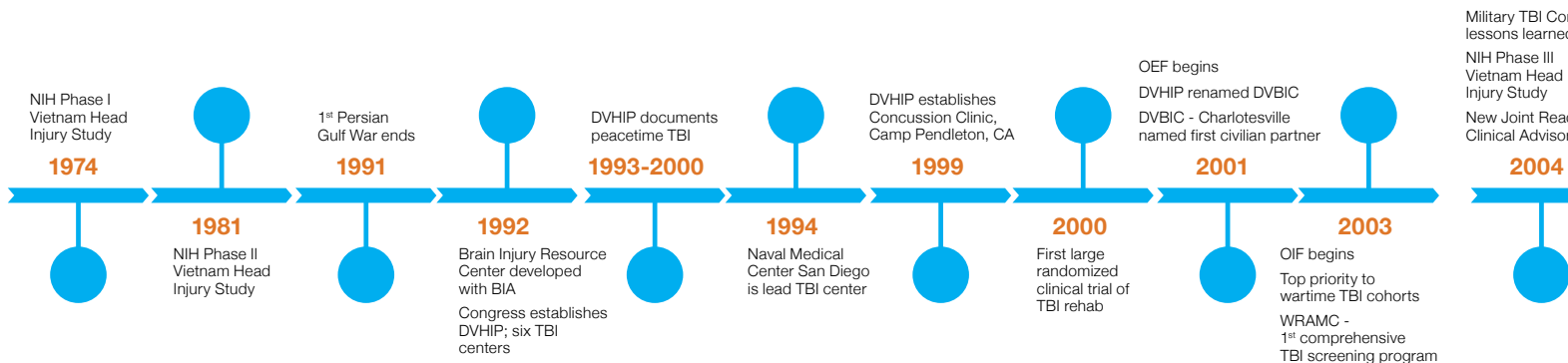
23 Years of Service

DVBIC was congressionally mandated in 1991 and opened its doors in 1992, largely in response to the first Persian Gulf War, under the name Defense and Veterans Head Injury Program. At that time, its goal was to integrate specialized TBI care, research and education across military and veteran medical care systems.

Twenty-three years later, DVBIC is part of the U.S. Military Health System (MHS) and the TBI operational component of DCoE.



Run@Work Day, September 18—DVBIC personnel prepare to run or walk at lunchtime during the General Dynamics Health Solutions sponsored Run@Work Day. Education network coordinator, Dr. Brooke Heintz, first row, left, arranged the event, geared to encouraging 30 minutes of physical activity during the work day. (Photo courtesy of Daryl Boddie)

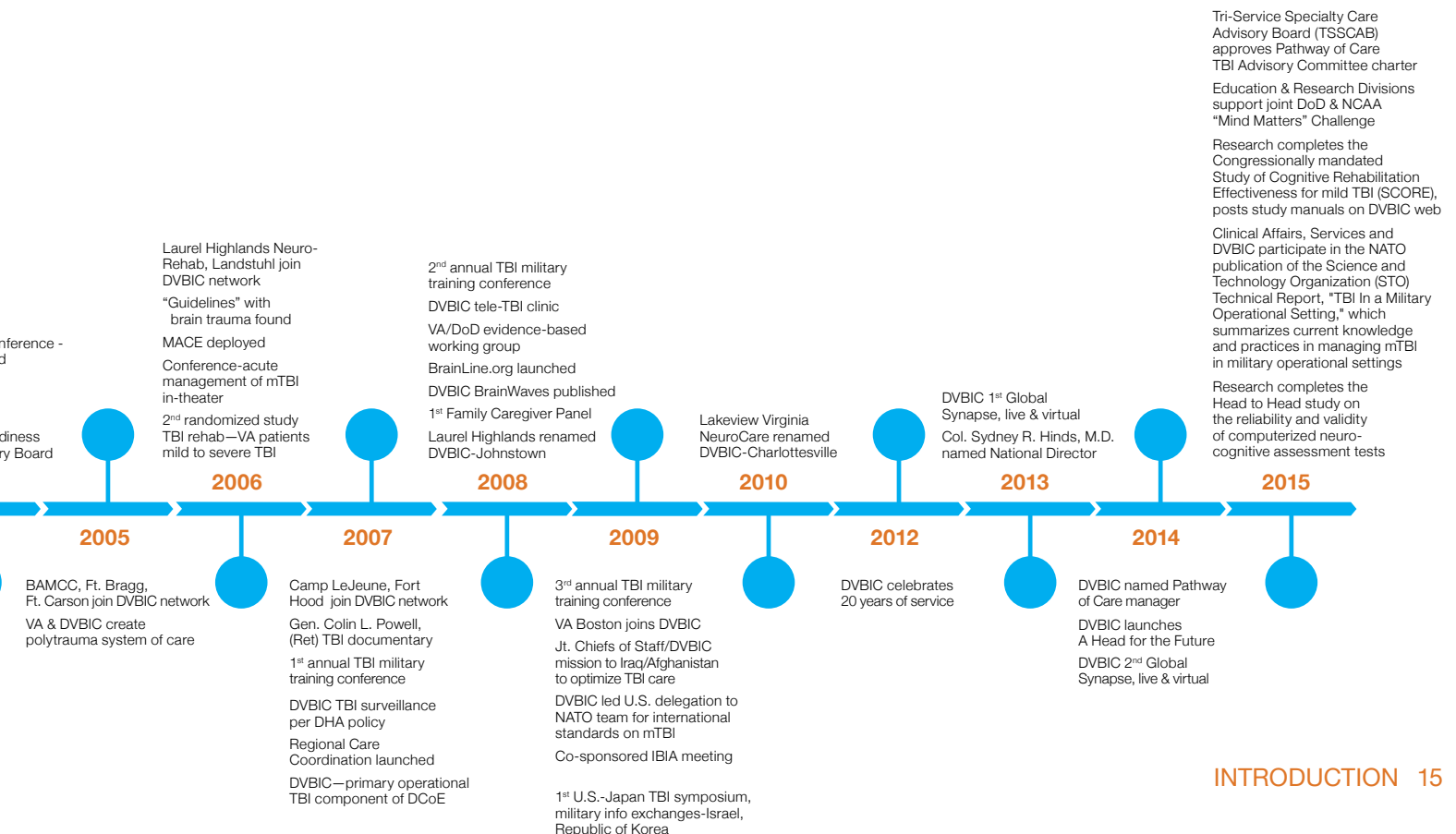


DVBIC, as the Defense Department's TBI Center of Excellence, helps service members, their beneficiaries, and veterans with TBI through state-of-the-science clinical care, innovative clinical research initiatives and educational programs, and support for force health protection services. DVBIC assists in screening and briefing troops heading into theater, performs provider training at military treatment facilities, gathers data mandated by Congress and DoD, and oversees research programs.

The Deployment Health Clinical Center (DHCC) and the National Center for Telehealth and Technology (T2), the other two components of Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE), work with DVBIC toward the common goal of helping service members and veterans. For example, DVBIC's Education Division coordinates the annual DCoE Psychological Health and TBI Summit with DHCC. DVBIC's Clinical Affairs Division is working with T2 to develop a digital platform for clinical recommendations. DVBIC's Office of the Chief of Staff Human Research Protections Program (HRPP) has regulatory oversight for all of DCoE's research efforts

Headquartered in Silver Spring, Maryland, DVBIC has a network of 15 sites, operating out of 11 military treatment facilities (MTFs) and four VA polytrauma centers. The DVBIC network includes a research infrastructure to support the execution of military-relevant TBI research projects including congressionally mandated studies; in 2015, there were 60 active research studies. The DVBIC network uses a regional approach to education by providing each MTF and VA facility in the system of care with state-of-the-science educational products and outreach efforts through the work of regional education coordinators (RECs). Recovery support specialists (RSSs) help service members, veterans and their families find and use the right services for their needs.

Research, education and clinical support activities vary at each site. From the moment of injury to return to duty or reintegration into the community, DVBIC directs care providers in the treatment of service members and veterans with mild, moderate or severe TBI. DVBIC evaluates best practices and the state of the science and provides clinical recommendations to the MHS.



DVBIC Named Manager of the TBI Pathway of Care:

The Defense Department further solidified DVBIC's TBI leadership role by naming it the office of responsibility for the TBI Pathway of Care (TPWoC). In 2014, Dr. Jonathan Woodson, assistant secretary of defense for health affairs, assigned DVBIC to manage the MHS TPWoC for clinical, research, education and training activities. On June 24, 2015, the Tri-Service Specialty Care Advisory Board (TSSCAB) unanimously approved the TBI Advisory Committee (TAC) charter. On June 25, 2015, Army Col. Stephen C. Phillips, TSSCAB Chair, signed the TAC charter.

In its new role, DVBIC is accountable for the main objectives of the TPWoC:

- **Maximize warfighter and beneficiary outcomes**
- **Advance high clinical standards**
- **Implement continuous performance improvement**

2015 research highlights reflect DVBIC's longstanding leadership upholding TPWoC objectives:

- **The 15-year Longitudinal Study.** At its network site at Walter Reed National Military Medical Center, DVBIC designed and executed congressionally mandated research on the effects of TBI in Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) service members and their families.
- **Head-to-Head Study.** The independent study at DVBIC Fort Bragg evaluated the reliability and validity of computerized neurocognitive assessment tools. In December, Jacques P. Arrieux, M.A., DVBIC Senior Clinical Research Associate, and Wesley R. Cole, Ph.D., DVBIC senior clinical research director, Fort Bragg, presented the DVBIC webinar, "Head to Head" Study: A Psychometric Comparison of Brief Computerized Neuropsychological Assessment Batteries.
- **SCORE.** The Research Division and DVBIC San Antonio MMC completed the "Study of Cognitive Rehabilitation Effectiveness" (SCORE) for mild TBI symptoms lasting more than three months, released preliminary results at a VA symposium in May 2015, and posted the study manuals on the DVBIC website in September.

In its new role as manager of the TBI Pathway of Care, DVBIC continues to lead the TBI community in the following areas:

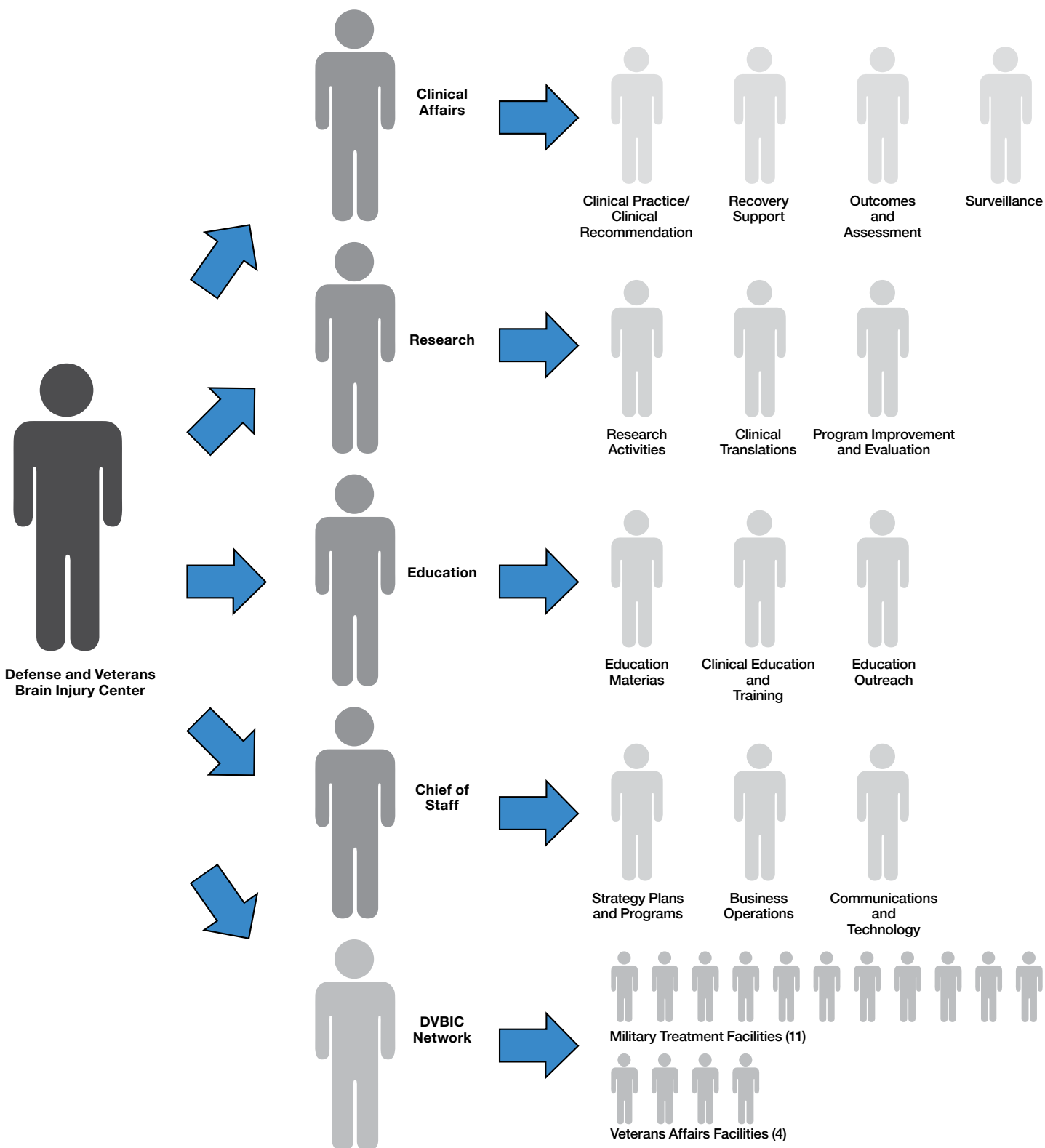
- TBI-specific evaluation, treatment standards and follow-up care for military personnel, their dependents and veterans with TBI
- Clinical research that defines optimal care and treatment for individuals with TBI
- Educational materials and training for the prevention and treatment of TBI and management of its long-term effects
- Subject matter expertise on a variety of Defense Department and congressional initiatives
- TBI worldwide surveillance of service members in the U.S. and at deployment locations
- Chair of monthly Neurocognitive Assessment Implementation Working Group meeting

IMPORTANT EMAIL CHANGES

Effective April 1, 2015:

The new email address to obtain information on accessing the TBI.consult service is med.consult.army@mail.mil.

The new email address for retrieving ANAM assessment reports, such as pre-deployment baseline assessments, is: usarmy.jbsa.medcom.mbx.otsg--anam-baselines@mail.mil.



