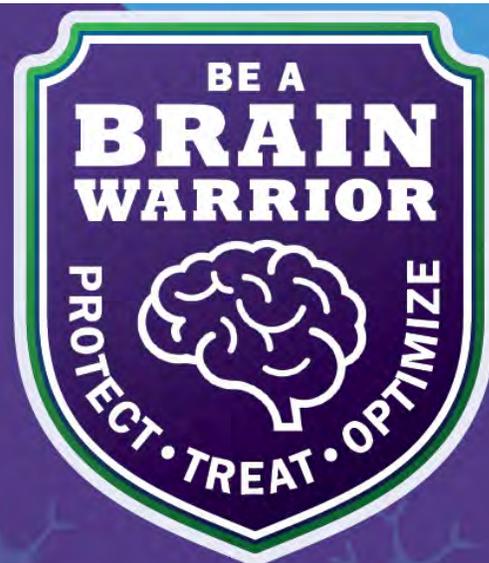


MARCH IS BRAIN INJURY AWARENESS MONTH

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The theme of this year's Brain Injury Awareness Month from the Traumatic Brain Injury Center of Excellence (TBICoE) is, "Be a Brain Warrior: Protect, Treat, Optimize."

One way that the Defense Intrepid Network for TBI and Brain Health, which is headquartered at the National Intrepid Center of Excellence (NICoE), is meeting this charge is by leveraging its 12 years of data to establish standard care practices across the Military Health System (MHS) and to treat service members earlier in their careers. This is possible because the Defense Intrepid Network now has the capability to export the interdisciplinary care model in a more formal way across the Defense Health Agency (DHA).

"The Defense Intrepid Network is meant to provide guidance and oversight for all four tiers of the DHA for clinical care of TBI," said CAPT Carlos Williams, director of the NICoE. The first two tiers are comprehensive TBI programs that treat all aspects of TBI care. Examples are Walter Reed National Military Medical Center and the Naval Medical Center San Diego. Tiers three and four provide some elements of TBI care and are embedded in clinics and smaller hospitals.

The NICoE was designed as a first of its kind interdisciplinary clinical and research organization for TBI care when it opened in 2010.

"Through the Defense Intrepid Network, we now have an unparalleled platform of clinical care that utilizes synchronized assessment and outcomes to not only provide standardized care throughout the MHS at those centers, but to serve as a clinical platform through which advancements can be made through clinical research," said Dr. Thomas DeGraba, chief innovations officer for the NICoE.

The NICoE is unique in the Department of Defense in how it translates research into clinical care to rapidly assess outcomes and to allow more targeted treatment for patients. This also helps address the stigma surrounding associated health conditions of TBI.

"TBI is not just one thing. PTSD is not just one thing. Depression is not just one thing," said Dr. Treven Pickett, department head of research for the NICoE. "We need to continue to refine our understanding of the characterization of these conditions through research."

The research grounds TBI as a heterogenous condition and reinforces the interdisciplinary care model as integral to successful treatment.

"Because of the interdisciplinary program, we view care for treating multiple co-morbidities at the same time as absolutely essential to recovery and improvement to human performance," said Dr. DeGraba.

The Defense Intrepid Network is specifically addressing these topics

in the current 15-year longitudinal study on the effects of TBI incurred by members of the Armed Forces serving in Operation Iraqi Freedom or Operation Enduring Freedom and their families and the Long-term Impact of Military-relevant Brain Injury Consortium – Chronic Effects of Neurotrauma Consortium by the National Research Action Plan. And because of the Defense Intrepid Network's model of translating research into clinical care, new discoveries can be more easily considered in terms of their promise for all centers of care throughout the MHS.

"It is a rare opportunity to be able to take a new concept and apply it to a large number of patients," said Dr. DeGraba.

“*It is difficult to assess the utility of a new program rapidly if you don't have best or standard practices in place to test the new treatment against. Instead, our model allows research to be done in as an efficient manner as possible.*”