Clinical Affairs



Soldiers, from the 509th Parachute Infantry Regiment are shown during a 19-hour flight from Alaska to Australia trying to get some sleep on the floor and seats of a Royal Australian Air Force C-17 Globemaster, July 8, 2015, during Exercise Talisman Sabre 15. Soldiers, who are deployed, average just three hours of sleep a night, said Lt. Col. Kate E. Van Arman, medical director, Traumatic Brain Injury Clinic on Fort Drum, N.Y. (U.S. Army photo)



Katherine Stout, DPT
Director, Division of Clinical Affairs

Dr. Stout is director of the Clinical Affairs division at the Defense and Veterans Brain Injury Center. She received her doctorate in physical therapy from Northeastern University and her master's degree in business administration with a concentration in healthcare administration from the University of Scranton. She is a board-certified neurological specialist by the American Board of Physical Therapy Specialties. For the last 10 years, she has worked in TBI and military medicine in a variety of roles to include direct clinical care, research portfolio management and program management within Telehealth. In addition to her work with the military, Dr. Stout is adjunct faculty at the University of Maryland School of Medicine and is currently serving a four-year term as a board member for the Maryland Board of Physical Therapy Examiners. She has authored several publications and a book chapter.

Gary McKinney
Chief, Clinical Practice/Clinical Research

Gary McKinney is the chief of Clinical Practice and Clinical Recommendations in the Clinical Affairs division at DVBIC. Mr. McKinney holds bachelor's and master's degrees in sports and health science with a concentration in sports performance and management. He has over two decades of experience in healthcare and fitness while in the U.S. Army as a healthcare specialist, emergency trauma technician, senior enlisted leader, educator and strategic operations leader. In addition to his military career, he has worked in the private sector as certified brain injury specialist, national director of veteran and military development, director of marketing, clinical evaluator and regional veterans liaison. His clinical interests include sports concussion prevention and rehabilitation treatment. He is an active member of the American College of Sports Medicine and Brain Injury Association of Maryland.



Capt. Cynthia A. Spells,
Chief, TBI Recovery Support Program

Capt. Spells earned her bachelor's degree from the University of Pennsylvania, clinical master's of social work from Atlanta University and license in clinical social work from the state of New York. Capt. Spells is board certified in clinical social work, and holds certifications in integrated behavioral health management and PH treatment of military, veterans and family members/ caregivers. Capt. Spells has been a U.S. Public Health Services officer for 13 years and earlier served four years as an Air Force officer. Before coming to DVBIC, she served as chief of the Community Behavioral Health Clinic at Fort Stewart Army Base in Hinesville, Georgia.





Elisabeth Moy-Martin
Acting Chief, Outcomes and Assessments

Elisabeth Moy Martin, R.N.-B.C., M.A., the acting chief of Outcomes and Assessments in the Clinical Affairs division, is a registered nurse with certification in adult behavioral health nursing. She is honored to have worked with DVBIC since 1994, when it was known as DVHIP, and has authored or co-authored several manuscripts and presented at conferences on TBI in the U.S. military. She has been and is currently an associate principle investigator on several DVBIC studies.

Lt. Cmdr. Ranjodh S. Gill
Chief, TBI Surveillance

Lt. Cmdr. Ranjodh S. Gill is DVBIC's Clinical Affairs chief of TBI surveillance. He holds a bachelor's degree in nursing from San Francisco State University and a master's of public health from University of Alaska Anchorage, with concentration on occupational health, infectious diseases and epidemiology. He is also part of U.S. Public Health Service (USPHS) Rapid Deployment Force and was deployed in 2015 to support the USPHS Ebola Response Mission in Monrovia, Liberia. Lt. Cmdr. Gill's interests include global health, health promotion, and prevention. He is also an active member of the U.S. military athletic community and a competitive cyclist.



Mission Essential Components

- Clinical Guidelines and Clinical Recommendations
- TBI Surveillance
- Recovery Support Program
- TBI Health Outcomes and Assessments

DVBIC's Clinical Affairs Division provides clinical guidance and tools built on state-of-the-science TBI knowledge to clinical care providers and clinical support to service members, veterans and their families. In achieving its mission, the division works in partnership with the Service TBI program directors, the National Intrepid Center of Excellence (NICoE), the VA, and other federal agencies, civilian partnerships, academic institutions and private industry. Four offices support this division:

- **Clinical Practices/Clinical Recommendations** develops, reviews and revises clinical recommendations (CRs) and provides TBI subject matter experts for internal and external stakeholders.
- **The TBI Recovery Support Program** provides unique, long-term follow-up to rehabilitation and reintegration of service members and veterans who sustained a TBI and ongoing services to caregivers and families.
- **Outcomes and Assessment** captures and evaluates TBI patient outcomes within the MHS and internal analysis of DVBIC products and programs related to the care of service members with TBI.
- **TBI Surveillance** works with DoD to provide quarterly TBI-relevant numbers regarding severity of injury, location of injury, type of care (purchased vs. direct/inpatient vs. outpatient).

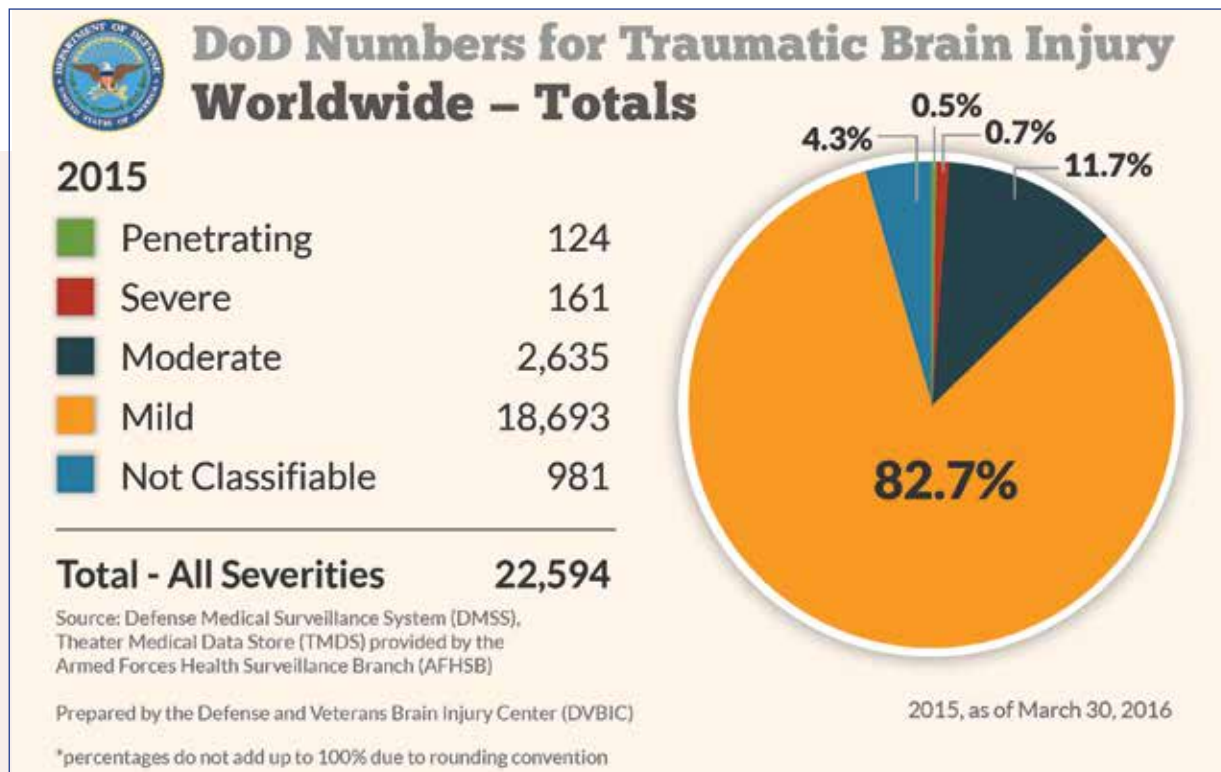
Read articles about TBI and the military at: dvbic.dcoe.mil/about/tbi-military.

ICD-10 Coding in Effect Now!

As of Oct. 1, 2015, all Health Insurance Portability and Accountability Act (HIPAA) covered entities are federally mandated to implement ICD-10 code use for TBI diagnoses. Quick reference sheets for guidance related to ICD-10 TBI codes coming soon. For more information, visit health.mil.

Four experts presented a DCoE webinar, moderated by DVBIC, to discuss how a major update of the classification codes for illnesses and conditions applies to care for traumatic brain injury (TBI) in the Military Health System. Training slides are available at <https://dvbic.dcoe.mil/material/icd-10-coding-guidance-traumatic-brain-injury-training-slides>.

TBI Surveillance



A case of TBI is defined based on the DoD Standard Surveillance Case Definition for TBI, which is available online at the Armed Forces Health Surveillance Branch (<https://www.afhsc.mil/Home/CaseDefinitions>). The first inpatient or outpatient TBI medical encounter is identified using billing codes from insurance claims defined in the International Classification of Diseases, previously ICD-9-CM and currently ICD-10-CM guidelines. Military treatment facilities also code medical encounters using both ICD-10-CM and other DoD specific codes. Case counts for the current year and immediate past calendar year are updated quarterly. For all other years, case counts are updated annually.

Individuals with multiple TBI health care encounters are counted only once for the purpose of this reporting. An individual is considered a “TBI surveillance case” only once per lifetime. The Armed Forces Health Surveillance Branch using the Defense Medical Surveillance System and the Theater Medical Data Store provide the data, which DVBIC TBI Surveillance tracks and reports quarterly. To see the annual worldwide numbers, go to <http://dvbic.dcoe.mil/dod-worldwide-numbers-tbi>.

2015 Selected Clinical Affairs Achievements

Recovery Support Program

- Used a web-based data repository, known as the Wounded, Ill and Injured Registry, or WIIR, that allows for measurement and documentation of recovery progress. WIIR is used internally to review outcomes and improve reporting procedures.
- Created the TBI Recovery Support Program fact sheet, which is available at http://dvbic.dcoe.mil/files/2014_TBI_RSP_Brochure.pdf.
- Created Military TBI Case Management Quarterly Newsletter: TBI Case Management Community of Interest, which is available at <http://dvbic.dcoe.mil/case-management-resources#newsletters>.

Outcomes and Assessments

- Identified trends in variants of TBI diagnoses and reporting that now includes beneficiary information.
- Initiated NICOE/DVBIC collaboration to evaluate initial NICOE cohort outcomes for process improvement.
- Clinical Affairs works with the services and DHA to finalize the mild TBI Form for the Armed Forces Health Longitudinal Technology Application (AHLTA). AHLTA is the electronic medical record system used by DoD medical providers since its initial implementation in January 2004.

Clinical Practices/Clinical Recommendations

- Developed the Management of Headache Associated with Concussion/mTBI initiative. The headache clinical recommendation is the first CR planned to be beta-tested at select DoD and VA sites before general release.
- Created comprehensive revision plan to update the 12 TBI-related clinical recommendations.
- Continued to support the TBI Consult program, a service for deployed providers to ask clinical questions related to TBI.

Research



Falcon defensive back Brian Lindsay pulls down Navy quarterback Trey Miller as Air Force met the Navy Midshipmen at the U.S. Air Force Academy's Falcon Stadium in Colorado Springs, Colo. (U.S. Air Force photo by Mike Kaplan)



Saafan Malik, M.D.
Director, Division of Research

Dr. Malik is the director of the Research Division at the Defense and Veterans Brain Injury Center. He received his medical degree from King Edward Medical University and has been working in the field of TBI for over 10 years. He undertook his postdoctoral work at the University of Pennsylvania Perelman School of Medicine, and Carolinas Healthcare System and clinical neurosurgery at Cleveland Clinic. Dr. Malik served as the senior research investigator at the University of Pennsylvania Perelman School of Medicine and at the Texas Tech University Health Sciences Center. Dr. Malik has expertise in basic science, translational and clinical research/care related to TBI. He is the recipient of several academic awards and grants, including the National Institutes of Health-National Research Service Award on TBI and the Murray Goldstein Award from the National Neurotrauma Society. He has authored several peer-reviewed publications and book chapters.

Felicia Qashu, Ph.D.
Deputy Director, Division of Research

Dr. Qashu is the deputy director of the Research Division for DVBIC. In this position, she helps direct DVBIC's research mission by providing recommendations in support of clinical research priorities, monitoring outcomes and results of TBI research, and facilitating the integration and implementation of research findings in clinical practice. Dr. Qashu serves as the principal investigator of two research studies at DVBIC headquarters. She is also the acting chief of DVBIC's Program Improvement and Evaluation Office. Before becoming deputy director, Dr. Qashu joined the Research Division as a research advisor, supporting the advancement of DVBIC's research portfolio. Prior to joining DVBIC, Dr. Qashu worked as a postdoctoral fellow at the Uniformed Services University of the Health Sciences (USUHS), studying the effects of nerve agents on the neuroanatomical and physiological properties of the amygdala. She received her doctorate in neuroscience in 2009 from USUHS.



Elisabeth Moy-Martin
Chief, Clinical Translation

Elisabeth Moy Martin, R.N.-B.C., M.A., the clinical translation chief of the Research Division, is a registered nurse with certification in adult behavioral health nursing. She is honored to have worked with DVBIC since 1994, when it was known as DVHIP, and has authored or co-authored several manuscripts and presented at conferences on TBI in the U.S. military. She has been and is currently an associate principle investigator on several DVBIC studies.





Sean Manion, Ph.D.
Chief, Research Activities

Formerly at Uniformed Service University of the Health Sciences, Dr. Manion received his doctorate in neuroscience in the Psychiatry Department there along with post-doctoral training in conjunction with the Center for Study of Traumatic Stress. In 2009, he began at DVBIC as a deputy chief of staff. Research was the initial focus of his work, as he also dual-hatted as the acting deputy director of research into 2011. Eventually, his role expanded to include plans and programs in all areas of DVBIC operations. Based on his research background, he returned to the DVBIC Research Division in 2014 as research activities chief. Attending to the DVBIC research network, he oversees facilitation of research opportunities and portfolio management for 60 different studies across 12 different sites. Locally at the DVBIC headquarters, Dr. Manion oversees research staff leading or participating in 12 different research studies from the portfolio. Looking toward the future, he is working to determine the return on investment of DoD TBI research and outline the appropriate portfolio balance for the different research models across the MHS.

Capt. James Blankenship
Chief, Program Improvement and Evaluation

Capt. James Allen Blankenship is chief of DVBIC's Program Improvement and Evaluation (PIE) Office, which is responsible for overseeing PIE initiatives at DVBIC and its 15 network sites.

A 25-year veteran, Blankenship enlisted in the U.S. Navy and later was commissioned as an ensign in the Naval Reserve. He transitioned into the U.S. Public Health Service in 1998. His tours of duty include serving with the Navy's 6th Fleet, the Federal Bureau of Prisons and the Department of Defense.

Blankenship is a certified family nurse practitioner with more than 20 years of experience. He received his undergraduate degree from the College of West Virginia and his graduate degree as a family nurse practitioner from the Uniformed Services University of the Health Sciences. He is enrolled in Liberty University's Masters in Theology program.

His past duties include regional site director for DVBIC Charlottesville and Johnstown; administrative officer for Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury; and health services administrator, nurse practitioner and registered nurse with the Bureau of Prisons. Blankenship also serves as a nurse practitioner at the Hunter Holmes McGuire Medical Center in Richmond, Virginia.



DVBIC's Research Division advances the scientific understanding of TBI through a clinically focused research network of military treatment facilities and Veterans Affairs medical centers.

The Research Division conducts, guides and supports research across the DVBIC network through three offices:

- **Research Activities** conducts and supports research projects that address the foundational science of TBI, as well as areas of focus across the continuum of care for TBI — from screening and assessment to treatment and clinical management to rehabilitation and reintegration.
- **Clinical Translation** catalyzes the translation of promising clinical research through dissemination of findings to stakeholders in support of the development of evidence-based clinical and educational tools.
- **Process Improvement and Program Evaluation** utilizes a systematic methodology to measure and improve the effectiveness of DVBIC's projects, processes, initiatives and programs with the goal of improving performance and, ultimately, improving the health, wellness and quality of life of service members, veterans and their families.

DVBIC's research portfolio spans a broad range, from congressionally mandated longitudinal population studies to investigator-initiated clinical research.

In 2015, DVBIC's Research Division had 60 active TBI research studies and projects in high priority focus areas related to TBI. Through innovative clinical research, DVBIC provides evidence-based knowledge to improve treatment and outcomes for service members and veterans who have sustained a TBI. These targeted efforts help patients, health care providers and policy makers take action and make informed decisions.

Mission Essential Components

- Develop, support and conduct innovative clinical research initiatives for TBI
- Manage and support DVBIC's research portfolio
- Establish and maintain visibility on current TBI research
- Support gap analysis related to TBI research
- Catalyze the translation of promising clinical research
- Provide mechanisms to evaluate, measure and improve the effectiveness of DVBIC's projects, processes, initiatives and programs

2015 Selected Research Achievements



SCORE team members presented preliminary results from the three-year study at the VA Polytrauma Symposium in May. From left to right, Dr. Doug Cooper, Mariana LeBlanc, Linda Picon, Dr. Amy Bowles, and Melissa Ray. (Photo courtesy of Sean Manion)

Research Activities Office

- Completed initial analyses of the congressionally mandated “Study of Cognitive Rehabilitation Effectiveness” (SCORE) for Mild TBI in 2015. See the SCORE study manuals at <http://dvbic.dcoe.mil/study-manuals>.
- Presented preliminary SCORE results at the VA Polytrauma System of Care Workshop: New Perspectives in TBI Rehabilitation.
- Developed the study, “Improved Understanding of Mental and Psychological Needs in Veterans and Service Members with Chronic TBI,” to complement the existing DVBIC 15-year studies to fully address the congressional mandate. This study will be conducted at the Tampa VA.
- Completed the Head to Head study on the reliability and validity of computerized neurocognitive assessment tests.
- Supported the joint DoD and NCAA “Mind Matters Challenge” initiative by reviewing scientific research and education grant proposals. See story about an app for athletes, developed during the challenge, <http://phys.org/news/2015-09-app-athletes-concussions.html#jCp>.
- Developed a multi-site study to evaluate the recently released clinical recommendation, Progressive Return to Activity Following Acute Concussion/Mild Traumatic Brain Injury. Held a study workshop to train researchers on the study procedures to ensure standardization and fidelity of study execution at the Camp Pendleton, Fort Bragg and Navy Medical Center San Diego study sites.
- Uploaded DVBIC research portfolio information input into the FedRePorter (<http://federalreporter.nih.gov>) to allow broad visibility on federally funded DVBIC studies. [Enter “Defense and Veterans Brain Injury Center” in the Organization field and hit return to display the portfolio.]
- Developed the DVBIC Research Network profile book to provide an overview of all research activities taking place throughout the DVBIC research network.

Clinical Translation Office

- Published research reviews on the current level of scientific understanding of multiple TBI/multiple concussion and chronic traumatic encephalopathy on the DVVIC website.
- Identified and developed a catalog of ongoing knowledge translation (KT) activities at DVVIC, in coordination with all DVVIC divisions.
- Supported the TBI end points development (TED) consortium as a member of the government oversight committee and as the scientific advisory board member for Chronic Effects of Neurotrauma Consortium (CENC) and TBI Model Systems National Data and Statistical Center.
- Provided a quarterly environmental scan of TBI “hot topics.”
- Presented at and attended multiple TBI-focused clinical and research conferences and venues.

Continuous Process Improvement and Program Evaluation Office

- Developed and implemented online mentoring workshops within DCoE to improve staff understanding of program evaluations and process improvement efforts.
- Completed an evaluation of DVVIC’s 2015 Brain Injury Awareness Month activities, results of which allow for improvements in 2016 BIA month activities.
- Conducted a program evaluation of the 2015 DCoE PH/TBI Summit.
- Initiated process improvement projects with DVVIC’s Research, Clinical Affairs and Education Divisions.
- Presented at the Military and Veterans Topical Interest Group at the American Evaluation Association annual meeting in November on “Creating a Program Evaluation Office at the Defense and Veterans Brain Injury Center (DVVIC) through Capacity Building to Improve Processes and Programs.”

Education



Army Staff Sgt. Jonathan Meadows and art therapist Jackie Biggs discuss a painting during an art therapy session at Fort Belvoir Community Hospital's TBI clinic at Fort Belvoir, Virginia. Meadows, assigned to Fort Belvoir's Warrior Transition Battalion, suffered a TBI in 2012 when his vehicle rode over an improvised explosive device in Afghanistan. Biggs manages the Wounded Warriors program in the TBI clinic. See story by Terri Moon Cronk, DoD News, Nov. 12, 2015. <http://www.defense.gov/News-Article-View/Article/628768/art-therapy-provides-lifeline-for-wounded-warriors>. (DoD photo by Marc Barnes)



Scott C. Livingston, Ph.D.
Director, Division of Education

Dr. Scott Livingston became DVVIC's Education director in January 2015. Previously, he was the program manager for the Warrior Adaptive Reconditioning Program of Wounded Warrior Battalion East — one of two Wounded Warrior Battalion components of the U.S. Marine Corps' Wounded Warrior Regiment. He also served as a Medical Service Corps officer (physical therapist) in the U.S. Navy and has held several academic positions at the University of Kentucky, the George Washington University, and Gannon University.

Dr. Livingston has worked in a variety of clinical settings in physical therapy and athletic training, ranging from the inpatient and outpatient hospital setting to Division I-III intercollegiate athletics. His area of research expertise is the evaluation and management of sport-related concussion/mild traumatic brain injury. He has numerous professional publications and conference presentations on the electrophysiologic assessment of concussion in an athletic population.

He received his doctorate in kinesiology from the University of Virginia, his Master of Science in advanced physical therapy (post-professional) from the University of North Carolina at Chapel Hill, and his bachelor's degree in physical therapy (entry-level) from Ohio University. Dr. Livingston is board certified as a sports clinical specialist (SCS) by the American Board of Physical Therapist Specialties, and is a certified athletic trainer (ATC) by the National Athletic Trainers' Association Board of Certification.

Lt. Cmdr. Cathleen Davies
Chief, Clinical Training and Education

Lt. Cmdr. Cathleen Davies, M.S., CCC-SLP/CBIS, USPHS, is the chief of Clinical Training and Education at DVVIC. In that role, she is responsible for the development, dissemination and evaluation of TBI education materials for the Military Health System. Prior to joining the U.S. Public Health Service, Lt. Cmdr. Davies held multiple clinical and administrative roles within skilled nursing facilities, hospital, and home health settings. She is a certified brain injury specialist through the Brain Injury Association of America and a clinical specialist for adult dysphagia and neurological diseases. She received her bachelor's degree in communication disorders and her master's degree in speech-language pathology from The Pennsylvania State University.



Lt. Cmdr. Ranjodh S. Gill
Chief, Education Materials
Acting Chief, Clinical Training and Education

Lt. Cmdr. Ranjodh S. Gill is DVVIC's chief of Education Materials and acting chief of Clinical Training and Education. He holds a bachelor's degree in nursing from San Francisco State University and a master's of public health from University of Alaska Anchorage, with concentration on occupational health, infectious diseases and epidemiology. He is also part of U.S. Public Health Service (USPHS) Rapid Deployment Force and was deployed in 2015 to support the USPHS Ebola Response Mission in Monrovia, Liberia. Lt. Cmdr. Gill's interests include global health, health promotion, and prevention. He is also an active member of the U.S. military athletic community and a competitive cyclist.





Maj. Pamela DiPatrizio
Chief, Education and Outreach

Maj. Pamela DiPatrizio enlisted in the U.S. Army in August 1986 as a communication specialist. After deployment in 1991, she commissioned into the U.S. Army Reserves as an Army Nurse Corps officer. Following mobilization in support of Operation Enduring Freedom, Maj. DiPatrizio transitioned to the active duty force. Throughout her career, Maj. DiPatrizio has served in many capacities, such as staff and emergency nurse, sexual assault nurse coordinator, chief of Education Training and Research at Fort Belvoir Community Hospital, and director of resuscitative services for the Korean peninsula. Among her many awards and decorations is the Meritorious Service Medal with three Oak Leaf Clusters. She is DVBIC's chief of education outreach.

Maj. DiPatrizio received her Associate of Science in nursing from Miami Dade Community College and her bachelor's of nursing, cum laude, from Florida International University. She received her master's degree in nursing, with

an emphasis in public health, from Grand Canyon University. She holds board certification in emergency nursing and pediatric emergency nursing and maintains instructor certifications in basic life support, pediatric advanced life support, advanced cardiac life support, and trauma nursing core course. She is a certified sexual assault forensic examiner.

DVBIC's Education Division develops and delivers TBI education programs built around state-of-the-science knowledge. The division provides activities and resources along the care continuum from prevention to recovery by educating and training healthcare providers, performing outreach and education to various stakeholder groups (including members of the Armed Services, veterans, families, caregivers, providers, line leaders and commanders), and producing state-of-the-science education and training materials. The division has three offices:

- **Education Materials** produces state-of-the-science education and training resources and conducts product life-cycle management on existing and new products.
- **Clinical Education and Training** provides education and training of medical and allied health care providers.
- **Education Outreach** performs outreach and education to various stakeholder groups.

These offices provide members of the military, veterans, and their families, supporters, and care providers with the knowledge they need to prevent or recover from and reintegrate into the community following aTBI.

The DVBIC network uses a regional approach to education by providing each Military Treatment Facility and VA facility in the system of care with state-of-the-science educational products and outreach efforts through the work of regional education coordinators. The division's multimedia education products deliver high-quality, clinically relevant education to clinicians and provide education about the means of prevention, causes and care of TBI to the broader military community.

In 2015, the Education Division facilitated a total of 4,800 education, outreach and training events related to TBI and reached an audience total of 287,000, which included service members, veterans, families, providers and community members. This is a 262 percent increase from the events and 151 percent increase in attendance seen during FY2014, when the DVBIC network facilitated 1,830 events and saw 189,844 service members, veterans, families, providers and community members.

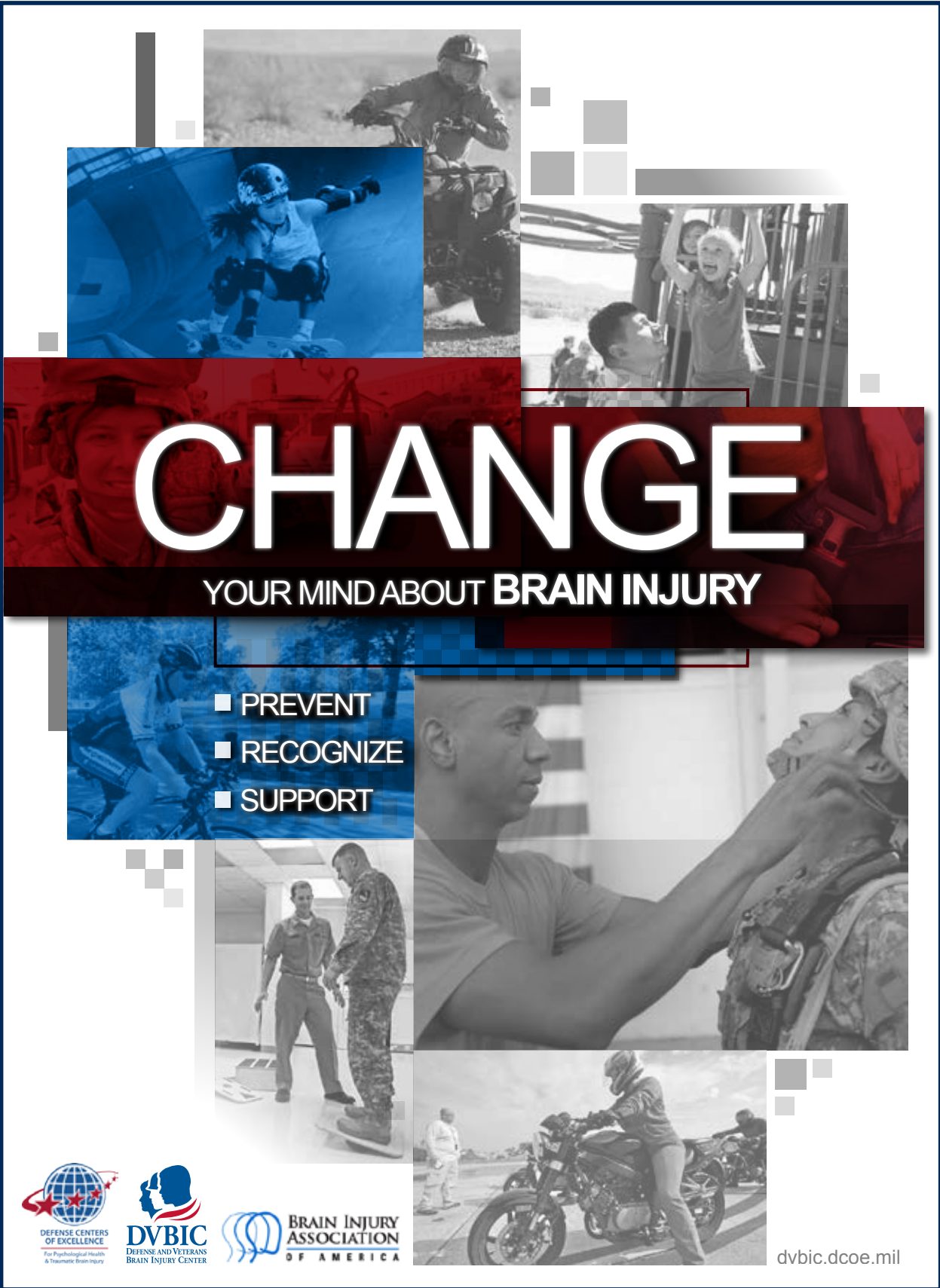
Brain Injury Awareness Day on Capitol Hill



Army Maj. Pamela DiPatrizio, (left) education and outreach chief at DVBIC, discusses TBI issues with Dr. Joel Scholten, acting national director of the Physical Medicine and Rehabilitation Program Office at Department of Veterans Affairs. Both participated in the Brain Injury Awareness Day event on Capitol Hill, March 18, 2015. Also shown are Dr. Saafan Malik, DVBIC's Research director, speaking with Dr. Tammy Crowder, former DVBIC chief of staff. (DVBIC Photo by Gary Arasin, DVBIC public affairs officer)

Mission Essential Components

- Development of educational tools and resources to promote TBI awareness and training opportunities
- Educational product development and distribution
- Regional education and outreach coordination throughout the DVBIC network sites



CHANGE

YOUR MIND ABOUT BRAIN INJURY

- PREVENT
- RECOGNIZE
- SUPPORT



dvbic.dcoe.mil

This DVVIC poster promotes brain injury awareness and reflects the 2015 Brain Injury Awareness Month theme, “Change Your Mind About Brain Injury: Prevent, Recognize and Support.”