– Dr. Thomas DeGraba, Chief Innovations Officer for the NICoE

2023 BRAIN INJURY AWARENESS MONTH



UPCOMING EVENTS

February 28 10 - 10:30 a.m. ET	Community/Partner Event TBI 101 Radio Interview <i>AFN Kaiserslautern Link</i> Speaker: Ms. Rachel Mote, MSN, RN, CCRN	Virtual	March 21 Noon - 1 p.m. MT	Lunch & Learn TBICoE Dizziness and Visual Disturbances Following Concussion/Mild TBI <i>ISC Fort Carson; MS Teams link</i> Speakers: Shannon Glinski, P.T., CBIST & Chris Lewandowski, MSW, LCSW	ISC Fort Carson & Virtual
March 1 7 a.m. CT	Eglin 96MDG Prostaff Brief TBI and Brain Injury Awareness <i>ISC Eglin AFB</i>	ISC Eglin AFB	March 22 11 a.m. - Noon ET	Service Member/Patient/Family Event The Art of Serenity <i>ISC Eglin AFB</i> Learn tools and techniques to self-soothe, reduce impacts of over-stimulation, and slow the over-active mind.	ISC Eglin AFB
March 1 Noon - 2 p.m. CT	Community/Partner Event BIAM Kick-Off Reception <i>ISC Eglin AFB</i> Inspirational guest speakers, refreshments, tours, and meet our team!	ISC Eglin AFB	March 22 Noon - 1 p.m. MT	Provider Training Acute Concussion Care Pathway Training <i>Evans Army Community Hospital</i> Speaker: Chris Lewandowski, MSW, LCSW	ISC Fort Carson
March 2 Noon - 1 p.m. ET	Education Webinar Series Post Traumatic Hypopituitarism <i>NICoE Auditorium; MS Teams link</i> Guest Lecturer: LTC Nicole Vietor, MD	NICoE & Virtual	March 23 1 - 2 p.m. ET	Service Member/Patient/Family Event Healthy Brain Games and Activities for Brain Warriors <i>MS Teams link</i> Rehabilitation providers from the Defense Health Agency and Department of Veterans Affairs will highlight innovative ways in which service members and veterans can improve their memory, cognition, and recall. Hosted by Fort Carson, Fort Drum, Camp Lejeune, and TBICoE. Speakers: Evelyn Galvis, CCC-SLP, CBIS; Doris Davis, M.Ed., CCC-SLP; Jamie Kaplan, M.Ed., CTRS ATP	Virtual
March 3 7:30 - 8:30 a.m. ET	TBI Didactic Lecture Series The Brain Fitness Center: Clinical and Research Applications <i>NICoE Auditorium; MS Teams link</i> Speaker: Katherine Sullivan, PhD	NICoE & Virtual	March 24 7:30 - 8:30 a.m. ET	TBI Didactic Lecture Series Collaborative Approach to Managing TBI-Related Visual Dysfunction <i>NICoE Auditorium; MS Teams link</i> Speakers: Dr. Geeta Girdher, Dr. Dorothy Porcello, Dr. Bryan Sixkiller	NICoE & Virtual
March 3 11:30 a.m. - 1 p.m. CT	Provider Training Helping with Headaches Following TBI <i>ISC Fort Hood; MS Teams link</i> Hosted by Fort Hood and Fort Carson. Speakers: Don McGeary, PhD, ABPP & Casey Becker BSN, RN, CBIS	ISC Fort Hood	March 24 9 - 11 a.m. CT	Service Member/Patient/Family Event Be a Family of Brain Warriors: Ways to Advocate for Yourself and Your Loved Ones <i>MS Teams link</i> Hosted by Fort Hood, Fort Bragg, Camp Lejeune, and Fort Campbell.	Virtual
March 3 1 p.m. CT	Community/Partner Event Intrepid Spirit Open House <i>ISC Fort Hood</i>	ISC Fort Hood	March 24 Noon CT	Provider Training TBI Visual Assessment and Management for the Primary Care Optometrist Virtual CE event (AF Operational Vision and Air Force TBI Working Group) to cover TBI visual assessment and management for the primary care optometrist. Questions from DHA eye care providers will be addressed in a Grand Rounds format. Sponsored by the Vision Center of Excellence.	Virtual
March 8 11 a.m. - Noon CT	Service Member/Patient/Family Event Healthy Brains 101 <i>ISC Eglin AFB</i> A free class to learn healthy habits to support brain health & recovery.	ISC Eglin AFB	March 24 Noon CT	Provider Training The Army's Perfect Storm: Attention & Memory in the Army <i>ISC Fort Bliss</i> Presentation at the Medical Professional Development Conference and open to all licensed providers at William Beaumont Army Medical Center. It will cover understanding PTSD at the layman level; impact of attention on memory; and what impacts memory in the soldier. Speaker: Sean Sebesta, MD	Fort Bliss
March 10 7:30 - 8:30 a.m. ET	TBI Didactic Lecture Series Neuroimaging in Traumatic Brain Injury <i>NICoE Auditorium; MS Teams link</i> Guest Lecturer: COL Robert Shih, MD	NICoE & Virtual	March 29-31	Provider Training Brain Injury Awareness Conference <i>ISC Joint Base Lewis-McChord; MS Teams link</i> Sponsored by the Center for Neuroscience and Regenerative Medicine; TBI Research Center USU; University of Washington School of Medicine; VA Puget Sound Health Care System.	ISC JBLM & Virtual
March 10 11 a.m. - 1 p.m. CT	Community/Partner Events TBI Educational Resource Fair <i>Carl R. Darnall Army Medical Center</i>	ISC Fort Hood	March 31 7:30 - 8:30 a.m. ET	TBI Didactic Lecture Series Utilization of the Computer Assisted Rehabilitation Environment (CAREN) for Rehabilitation and Research <i>NICoE Auditorium; MS Teams link</i> Speaker: Sarah Kruger	NICoE & Virtual
March 15 11 a.m. - 1 p.m. CT	Service Member/Patient/Family Event MIND Diet Cooking Class <i>ISC Eglin AFB</i> A hands-on cooking class to learn healthy food habits to improve cognition and brain health.	ISC Eglin AFB	March 31 10 a.m. - 2 p.m. CT	Community/Partner Events Open House Carnival <i>ISC Eglin AFB</i> Join us for a fun day of games and activities!	ISC Eglin AFB
March 16 11 a.m. - 2 p.m. ET	Community/Partner Event Creative Arts Café <i>ISC Eglin AFB</i> A community event to share creativity in Art, Music, Poetry, and Comedy.	ISC Eglin AFB			
March 17	Community/Partner Event TBI 5K Fun Run/Walk <i>ISC Eglin AFB</i> Community event to promote awareness of TBI.	ISC Eglin AFB			
March 18 10 a.m. - 2 p.m. ET	Community/Partner Event Back to Basics: Brain Awareness Day <i>National Museum of Health and Medicine, Silver Spring, MD</i> Join brain scientists, researchers, clinicians, and museum educators and enjoy interactive demonstrations and exhibits about the brain. Learn about prevention and treatment of traumatic brain injury, discover how your brain works, and explore the exciting world of neuroscience! More information on the NMHM website .				

#BIAMonth

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BRAIN FITNESS CENTER STAFF EXPAND ACCESS TO TOOLS ACROSS DEFENSE INTREPID NETWORK

One capability that Defense Intrepid Network providers are fortunate to have is the Brain Fitness Center (BFC). Through the BFC, patients can access a variety of computer-based programs to supplement traditional cognitive rehabilitation services, either in-person, remotely, or a combination. The BFC also includes a pod where patients can work on heart-rate-variability biofeedback in a closed, optimized environment.

In 2022, BFC staff created new online entry points for all Defense Intrepid Network sites so providers at each location can access the same brain-training tools. This access allows providers to track individual patient progress and performance over time.

These capabilities are enhanced by BFC staff continually measuring independent outcomes and tracking the feasibility and effectiveness of program use to ensure patient treatment is optimized.

One value of the BFC is that it can extend treatment services even after patients transition back home or return to active duty.



The Brain Fitness Center is where patients can access a variety of computer-based programs to supplement traditional cognitive rehabilitation services, either in-person, remotely, or a combination.

Continued on Page 4

NICoE Events

MAR
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Live Music Performances. 1200 – 1500 ET at WRNMMC, BLDG 19 America Lobby.

MAR

Troops to Songwriters. A song-writing group for active-duty/veteran patients culminating in live performances. Facilitated by Tech. Sgt. Craig Larimer, U.S. Air Force musician and producer. Location and date: TBA.

MAR

Wellbeing Support during MHS Genesis Rollout. Collaborating with the American Red Cross to support stress resilience during the MHS Genesis rollout. Current plans include live music, art making (encouragement cards for colleagues), therapy dogs, and an available yoga/mindfulness facilitator. Location and date: TBA.

MAR
31

Creative Arts Therapy Café Art Show. Organized by a Creative Forces Creative Arts therapist and the clinic team to showcase and honor the art and poetry of service members currently or previously engaged in clinical art therapy treatment at Intrepid Spirit Center (ISC) Joint Base Lewis-McChord. Attendees will take a visual journey into the works of patients who have courageously and creatively made the invisible visible through drawing, painting, sculpture, and mask-making. The event will include live musical performance by America's First Corps Band.

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Live Music Performances. 1100 – 1300 ET at WRNMMC, BLDG 19 America Lobby.

BRAIN FITNESS CENTER STAFF EXPAND ACCESS TO TOOLS ACROSS DEFENSE INTREPID NETWORK



The Brain Fitness Center includes a pod where patients can work on heart-rate-variability biofeedback in a closed, optimized environment.

Defense Intrepid Network staff can prescribe the computer-based programs for a year or more to complement the strategies they teach in individual treatment sessions on site.

The online tools offer high intensity stimulation exercises that target processing speed, memory, and attention, and can be customized to fit each patient's level of cognitive function.

Based on principles of neuroplasticity, the programs adjust in real time to push patients at a level that's cognitively challenging but not frustrating. The goal is to strengthen cognitive skills and maintain those gains over time.

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“The Brain Fitness Center offers me a great sense of direction and growth towards my goal of getting closer to functioning at the same level I was (mentally and physically) before my injuries and operations.”
– Retired Army Major with multiple combat-related TBIs
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Over 3,000 patients have been given access to the BFC since 2010.



456 Defense Intrepid Network patients were given access to the BFC in 2022.

FORT HOOD BEGINS 72-HOUR FOLLOW-UP CARE PILOT PROGRAM

In response to the Defense Health Agency's Quadruple Aim Performance Process goal to establish 72-hour follow-up care for acute concussion patients, ISC Fort Hood and Carl R. Darnall Army Medical Center (CRDAMC) launched a pilot program in January.

ISC Fort Hood Director Dr. Scot Engel said being a part of the Defense Intrepid Network for TBI and Brain Health allowed his site to learn from others that have already launched similar programs.

“We were able to collaborate with other directors and learn about the strategies that were successful and unsuccessful,” said Engel. “We took the best ideas of our colleagues to create our process and pilot program.”

Engel's team met with CRDAMC emergency department leadership where the majority of acute TBI patients at Fort Hood come for initial assessment. The new program will route

diagnosed patients with acute concussion to the ISC for 72-hour follow-up evaluation, education, and treatment if needed. Engel indicated that “monitoring of these patients has always been there, but now the ISC is in a better position to leverage our expertise to help meet the needs of our service members and their families.”