Brain Injury Awareness Day on Capitol Hill

The 2015 DCoE Psychological Health and Traumatic Brain Injury Summit featured experts in the treatment of TBI and psychological health diagnoses. The three-day summit combined a “live” in-person event at Defense Health Headquarters (DHHQ) in Falls Church, Virginia, with a “virtual” online component to reach a worldwide audience. DVBIC, DHCC and T2, with DCoE event planning team and public affairs collaborated on organizing the summit.

The summit registered 1,800 participants. Eligible participants received up to 19 continuing education (CE) credits across a spectrum of medical and allied health professional organizations. More than 9,000 CE credits were awarded to participants — more than 4,000 for the TBI track.

DVBIC solicited for all papers, selected the summit presentations from the submissions, aligned the summit agenda for the three days, vetted all presentations for accuracy of content and agreement with DVBIC treatment recommendations, and acted as moderators and facilitators for all presentations.

“The people who contributed to the sessions are not only known within the DoD and VA realms; they are well-established national leaders in TBI and psychological health. The impact of the things that they’ve done is far-reaching beyond their respective organizations, or the military.”

-- Col. Sidney R. Hinds, National Director
Defense and Veterans Brain Injury Center
(<http://www.health.mil/News/Articles/2015/09/11/Defense-Centers-of-Excellence-summit-seeks-to-improve-the-lives-of-service-members-veterans-families>)



Presentations at the 2015 DCoE Summit also were available virtually, registering 1,700 participants. (Photo by Terry Welch, DVBIC Public Affairs)

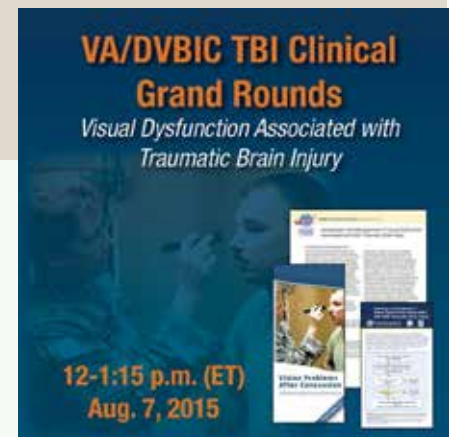
New Tactics Proven Effective for Treating TBI Symptoms

Rena Courtney, research assistant at the Washington, D.C. VA Medical Center, told her summit audience that sometimes service members initially snicker when presented with treatment options that include yoga or acupuncture, but preliminary research – and the veterans’ experiences – support their value as part of a complementary and integrative medicine (CIM) approach to treating TBI. Courtney said that CIM tactics have proven effective in treating symptoms such as anxiety, depression, headaches and chronic pain.

2015 Selected Education Achievements

Clinical Education and Training

- **Automated Neuropsychological Assessment Metrics**, a computer-based tool known as ANAM, is a neurocognitive assessment of acute neuropsychological effects of battlefield concussion, compared to a cognitive baseline. DVBIC developed (with the Quad Services input) two training slide presentations for primary care providers and neuropsychologists as guidelines for implementation of the ANAM.
- **Quarterly Grand Rounds** is a series of four presentations in conjunction with DCoE and the VA that afford an opportunity for health care providers to discuss TBI and best practices in treatment and care. In 2015, 186 registered and 156 attended.
- **Update of TBI-201** is an interactive web-based educational platform developed at the request of the Services' TBI program directors to fulfill training requirements for military medical healthcare providers.
- **Update of TBI educational annual training presentation materials** completed for providers, line leaders, and service members to meet the annual training requirement.



Fort Belvoir's regional education coordinator, Pamela Sjolinder, uses a real, plasticized brain to explain its functions to visiting middle school students during Brain Awareness Week March 16-20, 2015, at the National Museum of Health and Medicine in Silver Spring, Maryland. (Photo courtesy of Matthew Breitbart, National Museum of Health and Medicine)

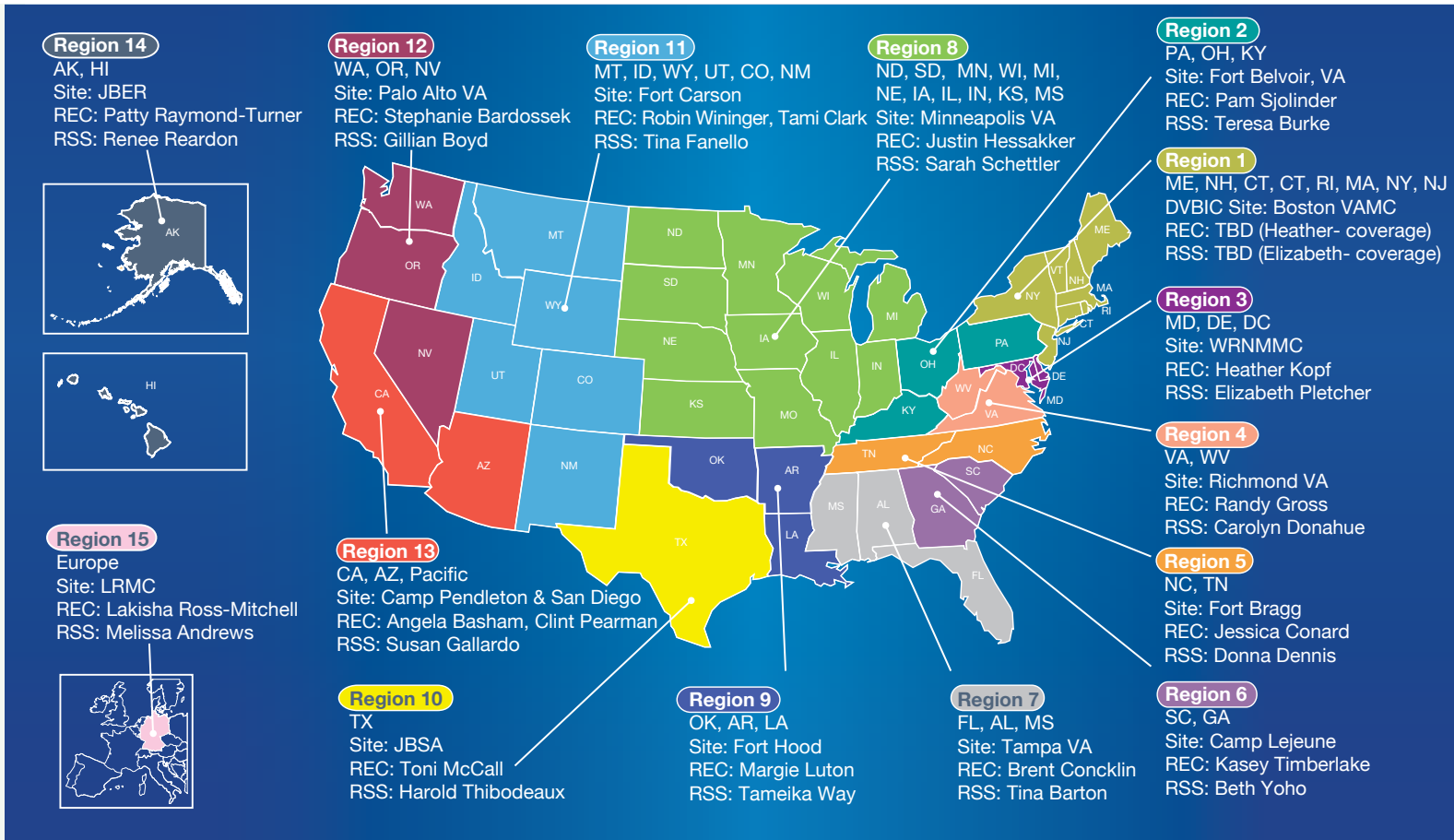
Education Outreach

- **Brain Injury Awareness Month** (March 2015), themed “Change Your Mind About Brain Injury: Prevent, Recognize and Support,” featured events that highlighted DoD’s efforts to prevent TBI and provide care for active-duty military, their beneficiaries and veterans with TBI. The REC network facilitated over 600 nationwide events.
 - DVbic’s Brain Injury Awareness Month kick-off event March 2 at the Walter Reed National Military Medical Center reached more than 900 health care providers nationwide.
 - DVbic participated in the congressional Brain Injury Awareness Day Task Force exhibitors’ fair March 18 on Capitol Hill to raise awareness about TBI in the Military Health System.
- **“A Head for the Future,”** a multi-year web and media initiative to promote TBI and concussion awareness, prevention and recovery re-launched in 2015 with a redesigned website, video filming, and TBI Champion Campaign.
 - In 2015, A Head for the Future’s news releases resulted in 515 media placements, including an original news story in the Fort Belvoir Eagle, featuring an interview with Lt. Cmdr. Cathleen Davies
 - Twitter page launched in November with the A Head for the Future handle: @AHFTF_Page.
- **Monthly webinar series**, in conjunction with DHCC and T2, on clinical and technology topics related to TBI assessment and treatment targeted health care providers, but attendance is open to the public. Listen to the full 2015 webinars at <http://www.dvbic.dcoe.mil/training/webinars>.
- **NCAA “Mind Matters Challenge.”** The Education Division supported the Research Division in this landmark initiative to enhance the safety of student-athletes and service members. The challenge focused on two important areas related to concussion: changing attitudes about concussions in young adults (a research challenge) and educational programs targeting young adults (an educational challenge). See story about app developed for student athletes as a result of the challenge, <http://phys.org/news/2015-09-app-athletes-concussions.html#jCp>.
- **New concussion/mild TBI fact sheet** for patients titled “Help with Ongoing Symptoms,” addresses why symptoms continue to persist in some patients following concussion and how they can cope or seek additional help.



Retired Army Sgt. 1st Class Victor Medina, right, addresses a class of future nurses about what it is like to live with a TBI. Medina and his wife, Roxana Delgado, left, share their story with future health care providers to give them an understanding of TBI other than what textbooks teach. (U.S. Army photo by 24th Press Camp Headquarters)

Nationwide REC and RSS Network



How RECs Impact Our Service Members, Veterans and Families

JAN 2015-MAR 2015		APR 2015-JUN 2015		JUL 2015-SEP 2015		OCT 2015-DEC 2015	
Events*	Audience**	Events*	Audience**	Events*	Audience**	Events*	Audience**
1,503	89,892	1,174	64,683	1,232	63,754	1,328	79,734

* Education, outreach, training
 ** Service members, veterans, families, providers, community member

Chief of Staff



U.S. Army Reserve drill sergeants Maurice Tucker, of West Palm Beach, Fla., and Kristina Martinelli of Columbia, S.C. - both Sgts. 1st Class with Company B., 1st Bn., 321st Inf. Reg. - case the colors after a change of command ceremony at Fort Jackson, June 13, 2015. (U.S. Army photo by Sgt. Ken Scar)



Capt. H. Charles Cathlin
Chief of Staff

Capt. H. Charles Cathlin directs the Office of the Chief of Staff, which is responsible for the operational and administrative support functions of DVBIC and its 15 network sites, to include personnel, budgeting, communications, strategic planning, and logistics.

Capt. Cathlin has served for over 20 years as a military and commissioned corps officer and has earned decorations for accomplishments while deployed to the Middle East (Operation Southern Watch), Albania (Kosovo War), Mozambique (Operation Atlas Response), New York (9/11 attacks), and the Gulf Coast Region and Texas for hurricanes Katrina, Ike, and Gustav.

Prior to DVBIC, Capt. Cathlin served as chief of the Radiology, Anesthesiology, and Neurology Devices Branch at the FDA, where he was responsible for regulating the design, manufacturing, and marketing of complex medical devices. He also served as an Air Force bioenvironmental engineer and was responsible for managing occupational health, environmental, and radiation safety programs.

Capt. Cathlin received his Bachelor of Science in civil and environmental engineering from the U.S Air Force Academy and his master's of public health from the Uniformed Services University of the Health Sciences.

Samantha Finstad, Ph.D.
Chief, Strategy Plans, and Programs

Dr. Samantha Finstad is the chief of the Strategy, Plans, and Programs section in the office of the Chief of Staff. She joined DVBIC in October 2015 and works with leadership to set and implement strategic and organizational goals, while ensuring alignment to the mission. Before joining DVBIC, she worked at the National Cancer Institute and brings extensive experience in science planning, program evaluation and scientific writing. Dr. Finstad received her doctorate in molecular and cellular biology from Tulane University, followed by a postdoctoral fellowship at Beth Israel Deaconess Medical Center at Harvard Medical School.



2015 Selected Chief of Staff Achievements

Strategy, Plans and Programs

- Welcomed Dr. Samantha Finstad as chief of the Strategy, Plans and Programs unit
- Streamlined the Institutional Review Board process for DVBIC and DCoE studies and initiated research determinations capability
- Planned and developed the DVBIC mission essential task list
- Executed the DVBIC internal training program



For the answer, go to the DVBIC Facebook page, <https://www.facebook.com/DVBICpage/photos/>

Business Operations

- Executed seven DVBIC network site support agreements
- Completed the DVBIC Manpower Concept Plan

Communications and Technology

- Led the effort to revitalize DVBIC's web presence through updating the website
- Launched DVBIC social media initiatives, including Facebook and Twitter
- Created the TBI Technology internal quarterly newsletter, "TBI Tech Watch"
- Participated in the video filming of TBI Champions for the "A Head for the Future" website campaign, Norfolk, Virginia, planned for 2016

Connect with us!

To fulfill its mission to serve its target audience, DVBIC connects with service members, veterans, families, caregivers and health care providers. “In order to connect and participate in the conversation about TBI,” said DVBIC’s social media specialist Nina Corin, “we need to be where our target audiences are, on the social media platforms that they are on.”