The pilot program is part of a larger move by ISC Fort Hood and the Defense Intrepid Network to focus on both chronic and acute TBI patients. Research indicates that with early intervention and education, the risk of persistent symptoms is decreased.

“We want to mitigate the conversion from acute to chronic TBI and in so doing, service members will be able to obtain timely and necessary treatment and rehabilitation closer to the point of injury, which should increase the service members' successful return to duty,” said Engel.

New Groups Help Patients Restore Love of Reading and Improve Cognitive Function at the NICoE

Throughout the Defense Intrepid Network, staff members continually adapt services to respond to patients' feedback and to meet their needs. A common symptom after traumatic brain injury is visual disturbance, which can present as eye strain and fatigue, and can cause once avid readers to avoid the activity.

When NICoE speech-language pathologist Maia Magder and occupational therapist Dorothy Porcello learned that this was the experience of many of their patients, they created Reading for Education and Academic Endeavors (READ) in 2022. It consists of four weekly group sessions that teach how the brain learns to read, what the eyes do while reading (ocular motor function), strategies for note-taking while reading for academic purposes, and how to improve study skills.

READ takes a deep dive into reading comprehension strategies that contribute to success in formal and non-academic settings. With this information, patients are better equipped to achieve their goals, including going back to school to complete a degree or getting a promotion by being better able to complete on-the-job tasks associated with reading.

The content grew out of a similar program Magder and Porcello began in 2019 at the NICoE called Thinking Out Loud (TOLO). TOLO gives service members strategies they can apply in the real world to improve memory, attention, executive function and time management, and reading comprehension in six weekly group sessions.

TOLO also incorporates an experiential mindfulness class taught by NICoE wellness staff and covers how the creation of good habits and routines contribute to cognitive success.

TOLO and READ allow patients to delve deeper into content shared in individual therapy sessions and to learn from peers and guest speakers from the NICoE's rehabilitation team.

TOLO's mission is to give patients the tools they need

to not only function better cognitively at work and at home, but also to understand external factors like stress, poor sleep, behavioral health concerns and uncontrolled pain that may negatively affect cognitive function.

Since January 2019, 120 patients have participated in TOLO and since March 2022, 20 patients have participated in READ.

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“I would hear consistently from patients that they loved reading or considered themselves a reader and now they don't read anymore – that's a loss of identity.”

– Maia Magder, speech-language pathologist at the NICoE

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TRANSITIONING SERVICE MEMBER COMPLETES INTERNSHIP AT ISC JOINT BASE LEWIS-MCCHORD



SpC. Aisha Yesufu stands in front of Intrepid Spirit Center Joint Base Lewis-McChord after completing a 16-week occupational therapy technician internship there.

In January, ISC Joint Base Lewis-McChord Director Dr. Rachel Satter and nurse practitioner Melissa Belle presented SpC. Aisha Yesufu with a clinic coin to honor her successful completion of a 16-week occupational therapy technician internship at the ISC.

ISC JBLM partnered with a local organization to provide Yesufu hands-on learning for a future career as an occupational therapist before she transitioned out of

the Army as an active-duty service member in February.

During her internship, Yesufu observed and supported occupational therapist Dr. Trisha Trujillo in a wide variety of rehabilitation treatments. These included vision therapy, stress management, myofascial trigger point release, recreation, prioritizing goals and habits, emotional regulation, and therapeutic listening. Aisha also supported the Madigan Army Medical Center hand clinic under 1st Lt. Staley Alexander.

"The experience was invaluable," said Yesufu. "It opened my eyes to many aspects of rehabilitation. I was able to see the importance of advocating for one's patients and how amazing it is when the different specialties work together to create the best individualized plan of care possible for patients."

The internship was valuable not only for Yesufu, but also provided helpful perspective and learning to ISC staff.

"Aisha was able to provide me, as a civilian employee, better insight into a service member's lifestyle and barriers they may potentially be facing, improving my ability to provide services," said Trujillo. "She was eager to provide insight to create more relatable vignettes centered around military life used for teaching material."

In addition, Yesufu brought many creative ideas to consider for treatment options and was better able to understand the role occupational therapists play in mild traumatic brain injury treatment, Trujillo said.

ISC FORT CARSON EXPANDS SERVICES THROUGH PARTNERSHIPS

With contributions by LCDR Courtney Wood, M.Ed., CCC-SLP

ISC Fort Carson's strong relationship with Evans Army Community Hospital and the local Colorado Springs market is

bearing fruit in new ways since the opening of its ISC building in June last year.

Currently, ISC staff support the post's orthopedic clinic, neurology clinic, and hand clinic, as well as the hospital's occupational therapy department by working directly inside those spaces once a week, while Fort Carson's pharmacists, optometrists, physical therapists, and occupational therapists

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"The new Intrepid Spirit Center [Fort Carson] is a very calming and welcoming environment, everything from the wall decor to the format of the building has a set purpose and that is, for me, to help ease the mind and focus on treatment when so many other issues are occurring."

– Patient

”

perform regular procedures inside the ISC.

The ISC has received new equipment for optometry, vestibular treatment, vision therapy, and transcranial magnetic stimulation to support these efforts.

"Our staff has always supported Evans [hospital] and the Colorado Springs market with their different clinics and services in the last three to five years," said LCDR Narisa Tappitake, occupational therapist at the ISC. "These new services are a result of relationship building by individual staff and leadership efforts to ensure positive communication and support."



A partnership between ISC Fort Carson and a local community organization created an instrument bank, which is helping patients pursue musical interests and build on their cognitive communications skills outside of treatment. All instruments and materials are free to service members.

By working together and sharing space, resources, and equipment, ISC patients and service members across the market are benefiting from continuity of care and the ability to access services all under one roof, said Tappitake.

At the same time, a partnership between ISC Fort Carson and a local community organization is helping patients pursue musical interests and build on their cognitive communications skills outside of treatment.

When ISC music therapist Claire Shad and speech-language pathologist LCDR Courtney Wood noticed that some patients were struggling in this area, they created an instrument bank at the ISC.

It is now a pilot program that offers instruments and other materials to service members for free. The ISC received its first donations of musical instruments and materials in January.

Schad and Wood hope to grow the instrument bank and use it as a model to support holistic wellness for service members at other sites in the Defense Intrepid Network for TBI and Brain Health.

Get to Know the New Director of Intrepid Spirit Center Fort Belvoir

LCDR Christine Brady's introduction to ISC Fort Belvoir was as a psychologist treating patients. Now as director, that perspective is equipping her to drive the mission, vision, and direction of the clinic moving forward.

Q What is your professional background?

A I received my psychology degree from Nova Southeastern University and completed an internship with the U.S. Navy at Walter Reed National Military Medical Center. I worked as a division officer for behavioral health embedded in the Wounded Warrior Battalion at Camp Pendleton and came to Fort Belvoir in 2014 with the Navy. I then completed an inter-service transfer to the U.S. Public Health Service in 2018 and began working as a psychologist at ISC Fort Belvoir.

Q How do you think that experience will equip and help you to succeed in this role?

A Having started as a provider for the ISC, I have the foundational knowledge of what it's like to be one of them, the challenges they face, and the experience of enjoying working as a team and treating patients.

As interim director of the ISC for a year, I had the opportunity to step into those shoes and see what that looks like from a leadership and management perspective. I'm taking what I've learned in these roles to drive the mission, vision, and direction of the clinic as director.



Q What drew you to apply for this role and the mission of treating service members with TBI, PTSD, and other invisible wounds of war?

A I joined a uniformed service initially to work with service members. I come from an active-duty family, so that was a good fit for me. Being at

the ISC is an opportunity to work as part of an interdisciplinary team. It's an opportunity to see collaboration and cohesion at work with different provider specialties working toward the same goals for the patient. My favorite part is being able

to help a patient in all areas at the same time. That kind of care is the best way for good, sustainable change. Here at ISC Fort Belvoir, you have all these experts in all these treatment areas, and to see that come together for the sake of the patient is very rewarding. I don't want to go anywhere else.

Q What is something unique about you that you offer to this role?

A I've had the opportunity to grow in this clinic as a provider, as service chief, then as interim director, and now director. I've seen the challenges and opportunities at various levels and have seen us grow as a clinic through COVID-19, which provides me that historical perspective, too. I've seen things that have and haven't worked, and I have formed relationships with staff and the leadership team. That all helps make for a more seamless transition to my role now.

Q What are your short- and long-term goals as director?

A The short-term goal is to get through the MHS Genesis transition.

Long-term goals are to grow staff cohesion and to expand our involvement in research, particularly as it relates to the outpatient model as we do not have an intensive outpatient program here. It would be good to have more metrics and research to back what we know to be true: that this treatment model is effective for our patients.

Q What are you most excited about or looking forward to in this role?

A I'm excited to see how the Defense Intrepid Network unfolds and where ISC Fort Belvoir fits into that.

I'm looking forward to the improved collaboration and standardization the network brings and demonstrating the effectiveness of the interdisciplinary care model for improved patient outcomes.

“My favorite part is being able to help a patient in all areas at the same time. That kind of care is the best way for good, sustainable change.”

— LCDR Christine Brady, Director of ISC Fort Belvoir

New and Ongoing Research

Research teams across the Defense Intrepid Network are collaborating among themselves and with outside partners to better understand TBI and associated behavioral health conditions and to evaluate treatment modalities. A small sample of the vast research being conducted toward these aims include:

PSYCHOMETRIC EVALUATION OF THE CAPS-5 AND PSSI-5 IN AN ACTIVE DUTY AND MILITARY VETERAN SAMPLE

The CAPS-5 and PSSI-5, the two most utilized clinical assessment tools for diagnosing and treating posttraumatic stress disorder (PTSD), need to be evaluated for their utility and reliability, especially in service members.

This study will evaluate the psychometric properties of the CAPS-5 and PSSI-5 assessment tools in active-duty military personnel and veterans. Biomarkers believed to be related to PTSD (e.g., biofluid biomarkers, neural activity as measured by EEG) will be collected to inform targeted interventions in specific groups of patients.

The knowledge gained from this study will directly impact the ability of clinicians to reliably diagnose PTSD and assess PTSD symptom severity. It will also directly impact success in the development of novel treatments for PTSD.