According to Pew Research, nearly two-thirds of American adults (65 percent) use social networking sites. One fifth of Americans are online “almost constantly,” while 73 percent of Americans go online daily. Facebook remains the most popular social media site (72 percent of online American adults use Facebook).

DVBIC’s Facebook page launched in 2015. Click on the link to connect with us:
<https://www.facebook.com/DVBICpage>.


Two of Our Most Engaging Facebook Posts from 2015

 **DVBIC - Defense and Veterans Brain Injury Center**
December 18, 2015 · 🌐

Protect your head — whether you are on a bike ride or fighting the evil First Order! #StarWars #TheForceAwakens



Poe Dameron
An ace pilot, Poe Dameron is a leader in the Resistance’s fight against the evil First Order. He soars into battle behind the controls of a modern X-wing fighter.
STARWARS.COM

 **DVBIC - Defense and Veterans Brain Injury Center**
June 22, 2015 · 🌐

This eye-opening article on family caregivers of veterans coping with #TBI and psychological health concerns is a must-read:



‘Hidden Heroes’ of war
Military caregivers, particularly those of post-9/11-era vets, face daily battles.
UTSANDIEGO.COM



Network



Network Site Reports

DVBIC supports 15 care and treatment sites nationwide through a DoD-funded collaboration with the VA. The network sites conduct clinical research, educate service members, medical personnel and caregivers, and consolidate and report all DoD TBI-related incidence and prevalence data.

To find out more, go to <http://dvbic.dcoe.mil/locations>.

Joint Base Elmendorf-Richardson, Anchorage, Alaska

The Joint Base Elmendorf-Richardson (JBER) Mild Traumatic Brain Injury Clinic is DVBIC's sole Air Force-based TBI facility. DVBIC JBER uses state-of-the-science diagnostic and rehabilitative equipment and complementary interventions, such as acupuncture and restorative yoga, to provide holistic care to a population of more than 166,000 beneficiaries, including active-duty service members, retirees and dependents. The site includes medical, clinical, administrative, and education/prevention-based staff.

In 2015, DVBIC JBER received over 300 new patient referrals during the year and accomplished 5,500 total patient visits, resulting in a 98 percent return-to-duty rate. The clinic led the base-wide Automated Neuropsychological Assessment Metric (ANAM) screening of more than 500 service members and civilians prior to deployment.

The recovery support specialist assisted 35 service members, veterans, and their family members during their care transition, as well as 139 patients enrolled in the JBER clinic. The regional education coordinator reached 9,366 service members, veterans, family members, providers, local law enforcement, education professionals and community organizations by sharing information about TBI prevention, screening and care.



DVBIC REC Patricia Raymond staffs the DVBIC exhibit at the 2015 Alaska Brain Institute annual conference on Nov. 4, 2015. (Photo courtesy of Patricia Raymond)

Camp Pendleton, California

DVBIC Camp Pendleton works collaboratively with Navy Hospital Camp Pendleton Concussion Care Clinic to provide optimal clinical care and education to the 1st Marine Expeditionary Force (1MEF) and other service members at Camp Pendleton.

DVBIC spearheads clinical research initiatives involving traumatic brain injury specifically focused on epidemiology, the impact of repetitive sub-concussive blast exposures and the chronic neurobehavioral impact of brain injury. In 2015, DVBIC Camp Pendleton's research program contributed to multiple peer-reviewed scientific publications as well as numerous national presentations for medical professionals and the military.

Clinically, DVBIC supports the Naval Hospital Camp Pendleton with various treatment providers to include social workers, neuropsychologists, and physicians, who evaluate and treat injured Marines through specialized TBI assessments, patient/family education, acupuncture and comprehensive neuropsychological assessments. The recovery support specialist assists service members and veterans with TBI as they transition from the Department of Defense to the VA Health Care System.

Camp Pendleton has an extremely active education outreach program. In 2015, DVBIC Camp Pendleton conducted 209 educational events that reached over 17,000 people and an annual TBI symposium that provides education to military physicians and other treatment providers on the latest advances in the clinical treatment of brain injury. DVBIC Camp Pendleton plays a key role providing the TBI annual training requirements for Marines and Navy Health Services Support Personnel assigned to 1MEF to include the corpsman providing in-field medical care.

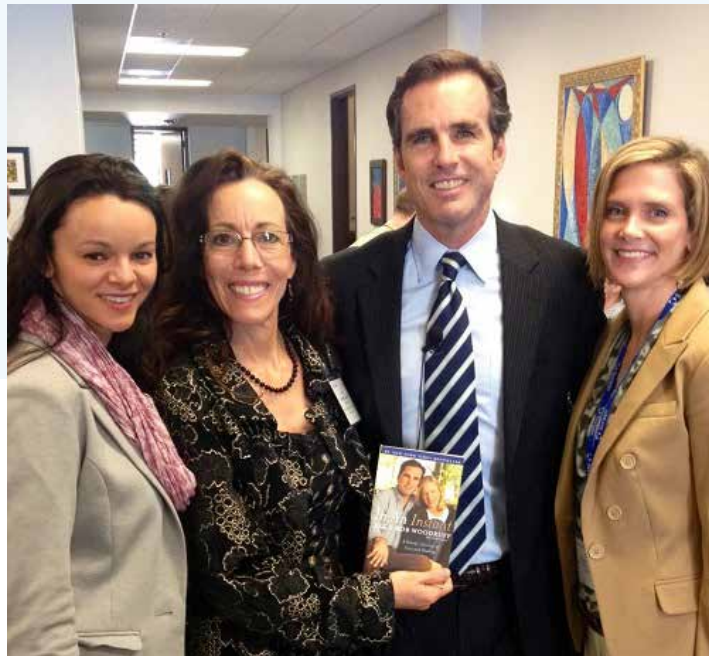


DVBIC research staff recently completed a study manual for researchers and clinicians based on the “Study of Cognitive Rehabilitation Effectiveness” (SCORE). SCORE team members in a lighthearted moment spelled out S-C-O-R-E. (Photo courtesy of DVBIC staff)

Naval Medical Center San Diego, San Diego, California

DVBIC at Naval Medical Center San Diego (NMCS D) works collaboratively with the Office of Neurotrauma/ NAVMED West and TBI Clinical Services at NMCS D to provide an array of clinical services, including TBI screening, evaluation and patient/family education, neuropsychological assessment, duty status determination and consultation services. DVBIC at NMCS D also conducts state-of-the-science research examining various aspects of TBI, such as mechanisms of injury from blasts, the relationships of cumulative blast exposure and interval of blast exposure to central nervous system pathology and neurocognitive function, and the impact of TBI on aggression. Staff continue to drive DVBIC's congressionally mandated studies, while also developing, researching and publishing TBI-related protocols and manuscripts.

DVBIC at NMCS D coordinates care for TBI patients and provides extensive educational services. The regional education coordinator gained visibility throughout the year by facilitating 173 education and training events reaching over 28,000 stakeholders. Included in these extensive outreach and education efforts were the hosting of the second Annual TBI Symposium at NMCS D and an all-encompassing outreach campaign to Hawaii.



(From left to right) DVBIC REC Angela Basham at NMCS D; Ann Ballasidney, TBI nurse case manager at NMCS D; Bob Woodruff, former ABC World News Tonight anchor; and Lt. Cmdr. Lynita Mullins, TBI medical director at NMCS D at the Scripps Health Brain Injury Rehabilitation Conference March 13, 2015. (U.S. Navy photo courtesy of Angela Basham)

Fort Carson, Colorado

DVBIC Fort Carson resides within the Evans Army Community Hospital's Warrior Recovery Center and Soldier Readiness Center. Fort Carson is a large Army post with continuing deployment cycles and is an ideal site for extending DVBIC's mission. DVBIC supports this site with two regional education coordinators, a recovery support specialist and a research team. The RECs were able to reach out to nearly 16,000 participants in educational presentations and events. The RSS provided invaluable resources and ongoing support to service members and veterans in transition.

DVBIC at Fort Carson provided clinical expertise, database and statistical support to quality improvement initiatives through the Outcome Measures Project. Research studies at Fort Carson, in collaboration with DVBIC headquarters and Fort Bragg, examine deployment-related mTBI in soldiers returning from Operation Enduring Freedom/Operation Iraqi Freedom and to look at posttraumatic stress disorder and TBI (in collaboration with the Denver VA Medical Center). In addition, two other studies have tested new technologies, interactive metronome and global z-score neurofeedback, and reported benefits in treating cognitive impairments after TBI.



DVBIC National Director Col. Sidney Hinds visits the Fort Carson TBI Center with Fort Carson DVBIC Director, Cmdr. Renee Pazdan, left, and Senior Clinical Research Director, Dr. Margaret McDonald. (Photo courtesy of Col. Hinds)



Fort Carson REC Robin Wininger, presents in July at the Warrior Symposium at Buckley Air Force Base, Aurora, Colorado. (Photo courtesy of Connie Roy)

Landstuhl Regional Medical Center, Landstuhl, Germany

The mission of the Traumatic Brain Injury and Rehabilitation Clinic at Landstuhl Regional Medical Center (LRMC) is to increase cultural awareness and understanding of traumatic brain injury. The TBI clinic evaluates all military personnel, civilians (DoD and contractors) and coalition military partners returning from theater of operations before returning to duty and cares for service members, veterans, family members and other dependents experiencing TBIs. The TBI clinic provides service members, veterans, family members and community members with the latest educational information about traumatic brain injury.

DVBIC opened its first formal European site in 2015, beginning with the placement of a recovery support specialist. The RSS actively reaches out to patients and family members in the European theater to provide advice and support, connecting service members and veterans who have sustained a TBI, their family members and caregivers to TBI and psychological health support services, as well as other medical and non-medical resources. The RSS helps ease patient transitions that are particularly challenging between overseas treatment facilities within Europe and military duty stations or veteran status in the United States.



The Landstuhl RMC DVBIC Network Site hosted a TBI/DVBIC education table at the Warrior Care Month Wheelchair Basketball Tournament, left, at Ramstein Air Force Base. DVBIC TBI recovery support specialist Melissa Andrews, above right, provides educational information and support during the tournament. (Photos courtesy of Lorrie Cappellino)



Landstuhl Regional Medical Center honorary REC Lorrie Cappellino, far right, attended the 2015 Central European Football Camp in Ansbach, Germany, where 283 athletes and 47 coaches from Germany, England, Italy, Spain, France and Austria were joined to provide concussion education by “HeadsUp Football” and “USA Football” guest coaches Michael Hayes and Chad Hester. Pictured in photo: (left to right) Camp Conditioning Coach Lin Hairstone, Trevir Miller, Glen Alexander Jr., Jaylen Bussey, Jeremiah Champ, Andre Fields, Jordan Hodson, Jakob Stenbeck, Austin Khidsukhum, and LRMC TBI Nurse Educator Lorrie Cappellino. (U.S. Army Photo)

Walter Reed National Military Medical Center, Bethesda, Maryland

The DVBIC site at Walter Reed National Military Medical Center (WRNMMC) undertakes clinical research, ensures clinical care and develops educational programs in coordination with other DVBIC sites and the overall TBI program at the hospital. In 2015, TBI care on the WRNMMC campus was formally integrated with the assets of the National Intrepid Center of Excellence (NICoE) Institute. This new partnership is further supported by the assets of the Uniformed Services University of the Health Sciences (“America’s Medical School”) and partnerships with the National Institutes of Health. This unity of effort has advanced care options for patients and boosted research expertise.

In 2015, WRNMMC saw tremendous growth in the 15-year studies; the 15-year study team currently has 24 positions. From the beginning of the 15-year studies through the end of 2015, the team published 57 manuscripts and conducted 66 conference presentations. The Natural History Comprehensive Pathway had 557 consented participants and conducted 301 baseline evaluations; the Brief Pathway had 656 consented participants and completed 384 baseline evaluations. The Caregiver Study had 362 consented participants and conducted 276 baseline evaluations. The TBI-Care Quality of Life Development Study completed the military focus groups and developed the military items, completed cognitive interviews on the general items and started field testing the general items. The Natural History Brief and Caregiver Studies expanded recruitment to Naval Medical Center San Diego and Camp Pendleton and hired a research assistant at both sites.

The National Institutes of Health sub-award for the TBI-Care Quality of Life Development Study was finalized between the University of Michigan and General Dynamics Information Technology.

In 2015, the Brain Fitness Centers at WRNMMC and Fort Belvoir Community Hospital had 2,334 patient visits, which include visits from 271 new patients in 2015. Of those, 92 patients are still active. This year, the WRNMMC Brain Fitness Center initiated a four-class mind-body seminar and expanded heart rate variability biofeedback training. The center staff also presented two posters and were invited to speak at many local and national venues. This care option for patients has brought significant attention to WRNMMC efforts to improve cognition and functioning. This expertise has been increasingly sought out by psychiatry, oncology and neurosurgery at the hospital.



Maj. Michelle Mummers (Ret.), who had sustained a TBI, tells her story about why she joined the Marine Corps and why she decided to compete in the Warrior Games.

<https://www.dvidshub.net/video/408635/conquering-hills-and-waters#.VliDoBHlvIU>

Camp Lejeune, North Carolina

DVBIC Camp Lejeune is the largest Marine Corps base on the East Coast and plays an important role in the Marine Corps' expeditionary abilities. The base actively maintains combat-ready units for deployment, including the II Marine Expeditionary Force, a Marine Air Ground Task Force of 47,000 Marines and sailors. Several training schools are housed at Camp Lejeune, including Camp Geiger, the Marine Corps School of Infantry, East; and Camp Johnson, the Marine Corps Combat Service Support School. Camp Lejeune, with its various satellite camps, housing, training areas and New River Air Station is the largest concentration of Marines and sailors in the world.

In 2015, Camp Lejeune Intrepid Spirit Concussion Recovery Center provided services for 496 Marines and sailors for a total of 3,408 since the center opened in October 2013. The center uses a 16-week interdisciplinary approach that includes a combination of traditional and adjunct therapies and incorporates the service member's family throughout the recovery process.

The regional education coordinator reached more than 14,250 service members, families, providers, veterans, and other stakeholders through TBI presentations and displays. In July, the REC provided DVBIC and TBI information at the Marine Corps Air Station Cherry Point Automated Neurological Assessment Metric (ANAM) screening. The recovery support specialist carried one of the largest caseloads with over 140 patients and covered a catchment area over three states.

The Camp Lejeune research team is participating with DVBIC on planning an upcoming study on post-traumatic headache clinical recommendations and will be one of the study sites. The research team also worked on the following protocols:

- "Novel Approaches to the Analysis of Clinic and MRI Data in Marines with a History of Possible mTBI," in partnership with the University of Pennsylvania
- "Discovery and Validation of Peripheral Biomarkers of Traumatic Brain Injury" in conjunction with Georgetown University
- "An Outcome Evaluation of Alpha Stimulation Therapy on Active Duty Service Members with a Concussion History"
- "Effectiveness of a Mindfulness-based Group Therapy (MBGT) Integrative Restoration (iRest) for Active Duty Personnel with Mild Traumatic Brain Injury (mTBI) in an Outpatient Clinic"
- "A Comparison of Traditional and Battlefield Acupuncture for Treatment of Headache Pain in a Military Population with Mild Traumatic Brain Injury," in conjunction with University of Pennsylvania and the Children's Hospital of Pennsylvania
- "A Prospective Study of Neurologic Effects Associated with Repetitive Low level Blast exposure (RLLBE) in Unit Level Training (ULT)," in partnership with Princeton Neuroscience Institute and Wayne State University

Camp Lejeune procured a 2015 grant for a comparative study of headache treatments, particularly battlefield acupuncture, which was submitted in November to DVBIC and DCoE for review.



Julie Minich-Castro, a nurse practitioner in the Department of Brain Injury Medicine at Womack Army Medical Center, informs an unidentified service member about TBI. (U.S. Army photo by Jordan Ramirez, DVBIC regional education coordinator)

Fort Bragg, North Carolina

DVBIC Fort Bragg functions as part of the Department of Brain Injury Medicine at Womack Army Medical Center, which serves the largest beneficiary population in the Army. The site conducts clinical research, supports clinical care and case management, and engages in educational outreach programs.

The site continued enrollment in a Phase II clinical trial for an investigational medication to treat concussion. Additionally, DVBIC Fort Bragg staff developed a multi-site protocol in conjunction with DVBIC headquarters, Naval Medical Center San Diego, and Camp Pendleton to investigate DVBIC's Progressive Return to Activity clinical recommendation guidelines. Researchers anticipate enrollment to begin in early 2016.

DVBIC staff received an AMEDD Advanced Medical Technology Initiative grant to investigate technical aspects of computerized neurocognitive testing. Dissemination efforts continue with previously completed studies, such as the Head to Head study, which compared computer-based cognitive tests to traditional pencil and paper tests, and the CONTACT study, which investigated a telephone-based problem solving treatment for service members injured on deployment. These studies contribute to a larger program of research investigating the evaluation, treatment and epidemiology of TBI.

The clinical care team assisted nearly 400 soldiers. DVBIC Fort Bragg's recovery support specialist monitored patient progress and provided consultation and resources for service members, veterans and their families in the expanded catchment area of North Carolina and Tennessee. The regional education coordinator reached thousands of stakeholders through outreach efforts, including during Brain Injury Awareness Month. Both staff members attended monthly meetings and made a DVBIC presentation at the North Carolina Governor's Working Group on Veterans, Service Members and their Families. The working group facilitates collaboration and coordination among all federal, state and local agency partners that touch a veteran's life in the state of North Carolina.

Fort Bragg in the News

The Army and Fort Bragg are making another progressive move by opening a new behavioral health clinic that's expected to serve 10,000 soldiers each year.

The key to success for the West Bragg Embedded Behavioral Health Clinic, and for the soldiers it will serve, may be because of its neighborhood address.

Instead of building the outpatient clinic around the central health-care hub of Womack Army Medical Center, officials intentionally put it in another area, renovating an old dining hall squarely in the vicinity of the 82nd Airborne Division's 2nd Brigade Combat Team.

It's all about location, as they say in real estate. It's also about battling stigma, as experts on behavioral and mental issues will tell you.

Bring the help closer to the soldiers where they work. Don't push them out of their comfort zone even more by requiring them to head over toward the giant Womack complex. "If it's hard to get to, then it's easy not to do it," said Col. Jay Earles, chief of the Department of Behavioral Health at Womack.

[edited for space] Posted: Tuesday, July 7, 2015 12:00 am, fayobserver.com editorial (Fayetteville Observer)

Fort Hood, Texas

DVBIC Fort Hood serves the continental United States' largest deploying base population. The program works in conjunction with the TBI clinic in providing direct and indirect patient care to soldiers as well as providing education to active duty, National Guard, Reserve, family members and clinical staff.

In 2015, the DVBIC staff increased with an additional three full-time personnel: a physiatrist to work in the TBI clinic and two research personnel. The REC continues to lead annual and pre-deployment concussion/mTBI training for troops at Fort Hood and engages in outreach to family members, veterans and civilian clinical practitioners who treat the service members. Educational efforts also included direct outreach to veterans in the local community's veterans' center. These education efforts reached 12,285 individuals this year.



An unidentified service member viewed DVBIC educational materials during Brain Injury Awareness Month 2015. (U.S. Army photo courtesy of Jordan Ramirez, DVBIC REC)

San Antonio Military Medical Center, San Antonio, Texas

San Antonio Military Medical Center (SAMMC) and Wilford Hall Ambulatory Surgical Center have been involved in the TBI initiative since DVVIC's inception by Congress in 1991. Staff participate in clinical research, provide clinical care, and develop educational programs.

In 2015, the DVVIC regional education coordinator reached more than 4,500 health care providers, veterans, service members, families and community stakeholders through educational presentations and outreach events. The DVVIC recovery support specialist completed over 250 patient follow-ups, ensuring that patients have access to the care and resources they need.

SAMMC research staff reported the findings for the "Study of Cognitive Rehabilitation Effectiveness," known as SCORE, at the VA Polytrauma System of Care: New Perspectives in TBI Rehabilitation Annual Conference, College Park, Maryland; Military Health System Research Symposium in Fort Lauderdale, Florida; meeting of the Office of The Surgeon General Clinician Manual for Cognitive Rehabilitation, San Diego, California; and the American Congress of Rehabilitation Medicine conference in Dallas, Texas. In addition, staff have prepared and submitted several publications for the "Imaging Study of Cognitive Rehabilitation Effectiveness," known as iSCORE, and other studies. Site researchers continued to build research portfolios to improve the lives of those who have suffered a TBI.

The clinical care team screened 798 patients at inpatient, outpatient and post-deployment settings and provided treatment on 165 occasions.



SAMMC REC Tonisha McCall presents concussion awareness education, "mTBI: Helping Soldiers Follow Their Treatment Plan" Warrior Transition Cadre Training, in July at Fort Sam Houston, Texas. (Photo courtesy of Truitt "Dwight" Stewart)



SAMMC regional education coordinator Tonisha McCall distributes information about TBI to an unidentified visitor during Brain Injury Awareness Month at Fort Sam Houston, Texas. (U.S. Army photo by Maria C. Barrera, Army & Air Force Exchange Service)

Fort Belvoir, Virginia

The Fort Belvoir DVBIC site is a fully integrated part of the Intrepid Spirit at Fort Belvoir, Virginia, for comprehensive evaluation and treatments for those who sustained traumatic brain injury. The site offers clinical care services using 16 disciplines — music therapy is the newest addition — addressing medical, psychological, social and spiritual issues in patients with TBI and posttraumatic stress disorder. The center has averaged 600 new patient evaluations and over 20,000 patient visits in 2015.

The DVBIC research portfolio grew to 12 research protocols, including interventional trials, and epidemiological research with collaborations from multiple institutions, including the National Institutes of Health, Harvard Medical School, Kessler Foundation, Virginia Commonwealth University, Center for Neuroscience and Regenerative Medicine (CRNM), Walter Reed National Military Medical Center and others. Fort Belvoir was nominated as one of the sites for DVBIC's 15-year longitudinal study and became the only DoD site in the Chronic Effects of Neurotrauma Consortium (CENC). Staff members have been invited to present research studies at national and international conferences, including NIH, DoD and individual specialty conferences.

The educational program included outreach throughout the DoD and community centers with several providers presenting in prominent national and international venues. DVBIC Fort Belvoir staff look forward to continuing and expanding on these great activities in the coming year.



TBI forum participants browse resources. (U.S. Navy photo courtesy of Mass Communications Specialist First Class Christopher Krucke)

VA Medical Center, Palo Alto, California

DVBIC Palo Alto has been a fundamental part of the success of VA Palo Alto Health Care System (VAPHCS) and continues to make a significant impact on clinical research, care coordination and education and outreach. DVBIC Palo Alto supports the Polytrauma System of Care (PSC) and collaborates with national, regional and local community centers and stakeholders.

In 2015, the research team saw growth in the “Prospective Clinical Tracking Form Study” (CTF). Enrollment in the study reached 370 participants, with 80 participants enrolled during 2015. The team presented a CTF poster at the October American Congress of Rehabilitation Medicine conference in Dallas, Texas, and submitted a manuscript publication.

The Long-Term Outcomes (LTO) project team published a manuscript in the journal *Brain Injury* summarizing the successes and challenges participants experienced five or more years after a moderate or severe TBI. Of note, most participants were active in work or school, although participants experienced numerous problems, such as cognitive symptoms and difficulties with activities of daily living. The most common service needs were for help with memory and for information about available services. Participants with psychological health issues and those alienated from their community had difficulty getting their needs addressed. A second LTO manuscript is scheduled for submission for publication.

DVBIC Palo Alto staff expanded its research collaboration with the PSC through work on the study “Improved Understanding of Medical and Psychological Needs in Veterans and Service Members with Chronic TBI,” known as I-MaP. Further, DVBIC/PSC research staff submitted a manuscript for publication for the women and TBI study titled, “The Differing Effects of Traumatic Brain Injury between Female and Male Veterans.” The research team continues to work on innovative studies, such as adding neuroimaging to the CTF study to understand the functional and structural changes that occur in the brain throughout the course of recovery.

DVBIC staff hosted the 5th Annual TBI Research Forum on March 27, gathering over 130 researchers and clinicians to network, present clinical updates and increase awareness of recent innovations in TBI research. Staff presented 22 posters that represented abstracts submitted from a wide region, including large academic and community hospitals. The recovery support specialist (RSS) hosted a DVBIC Education Booth.

Palo Alto has served over 700 service members and veterans, administering care coordination services through the Recovery Support Program. The RSS expanded a network of providers and a point of contact list that enhances care coordination within the RSS region, leveraging community partnerships, identifying areas of potential outreach, and professionally improving social work credentials by obtaining master level licensure

Palo Alto has hosted, exhibited or supported over 300 local, regional and national educational events that support clinical providers, service members, veterans and their families. Highlights from this year include:

- In March, the RSS hosted TBI Brain Injury Awareness outreach table at VA Palo Alto for TBI Awareness Month, with over 130 service providers and veterans in attendance.
- In April, the RSS attended an event at Moffett Airfield, to host a DVBIC outreach table for their military child event. The goal of the event was to raise awareness about bicycle/helmet safety and celebrate military children. More than 100 military families, children, and community partners attended the event.
- In June, the RSS hosted a DVBIC table at the 2nd Annual Posttraumatic Stress Disorder (PTSD) Awareness Month event at Menlo Park VHA National Center for PTSD. The goal was to raise awareness about TBI/PTSD comorbidity and provide DVBIC TBI services/information to more than 30 veterans who attended this event.
- In October, the REC and RSS presented a DVBIC exhibit table at VA Palo Alto in support of Disability Awareness Day. This event was sponsored by VAPAHCS People with Disabilities Special Emphasis Program. The event provided education resources and information concerning how veterans with disabilities can adapt and overcome personal challenges.



Margaret MacDonald, M.D., BCN, DVBIC clinical research director, Fort Carson Warrior Recovery Center, presents “The Role of Integrative Medicine in the Treatment of TBI” at the Palo Alto 5th Annual TBI Research Forum. At left is Stephen Ezeji-Okoye, M.D., deputy chief of staff, VAPAHCS, and integrative health coordinator, Patient Care Services. At right is James Hallenbeck, M.D., associate chief of staff, Extended Care VAPAHCS, and associate professor of medicine, Stanford University. (Photo courtesy of Joe Mathews, VAPAHCS)

VA Medical Center, Tampa, Florida

James A. Haley Veterans Hospital houses DVBIC Tampa. The hospital is an acute and tertiary medical center that serves the largest number of veterans in the nation. The VA Polytrauma/TBI program is an integrated system of care that provides the highest level of comprehensive inpatient and outpatient medical and rehabilitative services for all levels of TBI as well as the most complex and severely injured. The new James A. Haley Veterans Hospital Polytrauma and Rehabilitation Center is a state-of-the-science facility that provides comprehensive, compassionate, high-quality interdisciplinary care to patients and their families. The site undertakes clinical research, ensures clinical care, and develops educational programs in coordination with other DVBIC sites and locations.

The research staff has been busy this year with the TBI Model Systems and the “Improved Understanding of Mental and Psychological Needs in Veterans and Service Members with Chronic TBI” protocol, or I-MaP. Tampa has enrolled over 360 patients. Research staff are also embedded in the Chronic Effects of Neurotrauma Consortium (CENC) study and have enrolled over 65 patients.

A focus group, involving caregivers of veterans with severe TBI complicated by disorders of consciousness, initiated a change in direction in early 2015 for the SmartHome project. Since March, new assessment tools have been created to attempt to capture the needs of caregivers for this specific patient population. Two new SmartHomes are up and running in the Tampa Bay area, with another three in the queue. The caregivers have been reporting high rates of satisfaction and success since having the new technology in their homes. In September, the SmartHome project received funding for Fiscal Year 2016. Additionally, the findings that came out of the focus group were presented in October as a poster session at the annual American Congress of Rehabilitation Medicine (ACRM) conference in Dallas, Texas. Plans for further assessment of caregiver needs, as well as behaviors of those veterans with severe TBI complicated by disorders of consciousness will be further investigated with the SmartHome project over the next year.

The regional education coordinator delivered or facilitated 156 education events, including Yellow Ribbon Events, reaching 6,100 service members, civilian and DoD care providers, veterans and family members.

The TBI recovery support specialist provided regular follow-up to Operation Enduring Freedom/Operation Iraqi Freedom/Operation New Dawn service members or veterans who screened positive for TBI regardless of injury location. This follow-up included assessments and facilitating connections to direct service providers who could meet the patient’s needs.

The RSS and REC, along with the neuropsychologist, continued involvement in an initiative at MacDill Air Force Base 6th Medical Group providing a crosswalk of services available at James A. Haley VA to meet the needs for active duty service members with TBI. This year, the MacDill Air Force Base 6th Medical Group received the 2015 Annual Air Force Medical Squadron Award presented by Gen. Kory Cornum for unique collaboration between DVBIC, Tampa VA and 6th Medical Group for TBI assessment and care.

VA Medical Center, Minneapolis, Minnesota

Minneapolis DVBIC is located within the Minneapolis Veterans Affairs Health Care System (MVAHCS), a Department of Veterans Affairs VISN-23 tertiary care referral center and location of one of the five VA Polytrauma Rehabilitation Centers (PRCs). The DVBIC personnel at the Minneapolis VAHCS undertake clinical investigative research, care coordination, and education.