EVALUATION OF QEEG DURING ART THERAPY IN SERVICE MEMBERS WITH CO-MORBID TBI AND POSTTRAUMATIC STRESS SYMPTOMS

The presentation of co-morbid mild TBI (mTBI) and behavioral health symptoms experienced by service members returning from deployment remains a challenge. A gap in knowledge exists regarding art therapy's underlying neurobiological mechanisms.

The purpose of this pilot project is to conduct a longitudinal study collecting mobile, quantitative EEG (qEEG) directly before, during, and after art therapy sessions to assess the impact of art therapy on brain networks and associated behavioral health symptoms.

Up to 24 service members with co-morbid mTBI and significant posttraumatic stress symptoms will participate. The goal of this study is to investigate brain signals associated with the art therapy process and to generate preliminary data for the efficacy of art therapy for service members.

Findings from this study may be used to guide future

research in the creative art therapies and to offer creative arts therapists greater insight into the mechanisms of art therapy.

NUTRITION FOR POSTTRAUMATIC HEADACHE STUDY

This multi-site, double-blind, two-arm, randomized clinical trial (RCT) of a dietary intervention for chronic posttraumatic headache (PTH), funded by the Congressionally Directed Medical Research Programs, was completed in 2022.

Chronic PTH is more prevalent among active-duty military than civilian populations and has recently been shown to be more difficult to treat than PTH among civilian TBI survivors.

The study investigated food as a novel PTH treatment through a dietary manipulation of essential fatty acids that have been linked to migraine pain propagation. Clinical and dietary analyses are underway.

If successful, this RCT will support a safe, non-medicinal, dietary (food as medicine) therapy that effectively reduces chronic PTH burden and may reduce overall pain.

COMPLEX ASSESSMENT OF MILITARY PERFORMANCE (CAMP)

ISC Joint Base Lewis-McChord is leading a study to improve TBI diagnostic capabilities by validating a complex physical test battery.

The Complex Assessment of Military Performance (CAMP) Project leverages lessons learned in the Assessment of Military Multitasking Performance (AMMP) project to refine tasks found to be sensitive to concussion to develop a test battery useful in rehabilitation for post-concussive patients.

The project team will evaluate the CAMP test battery of ecologically valid activities relevant to military function as informed by military end-users. The objective of this 3-year project is to validate a complex physical test battery that integrates three tasks from the AMMP project using post-exertion measures with sensitive movement and physiologic metrics.

CAMP uses inexpensive equipment in typical clinical

Continued on Page 9

New and Ongoing Research

space, allowing testing in garrison and more austere environments for rehabilitation assessment.

The aims of the study are: 1) Establish typical performance parameters for active duty service members on the CAMP test battery; 2) Determine elements of the CAMP battery that demonstrate the greatest differences from standard performance and those that serve as strongest predictors of return to duty decisions for 150 individuals with mTBI at 3 collaborating sites; 3) Develop feedback interfaces using healthy control data to provide information for clinicians and patients about performance on each task based on average values for performance and physiologic measures; and 4) Develop materials to share the CAMP application with Defense and Veterans Brain Injury Center and other military stakeholders.

THE CARE-SALTOS INTEGRATED STUDY

The CARE-SALTOS Integrated (CSI) Study: Characterizing Potential Chronic Brain Health Effects of Concussion and Repetitive Head Impact Exposures – Military Cohort Tier 2 is led by the Uniformed Services University of the Health Sciences across sites in the Defense Intrepid Network, with the NICoE as the lead site. It follows up with previously assessed military service academy cadets/midshipmen to address questions about potential long-term effects of mTBI and head impact exposure (HIE).

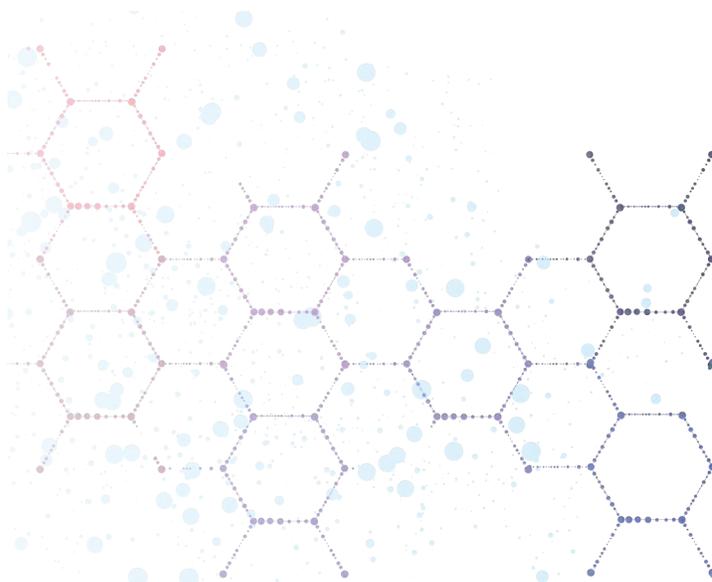
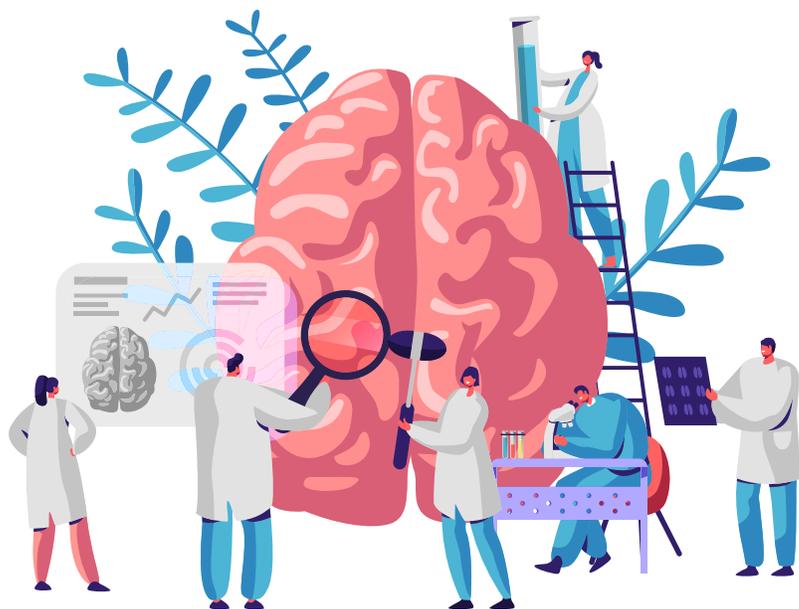
The study aims to: 1) characterize the relationship between mTBI, repetitive HIE, and brain health outcomes up to 10 years following an athletic and military service academy career in the domains of neurological and psychological health, cognition, quality of life, and career/military performance; 2) characterize the relationship between mTBI and/or HIE on brain structure and function up to 10

years following an athletic and military service academy career, using advanced neuroimaging (multimodal MRI, genomic and proteomic markers of neurodegeneration and neuroinflammation); and 3) develop a multidimensional algorithm that predicts brain health up to 10 years after HIE. Research protocols will start in early 2023.

MULTISITE ADVANCEMENT OF RESEARCH ON CHRONIC POSTTRAUMATIC HEADACHE AT ISC FORT HOOD

This Multisite Advancement of Research on Chronic Posttraumatic Headache (MARCH) at ISC Fort Hood aims to determine the efficacy of Combined Cognitive-Behavioral Therapy (CCBT) and Telemedicine-Based Combined Cognitive Behavioral Therapy (TCBT) for posttraumatic headache (PTH). The study compares 525 active-duty service members and veterans in the CCBT and TCBT groups to treatment-as-usual across seven geographically dispersed sites.

The study aims to 1) determine the efficacy of CCBT and TCBT (both using manualized intervention) for PTH compared to treatment as usual; 2) establish the non-inferiority of TCBT to CCBT in the treatment of PTH-related disability (only pursued if either CCBT or TCBT is superior to treatment as usual); and 3) assess the contribution of different types of treatment effects on PTH treatment outcome. The team will run a patient-level model to assess treatment effects based on site, system, and patient-level factors. Researchers will then assess the degree of benefit conditional on the model predictors using procedures from the Predictive Approaches to Treatment Effect Heterogeneity statement (PATH). Research protocols will start in early 2023.



Highlights Around the Network

ISC EGLIN AIR FORCE BASE PARTICIPATES IN TOY FOR TOTS

An **ISC Eglin AFB** speech-language pathologist Evelyn Galvis (center) supports the U.S. Marine Corps Toys for Tots drive this holiday season with the help of the base's 96th Medical Group. The toys were distributed to children across the Emerald Coast in northwest Florida.



ISC EGLIN AIR FORCE BASE STAFF SHARE MUSIC WITH PATIENTS OVER HOLIDAYS



ISC Eglin AFB staff bring music to the 96th Medical Group's inpatient units for those who were hospitalized over the holidays.

ISC EGLIN AIR FORCE BASE ADDS NEW THERAPY GROUP TO ORIENTATION

A licensed clinical social worker at **ISC Eglin AFB** created a new Art of Serenity group to include in the patient orientation process. This will help patients learn tools and techniques to self-soothe, reduce impacts of over-stimulation, and slow the over-active mind before treatment begins.

NURSE CASE MANAGER RECEIVES AWARD



ISC Joint Base Lewis-McChord nurse case manager Barbara Travers received the 2023 Physical Performance Service Line award for her dedication as a staff member, excellence in clinical care, and leadership as a supervisor. She covered multiple tasks during staff vacancies while providing exceptional care with a can-do positive attitude.

ISC EGLIN AIR FORCE BASE CREATES NEW INTAKE FORM

Nurse case managers Tanja Johnson and Matthew Haller created a new electronic intake form for **ISC Eglin AFB**. NICoE staff visited the ISC to provide training and to help launch the new initiative.

LANDSTUHL TBI PROGRAM HOSTS AZERBAIJANI DELEGATION

The **Landstuhl Regional Medical Center TBI Program** recently hosted a delegation of military rehabilitation physicians from Azerbaijan at the request of US Air Force Europe Office of the Command Surgeon. Two neurologists and one physical medicine and rehabilitation physician from Azerbaijan received a detailed explanation of care processes for both acute and chronic TBI patients. Additionally, they received a tour of the facility, training on MACE 2 evaluation, and discussed pain management and electrodiagnostic testing with Medical Director Dr. George Smolinski.