New to the position in September, the regional education coordinator coordinated meetings within the Minneapolis VA Polytrauma/Traumatic Brain Injury Social Work team to determine current level of organizational relationships and foster cohesion between the VA Polytrauma/TBI System of Care and DVBIC. In addition, the REC attended and collaborated with the Minnesota Brain Injury Alliance at their Interagency Leadership Council meeting; provided information on DVBIC's role at the VA Medical Center; disseminated materials on TBI awareness; and contacted community agencies, such as the Minnesota Department of Health and the Minnesota Department of Human Services TBI Advisory Committee.

Other outreach included distribution of DVBIC information at recreational therapy events; participation as an exhibitor at the Minneapolis VA Caregiver Appreciation Day; and visits to the local veterans centers, community-based outpatient clinics, and University of Minnesota Disability Resource Center. The REC collaborated with several other RECs nationwide to enhance a relationship with members of Special Operations Forces, their commands, and organizations, such as the Special Operations Medical Association, to provide optimal outreach and education for this community and their families.

The TBI recovery support specialist worked to optimize clients' engagement, treatment and recovery from TBI by providing recovery support and connecting care and resources to the military and veterans' communities and their members recovering from TBI throughout the 11-state region. The RSS conducted regular needs assessments, provided follow-up consultations, helped facilitate connections to TBI care and resources for active duty service members, veterans and their families impacted by brain injury, and consulted with providers on behalf of clients served by the program.

The research program at DVBIC Minneapolis continues to grow. Staff developed strong research collaborations locally and nationally to include numerous groups within the Minneapolis VA, as well as the Iowa City and Palo Alto VAs and Ohio State University. The research team developed novel intervention-focused research protocols that address TBI and comorbid conditions.

The research team recruited and assessed patients for two ongoing studies: "Longitudinal, Multi-Domain Assessment of Neurodegeneration in Veterans" and "Enhancing Cognitive Control Using Transcranial Direct Current Stimulation." Additional staff aid in the execution of four new approved projects: "Deep Transcranial Magnetic Stimulation for the Treatment of Alcohol Use Disorder in Mild Traumatic Brain Injury," "Deep Transcranial Magnetic Stimulation for Medication Refractory Depression in Mild Traumatic Brain Injury," "Retinal Imaging with Adaptive Optics for Early Diagnosis of Traumatic Brain Injury (TBI)," and "Visual Sensory Impairments and Progression Following Mild Traumatic Brain Injury."



Research Coordinator, Molly Gierke, staffs a DVBIC table at the Minneapolis VA Wellness Fair in June 2015. (Photo courtesy of Carolyn Gentz)

VA Medical Center, Richmond, Virginia

Richmond DVBIC research staff produced publications or presentations on symptom trajectories, pain, mental health conditions after blast (featured in the VA research newsletter), mTBI and posttraumatic stress disorder effects on balance, insomnia and TBI, structured interview for mTBI diagnosis, and diagnostic accuracy of a PTSD checklist.

One of the posters displayed at the 2015 National Capital Area TBI Research Symposium included “Brain Volume Changes in Veterans with mTBI,” which won best poster by a graduate student. Other posters were “Traumatic Stress Studies on Using EEG to Validate PTSD Symptom Structure in Vets with mTBI” and “Distinctions in Slow EEG Oscillations Between mTBI and PTSD.”

DVBIC research staff attended training conferences for rehabilitation nursing and medicine, military and veteran health, and mental health and TBI research and clinical care. The research study “Improved Understanding of Mental and Psychological Needs in Veterans and Service Members with Chronic TBI,” known as I-MaP, was approved. Staff finished data collection for “Treatment for Social Competence in Military Veterans, Service Members and Civilians with Traumatic Brain Injury.”

In March 2015, regional education coordinator Randy Gross was the subject of an interview published on the DCoE blog to coincide with Brain Injury Awareness Month. The blog received great attention across the internet, including multiple DoD Facebook and blog sites. Randy was also featured in the DVBIC video series, “A Head for the Future,” in December 2015.

The recovery support specialist presented at the Mid-Atlantic VA/ DoD Collaborative Care Coordination Symposium “Patient-Centered, Goal-Directed Care in Acquired Brain Injury,” June 22, 2015, at Hunter Holmes McGuire VA Medical Center. The symposium focused on improving access to appropriate services for TBI care of service members and veterans by promoting and enhancing interagency communication, networking and collaboration among all DoD and VA care coordinators. The program format and agenda serve as potential models for other regions of the VA TBI/Polytrauma System of Care.

The RSS was invited to present with colleagues at DCoE’s 2015 Summit, September 11, 2015, “Transition in Care: A Federal Joint Agency Case Management Model.” DVBIC National Director Col. Sidney Hinds presented RSS Carolyn Donahue with a Certificate of Appreciation for her commitment to the DVBIC mission. General Dynamics Information Technology (General Dynamics Health Solutions) also presented her with a Distinguished Performance Award for her efforts to improve the lives of service members, veterans and families affected by TBI



Dr. Brooke Heintz, at left, education network coordinator, and Richmond REC Randy Gross, give a thumbs up to the DVBIC displays at the DoD Warrior Games 2015 in June at the Marine Corps Base in Quantico, Virginia. (Photo courtesy of Dr. Brooke Heintz)

International Outreach

Capt. Spells and Lt. Cmdr. Gill Deployed to Liberia

Capt. Cynthia Spells and Lt. Cmdr. Ranjodh Gill deployed March 5, 2015, to Liberia as part of the U.S. Public Health Service Ebola support mission. Capt. Spells is the Clinical Affairs care coordination chief; she returned to DVBIC June 1. Lt. Cmdr. Gill is acting Clinical Affairs surveillance chief, Education materials chief, and acting clinical training and education chief. He returned to DVBIC May 26. Both returned after mandated quarantine.

Capt. Blankenship Returns from Liberia Deployment

Capt. James Allen Blankenship returned Jan. 12, 2015, after mandated quarantine from Liberia, where he had deployed as part of the U.S. Public Health Service Ebola support mission. Capt. Blankenship is DVBIC's Research Division program evaluation chief and VA/Sexual Harassment-Assault Response and Prevention coordinator.

National Director Lectures, Visits Germany, Spain and Italy

Col. Sidney Hinds, DVBIC national director, presented "Managing TBI for U.S. Service Members and Their Families: A Pathway of Care" at the Mental Health and Mild TBI Workshop organized by the U.S. Army Europe Regional Medical Command and the NATO Centre of Excellence for Military Medicine in Ramstein, Germany. The workshop organizers collected best practices, exchanged experiences and suggested future areas of exploration. The national director also conducted a site assistance visit to the Landstuhl Regional Medical Center DVBIC site in Landstuhl, Germany.

In May, Col. Hinds lectured at the Medical Effects of Ionizing Radiation course at Landstuhl, Germany, and conducted site assistance visits and TBI training in Rota, Spain, and Naples and Sigonella, Italy.



DVBIC National Director Col. Sidney Hinds presents a DVBIC challenge coin and certificate of appreciation to Dr. Scott Swasey, departing DVBIC/TBI director, Landstuhl Regional Medical Center. (Photo courtesy of Dr. Juan Rivera)



Resources



A Head for the Future Public Awareness Campaign

“Military readiness can make you physically and mentally strong, but an extreme approach to work and play puts you at greater risk of getting a concussion.”

DVBIC created the A Head for the Future initiative to raise awareness and lower the risk of concussion.

How? By spreading the word about signs, symptoms and treatment of brain injuries and educating service members and veterans about how to prevent them.

We’re talking to you – military families, line leaders, health care providers and caregivers.

The A Head for the Future website explains how to:

- Prevent a TBI
- Recognize the symptoms of a TBI
- Recover from a TBI
- Care for a TBI patient

This multi-year web and media initiative to promote TBI and concussion awareness, prevention and recovery was re-launched in 2015 with promotional flyers, website redesign, video filming, and TBI educational creative materials for target population ages 18-35 (postcards, posters, TBI champion videos, fact sheets, partnership flyers) and other targeted materials for outreach events, including a regional education coordinator toolkit. New fact sheets are available at <http://dvbic.dcoe.mil/aheadforthefuture/materials>. Visit the A Head for the Future website at <http://dvbic.dcoe.mil/aheadforthefuture>.





MYTH

TBIs in the military occur most often in combat.

FACT

The majority of TBIs treated by military physicians are diagnosed in noncombat settings.

MYTH

Blasts are the number one cause of military TBIs.

FACT

Motor vehicle collisions — crashes on motorcycles or cars — account for the majority of TBIs in the military.* Most of these injuries are preventable.

*Department of Defense Medical Surveillance Monthly Report, Vol. 20, No. 3, March 2013, “External causes of traumatic brain injury, 2000-2011”

MYTH

There are limited treatment options for concussions and TBI.

FACT

Through innovative treatment and your military or civilian health care providers, recovery from brain injury is more attainable than ever before.

Practitioner and Patient Resources

Crisis Intervention (24/7)

Department of Veterans Affairs, Military and Veterans Crisis Line

1-800-273-8255, press 1

Safety Announcement

DVBIC posted a safety announcement on its website in January, modifying the sleep medication dosage in the Concussion Management Algorithm in the Deployed Setting (v. 4.0; 2012) to reflect updated FDA guidelines. The label change specifies new dosage recommendations for zolpidem products (i.e., Ambien and Ambien extended release) because of the known risk of next-morning impairment with these drugs.

Read more at <http://dvbic.dcoe.mil/medical-dosage-guidance-update>.

Recovery Support Program link

The RSP brochure and 2015 fact sheet are free and downloadable from dvbic.dcoe.mil/tbi-recovery-support-program.

For the fact sheet, click on http://dvbic.dcoe.mil/sites/default/files/DVBIC_TBI_Recovery-Support-Program_FactSheet_2015-02-19.pdf.

Web Resources and Products

DVBIC is committed to providing resources on traumatic brain injury to help service members, veterans, family members and health care providers. Click on the link to access the Resources page: <http://dvbic.dcoe.mil/resources>.

Resources include clinical tools such as clinical recommendations, support tools, training slides, fact sheets and brochures to support military and civilian health care providers in assessing and treating service members and veterans who have sustained a TBI.



Traumatic Brain Injury Recovery Support Program

A Parent's Guide to Returning Your Child to School After a Concussion

FAMILIES

Head Injury and Dizziness
Concussion/Mild Traumatic Brain Injury (mTBI)

DVBIC
DEPARTMENT OF VETERANS AFFAIRS
TRAUMATIC BRAIN INJURY CENTER

ACTIVE DUTY, GUARD & RESERVE VETERANS

Why am I dizzy?
Dizziness is one of the symptoms that you may experience after a concussion. During the week or two following a concussion, the vast majority of patients will recover from their dizziness and other associated symptoms.

There are several possible causes of your dizziness including:

- migraines
- a problem in your inner ear
- an injury to the muscles and nerves in your upper neck
- minor changes in the parts of your brain that control balance
- minor changes in the parts of your brain that control eye movement and vision
- a medication side effect
- low blood pressure
- anxiety

What is dizziness?
Dizziness may make you feel unsteady and like things are moving when they are not.
Symptoms of dizziness may include:

- feeling like there is rotation, spinning or movement
- feeling unsteady, like you are losing your balance
- feeling hazy or like you are about to faint/pass out

What can I do?

- maintain your daily routine
- be physically active but stop if you get dizzy
- minimize alcohol and caffeine
- drink plenty of water
- get plenty of sleep
- talk to your provider about medications and supplements you are taking
- discuss options for treatment with your provider
- keep a dizziness journal following the example below and share it with your provider

What makes you dizzy (i.e., position, movement, activity)?	How long are you dizzy (i.e., seconds, hours)?	What makes you feel better?	Is there a certain time of day your dizziness is worse?

PATIENTS

2015 Publications and Presentations

Publications

- Amyot, F., Arciniegas, D.B., Brazaitis, M.P., Curley, K.C., Diaz-Arrastia, R., Gandjbakhche, A., ... Stocker, D. (2015). A review of the effectiveness of neuroimaging modalities for the detection of traumatic brain injury. *Journal of Neurotrauma*, 32(22), 1693-721. <http://dx.doi.org/10.1089/neu.2013.3306>
- Bailie, J.M., Cole, W.R., Ivins, B., Boyd, C., Lewis, S.C., Neff, J., & Schwab, K. (2015). The experience, expression, and control of anger following traumatic brain injury in a military sample. *Journal of Head Trauma Rehabilitation*, 30(1), 12-20. <http://dx.doi.org/10.1097/HTR.0000000000000024>
- Belanger, H.G., Silva, M.A., Donnell, A.J., McKenzie-Hartman, T., Lamberty, G.J., & Vanderploeg, R.D. (2015). Utility of the neurobehavioral symptom inventory as an outcome measure: A VA TBI model systems study. *Journal of Head Trauma Rehabilitation*. [Epub ahead of print]. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/26709585>
- Belanger, H.G., Vanderploeg, R.D., & McAllister, T. (2015). Subconcussive blows to the head: A formative review of short-term clinical outcomes. *Journal of Head Trauma Rehabilitation*. [Epub ahead of print]. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/25931186>
- Belanger, H.G., Vanderploeg, R.D., & Sayer, N. (2015). Screening for remote history of mild traumatic brain injury in VHA: A critical literature review. *Journal of Head Trauma Rehabilitation*. [Epub ahead of print]. <http://dx.doi.org/10.1097/htr.0000000000000168>
- Bell, K.R., Brockway, J.A., Fann, J.R., Cole, W.R., St Delore, J., Bush, N., Lang, A.J., Hart, T., Warren, M., Dikmen, S., Temkin, N., Jain, S., Raman, R., ... Stein, M.B. (2015). Concussion treatment after combat trauma: Development of a telephone based, problem solving intervention for service members. *Contemporary Clinical Trials*, 40, 54-62. <http://dx.doi.org/10.1016/j.cct.2014.11.001>
- Bogner, J., French, L.M., Lange, R.T., & Corrigan, J.D. (2015). Pilot study of traumatic brain injury and alcohol misuse among service members. *Brain Injury*, 29(7-8), 905-14. <http://dx.doi.org/10.3109/02699052.2015.1005136>
- Carlozzi, N.E., Kratz, A.L., Sander, A.M., Chiaravalloti, N.D., Brickell, T.A., Lange, R.T., Hahn, E.A., Austin, A., Miner, J.A., ... Tulskey, D.S. (2015). Health-related quality of life in caregivers of individuals with traumatic brain injury: Development of a conceptual model. *Archives of Physical Medicine and Rehabilitation*, 96(1), 105-13. <http://dx.doi.org/10.1016/j.apmr.2014.08.021>
- Cooper, D.B., Bunner, A.E., Kennedy, J.E., Balldin, V., Tate, D.F., Eapen, B.C., & Jaramillo, C.A. (2015). Treatment of persistent post-concussive symptoms after mild traumatic brain injury: a systematic review of cognitive rehabilitation and behavioral health interventions in military service members and veterans. *Brain Imaging and Behavior*, 9(3), 403-20. <http://dx.doi.org/10.1007/s11682-015-9440-2>
- DiFazio, M., Silverberg, N.D., Kirkwood, M.W., Bernier, R., & Iverson, G.L. (2015). Prolonged activity restriction after concussion: Are we worsening outcomes?. *Clinical Pediatrics*. [Epub ahead of print]. <http://dx.doi.org/10.1177/000922815589914>
- Holcomb, E.M., Towns, S., Kamper, J.E., Barnett, S.D., Sherer, M., Evans, C., & Nakase-Richardson, R. (2015). The relationship between sleep-wake cycle disturbance and trajectory of cognitive recovery during acute traumatic brain injury. *Journal of Head Trauma Rehabilitation*. [Epub ahead of print]. doi:10.1097/HTR.0000000000000206
- Ivins, B.J., Lange, R.T., Cole, W.R., Kane, R., Schwab, K.A., & Iverson, G.L. (2015). 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. <http://dx.doi.org/10.1093/arclin/acu072>
- Janak, J.C., Cooper, D.B., Bowles, A.O., Alamgir, A.H., Cooper, S.P., Gabriel, K.P., ... Orman, J.A. (2015). Completion of multidisciplinary treatment for persistent postconcussive symptoms is associated with reduced symptom burden. *Journal of Head Trauma Rehabilitation*. [Epub ahead of print]. <http://dx.doi.org/10.1097/HTR.0000000000000202>
- Jaramillo, C.A., Cooper, D.B., Wang, C.P., Tate, D.F., Eapen, B.C., York, G.E., & Pugh, M.J. (2015). Subgroups of US IRAQ and Afghanistan veterans: Associations with traumatic brain injury and mental health conditions. *Brain Imaging and Behavior*, 9(3), 445-55. <http://dx.doi.org/10.1007/s11682-015-9402-8>
- Kennedy, J.E., Cooper, D.B., Reid, M.W., Tate, D.F., & Lange, R.T. (2015). Profile analyses of the personality assessment inventory following military-related traumatic brain injury. *Archives of Clinical Neuropsychology*, 30(3), 236-47. <http://dx.doi.org/10.1093/arclin/acv014>
- Kratz, A.L., Sander, A.M., Brickell, T.A., Lange, R.T., Carlozzi, N.E. (2015). Traumatic brain injury caregivers: A qualitative analysis of spouse and parent perspectives on quality of life. *Neuropsychological Rehabilitation*. [Epub ahead of print]. doi:10.1080/09602011.2015.1051056
- Lange, R.T., Brickell, T.A., & French, L.M. (2015). Examination of the mild brain injury atypical symptom scale and the validity-10 scale to detect symptom exaggeration in US military service members. *Journal of Clinical and Experimental Neuropsychology*, 37(3), 325-337. <http://dx.doi.org/10.1080/13803395.2015.1013021>