ISC FORT CAMPBELL PHYSICIAN ASSISTANT RECEIVES CIVILIAN SERVICE AWARD

Charles Brill, a physician assistant at **ISC Fort Campbell**, recently received the Civilian Service Achievement Medal.

The award states: "For meritorious achievement as a preceptor to student military physician assistants. Mr. Brill has exhibited unparalleled commitment, leadership, and professionalism in educating the next generation of military physician assistants, culminating in recognition by Class 20-3 as the best Clinical Preceptor that they encountered as students. His devotion to educating the next generation of health care providers is in keeping with the finest traditions of the military service and has brought great credit upon himself, Blanchfield Army Community Hospital, the Army Medical Department Activity-Fort Campbell, Medical Readiness Command-East, the United States Army Medical Command, and the United States Army."



Intrepid Network Patient Testimonials



"My experience with **ISC Fort Carson** was excellent. Everyone on staff is proficient at what they do with a good attitude to go along with it. The providers at this clinic are great as well. They are all very knowledgeable and want what is best for all of their patients. I would highly recommend this clinic to anyone struggling with TBI-related issues."

The staff at **[ISC Fort Carson]** is professional, patient, and very caring toward the service members. I was very impressed with their knowledge and ability to work within my specific needs and challenges. I have served in the Army nearly 29 years and the Intrepid Spirit team is easily the best experience I have ever had with military health care. This team is an example of what right looks like and I am grateful to them for a positive impact on my life."

"I don't know how to explain it, but it felt like everyone cared – I wish all centers were like this. Please use **[ISC Eglin AFB]** as an example for the rest of DHA medical facilities. Their patience and understanding could be an example for every provider and front desk personnel across DHA!!!"

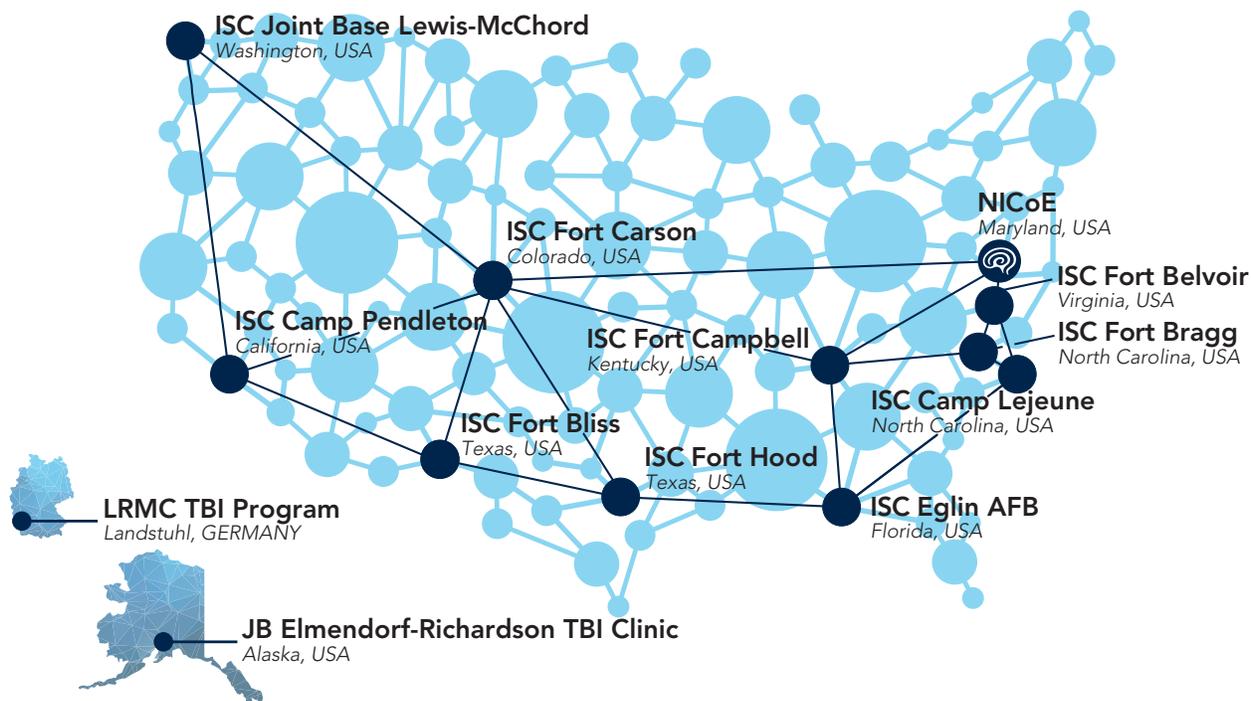
"**[ISC Eglin AFB]** is a natural when it comes to providing care. I can't explain how thankful I am to staff. Because of [them], I can see better and my eyes don't hurt like they used to."

"Profound respect for the staff here [at the **NICoE**]. From the Corpsman to every provider has been professional and genuine. It's pretty profound when you get that at scale."

"I like how the **NICoE** takes a linear approach to your body. They chip away at different aspects of your physical and emotional environment. The **NICoE** was a respite from stress. I haven't felt this great I think in 16 years."



Defense Intrepid Network for TBI and Brain Health



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