- Lange, R.T., Panenka, W.J., Shewchuk, J.R., Heran, M.K., Brubacher, J.R., Bioux, ... Iverson, G.L. (2015). Diffusion tensor imaging findings and postconcussion symptom reporting six weeks following mild traumatic brain injury. *Archives of Clinical Neuropsychology*, 30(1), 7-25. <http://dx.doi.org/10.1093/arclin/acu060>
- Lippa, S.M., Fonda, J.R., Fortier, C.B., Amick, M.A., Kenna, A., Milberg, W.P., & McGlinchey, R.E. (2015). Deployment-related psychiatric and behavioral conditions and their association with functional disability in OEF/OIF/OND veterans. *Journal of Traumatic Stress*, 28 (1), 25-33. <http://dx.doi.org/10.1002/jts.21979>
- Livingston, S.C. (2015). Are there risk factors or behaviors that can make athletes prone to concussions? (Chapter 5) and Why can't an athlete return to play on the same day as the concussion? (Chapter 30). In E.L. Sauers & T.C. Valovich McLeod (Eds), *Quick Questions in Sport-Related Concussion: Expert Advice in Sports Medicine* (pages 23-27 and 155-158). Thorofare, New Jersey: SLACK Incorporated.
- Lusk, J., Brenner, L.A., Betthausen, L.M., Terrio, H., Scher, A.L., Schwab, K., & Poczwardowski, A. (2015). A qualitative study of potential suicide risk factors among Operation Iraqi Freedom/Operation Enduring Freedom soldiers returning to the continental United States (CONUS). *Journal of Clinical Psychology*, 71(9), 843-55. <http://dx.doi.org/10.1002/jclp.22164>
- McCulloch, K.L., Goldman, L.S., Lowe, L., Radomski, M.V., Reynolds, J., Shapiro, C.R., & West, T.A. (2015). Development of clinical recommendations for progressive return to activity after military mild traumatic brain injury: Guidance for rehabilitation providers. *Journal of Head Trauma Rehabilitation*, 30(1), 56-67. <http://dx.doi.org/10.1097/HTR.000000000000104>
- Merritt, V.C., Lange, R.T., & French, L.M. (2015). Resilience and symptom reporting following mild traumatic brain injury in military service members. *Brain Injury*, 29(11), 1325-36. <http://dx.doi.org/10.3109/02699052.2015.1043948>
- Panenka, W.J., Lange, R.T., Bouix, S., Shewchuk, J.R., Heran, M.K., Brubacher, J.R., ... Iverson G.L. (2015). Neuropsychological outcome and diffusion tensor imaging in complicated versus uncomplicated mild traumatic brain injury. *PLOS One*, 10(4), e0122746. <http://dx.doi.org/10.1371/journal.pone.0122746>
- Prakash, R.S., Hussain, M.A., & Schirda, B. (2015). The role of emotion regulation and cognitive control in the association between mindfulness disposition and stress. *Psychology and Aging*, 30(1), 160-71. <http://dx.doi.org/10.1037/a0038544>. Epub 2014 Dec 29
- Regasa, L.E., Thomas, D.M., Gill, R.S., Marion, D.W., & Ivins, B.J. (2015). Military deployment may increase the risk for traumatic brain injury following deployment. *Journal of Head Trauma Rehabilitation*. [Epub ahead of print]. doi:10.1097/HTR.0000000000000155
- Reid, M.W., & Velez, C.S. (2015). Discriminating military and civilian traumatic brain injuries. *Molecular and Cellular Neuroscience*, 66, 123-8. <http://dx.doi.org/10.1016/j.mcn.2015.03.014>
- Scheibel, R.S., Pastorek, N.J., Troyanskaya, M., Kennedy, J.E., Steinberg, J.L., Newsome, M.R., ... Levin, H.S. (2015). The suppression of brain activation in post-deployment military personnel with posttraumatic stress symptoms. *Brain Imaging and Behavior*, 9(3), 513-26. <http://dx.doi.org/10.1007/s11682-015-9376-6>
- Schwab, K.A., Gudmundsson, L.S., & Lew, H.L. (2015). Long-term functional outcomes of traumatic brain injury. *Handbook of Clinical Neurology*, 128, 649-59. <http://dx.doi.org/10.1016/B978-0-444-63521-1.00040-6>
- Sullivan, K.W., Solomon, N.P., Pramuka, M., Quinn, J.E., Teixeira, K.A., & French, L.M. (2015). Computer-based cognitive rehabilitation research in a military treatment facility: Recruitment, compliance, and lessons learned. *Work*, 50(1), 131-42. <http://dx.doi.org/10.3233/WOR-141986>
- Vanderploeg, R.D., & Belanger, H.G. (2015). Stability and validity of the Veterans Health Administration's traumatic brain injury clinical reminder screen. *Journal of Head Trauma Rehabilitation*, 30(5), E29-39. <http://dx.doi.org/10.1097/HTR.0000000000000095>
- Vanderploeg, R.D., Silva, M.A., Soble, J.R., Curtiss, G., Belanger, H.G., Donnell, A.J., & Scott, S.G. (2015). The structure of postconcussion symptoms on the neurobehavioral symptom inventory: A comparison of alternative models. *Journal of Head Trauma Rehabilitation*, (1), 1-11. <http://dx.doi.org/10.1097/HTR.0000000000000009>
- Voss, J.D., Connolly, J., Schwab, K.A., & Scher, A.I. (2015). Update on the epidemiology of concussion/mild traumatic brain injury. *Current Pain and Headache Reports*, 19(7), 32. <http://dx.doi.org/10.1007/s11916-015-0506-z>
- Walker, W.C., Cifu, D.X., Hudak, A.M., Goldberg, G., Kunz, R.D., & Sima, A.P. (2015). Structured interview for mild traumatic brain injury after military blast: inter-rater agreement and development of diagnostic algorithm. *Journal of Neurotrauma*, 32(7), 464-73. <http://dx.doi.org/10.1089/neu.2014.3433>
- Wares, J.R., Hoke, K.W., Walker, W., Franke, L.M., Cifu, D.X., Carne, W., & Ford-Smith, C. (2015). Characterizing effects of mild traumatic brain injury and posttraumatic stress disorder on balance impairments in blast-exposed servicemembers and veterans using computerized posturography. *Journal of Rehabilitation Research and Development*, 52(5), 591-604. <http://dx.doi.org/10.1682/JRRD.2014.08.0197>

- Wilde, E.A., Bouix, S., Tate, D.F., Lin, A.P., Newsome, M.R., Taylor, B.A., ... York, B. (2015). Advanced neuroimaging applied to veterans and service personnel with traumatic brain injury: State of the art and potential benefits. *Brain Imaging and Behavior*, 9(3), 367-402. <http://dx.doi.org/10.1007/s11682-015-9444-y>
- Yerry, J.A., Kuehn, D., & Finkel, A.G. (2015). Onabotulinum toxin a for the treatment of headache in service members with a history of mild traumatic brain injury: A cohort study. *Headache*, 55(3), 395-406. <http://dx.doi.org/10.1111/head.12495>

Presentations

DVBIC staff presented six abstracts at Military and Veterans Health after a Decade at War: Lessons Learned and the Road Ahead. Virginia Commonwealth University's conference in Washington, D.C., July 16-18.

- “Prognosis of military mild traumatic brain injury (mTBI) for non-hospitalized soldiers returning from Afghanistan (OEF) and Iraq (OIF)”
- “Evidence-based clinical practice recommendations for the treatment of common symptoms following concussion/mild traumatic brain injury in deployed and non-deployed settings”
- “Lessons learned: Invisible wounds of war — the Department of Defense response”
- “The development of evidence-based clinical recommendations for the deployed and non-deployed setting”
- “U.S. Department of Defense evidence-based clinical practice recommendation for the treatment of concussion/mild traumatic brain injury and common symptoms in deployed and non-deployed settings”
- “Evidence-based clinical practice recommendations for the assessment and treatment of concussion/ mild traumatic brain injury and return to activity in deployed and non-deployed settings”

DVBIC staff attended and presented at the Military Health System Research Symposium August 17-20 in Fort Lauderdale, Florida.

DVBIC HQ

- “Self-identified unmet service needs and related outcomes in a noncombatant military sample an average of five years after traumatic brain injury”
- “Lessons learned: Evidence based clinical practice recommendations for the treatment of common post-concussion symptoms”

Camp Lejeune

- “Predictors of return to duty”

Fort Bragg

- “A ‘head to head’ comparison of four computerized neurocognitive assessment tools in soldiers with and without mild traumatic brain injury”

Fort Carson

- “Novel motor-skill therapy improves attention and memory in blast-related TBI”

Minneapolis VA Medical Center

- “Deficits in visual system functional connectivity after blast-related mild TBI are associated with injury severity and executive dysfunction”

Naval Medical Center San Diego

- “Assessment of subtle cognitive changes following low level blast exposure”
- “Blast exposure from shoulder-mounted rocket launchers”
- “The influence of demographic factors on the assessment of anger in military personnel”
- “Evaluation of neuromotor function following blast exposure”

San Antonio Military Medical Center

- “Results of the SCORE clinical trial of cognitive rehabilitation therapy for OIF/OEF service members with mild traumatic brain injury”

Tampa VA Medical Center

- “Neuropsychological testing is predictive of severity of disability following traumatic brain injury: Findings from the VA TBI model systems and implications for the Chronic Effects of Neurotrauma Consortium”
- “Injury and psychological predictors of employment stability in veterans and service members with TBI: A VA brain injury model systems study”
- “Is the Neurobehavioral Symptom Inventory (NSI) a good outcome measure? Chronic Effects of Neurotrauma Consortium (CENC) and VA TBI model system study”

Walter Reed National Military Medical Center

- “The Defense and Veterans Brain Injury Center’s 15-year studies: Update, progress and preliminary analyses”
- “Clinical utility of the Neurobehavioral Symptom Inventory Validity-10 in a sample of active-duty service members with mild TBI and co-morbid psychological health conditions”

Additional presentations included:

Cole, W.R. presented on concussion treatment after combat trauma using a telephone-based problem-solving intervention at the Womack Army Medical Center Research Symposium (May 2015) and a poster on the same topic at the annual meeting of the American Association of Critical Care Nurses (June 2015).

Engel J, Franke L, Lennon M, Ochs, A, Hudak A, & Walker, W. presented on morphometric changes in veterans with mTBI by volumetric analysis of MRI. National Capital Area TBI Research Symposium. Bethesda, Maryland. March 9-10, 2015.

MacDonald, M, Cornwell, R.E., Kitchen, D., Hill, C., Nelson, L.A., Pazdan, R. presented on targeting neural timing mechanisms for rehabilitation recovery after blast-related brain injury. American Congress of Rehabilitation Medicine. Dallas, Texas. October 27-30, 2015.

Schwab, K., Terrio, H., Brenner, L., Pazdan, R., Sahota, G., Scher, A. presented on ascertainment and validation of TBI in a large randomly selected cohort of recently deployed soldiers. National Capital Area TBI Research Symposium. Bethesda, Maryland, 2015.

Seibert, L., Lange, R.T., Kennedy, J.E., Duckworth, J., Brickell, T.A.; French, L.M., & Bailie, J.M. presented on the effect of body orientation to blast on risk of post-concussive symptoms among active duty service members. International Neuropsychological Society annual meeting. Denver, Colorado. February 2015.

Acknowledging External Partners



HERO'S HWY

Back cover photo: In an average month, hundreds of wounded soldiers, airmen, marines, sailors and Iraqi personnel pass underneath the American flag-embelized canopy known as Hero's Highway. Ninety-eight percent of the patients treated at Balad's Air Force Theater Hospital survive. (U.S. Air Force photo by Tech. Sgt. Cecilio M. Ricardo Jr.)



DVBIC National Headquarters
1335 East-West Highway, Suite 6-100
Silver Spring, MD 20910
dvbic.dcoe.mil | 800-870-9244

Crisis Intervention Hotline (24/7) 800-273-8255, press 1

