

**THE NATIONAL  
INTREPID CENTER  
OF EXCELLENCE**

ANNUAL REPORT

**20  
19**



Walter Reed  
National Military  
Medical Center



**NICoE**

NATIONAL INTREPID CENTER OF EXCELLENCE

# Colleagues—



We are delighted to provide you with the fiscal year (FY) 2019 National Intrepid Center of Excellence (NICoE) Annual Report, which highlights the NICoE's efforts and achievements.

Collaboration is vital to the NICoE, and we are proud to partner with organizations across the Military Health System (MHS), federal government, and academia to advance the understanding and care of traumatic brain injury (TBI). The NICoE served as a model for the Intrepid Spirit Center (ISC) Partnership Network as it developed. With operations now established at the 10 ISC locations, the NICoE and the network play a significant role in the MHS TBI Pathway of Care. In addition to regularly collaborating and sharing best practices, in FY 2019 the NICoE and the network began focusing on synchronizing clinical care by developing standards and processes that ensure service members receive the same level of care regardless of location. NICoE's TBI Portal, now Defense Health Agency's enterprise application for TBI, supports this synchronization, and our informatics and clinical teams continued to develop new functionality and support its implementation at the ISCs throughout the year.



We continue to collaborate closely with the Defense and Veterans Brain Injury Center (DVBIC), National Institutes of Health (NIH), and Uniformed Services University of the Health Sciences (USU) and its Center for Neuroscience and Regenerative Medicine (CNRM). In addition, we are delighted to be part of the National Endowment of the Arts' Creative Forces initiative, which is placing creative arts therapies at the core of patient-centered care at Department of Defense and Department of Veterans Affairs clinical sites throughout the U.S. This important initiative builds on the NICoE's groundbreaking work using creative arts therapies in the management of TBI and post-traumatic stress disorder.

Over the past nine years, the NICoE established a firm foundation of clinical and research expertise that has continually improved TBI care and treatment for service members. Our foundational research through longitudinal patient studies opens up new possibilities to better understand TBI symptoms. This will allow us to recognize injury sooner and develop new treatments and interventions to help injured service members heal and recover.

Another key development in FY 2019 was the launch of our own NICoE-created program evaluation initiative, Project Intrepid, to thoroughly assess all aspects of our operations. This work will continue throughout 2020, but early results have already revealed valuable insights and actionable data that will help us continue to adapt our programs to better meet patients' needs.

The NICoE's accomplishments this year would not be possible without our dedicated staff of clinicians, nurses, Navy hospital corpsmen, clinical researchers, and administrative staff.

The NICoE is privileged to have a high-caliber team that continually sharpens their skills through continuing education opportunities and who regularly share their expertise at military and professional conferences to promote the advancement of TBI care. We are equally privileged to have the critical support of key stakeholders throughout the MHS, Department of Defense, federal government, and private sector.

Since the NICoE opened its doors in 2010, our vision has been to be a global leader in TBI care, research, and education. As we look toward our 10th anniversary in 2020 and the next 10 years of caring for service members, that vision remains firm. Achieving it requires tremendous effort by many people working in many different areas and specialties and collaboration with partners across the MHS, government, and academia.

**This annual report shares the NICoE's blueprint for how we are working toward our vision, with the ultimate goal of improving the lives of the service members and families impacted by TBI.**

Sincerely,

**Captain Walter M. Greenhalgh**  
Medical Corps, United States Navy  
Director for the National Intrepid Center of Excellence  
Walter Reed National Military Medical Center

## MISSION

We improve the lives of patients and families impacted by TBI through excellence and innovation

## VISION

To be a global leader in TBI care, research, and education

## GUIDING PRINCIPLES

Excellence, Innovation, Compassion, Honor, and Collaboration



# WARFIGHTER BRAIN HEALTH AND READINESS

At the beginning of fiscal year 2019, the Deputy Secretary of Defense directed the development of a comprehensive strategy and plan of action focused on promoting warfighter brain health and countering the effects of traumatic brain injury.

Having been established to better understand and address the invisible wounds of war, the NICoE sits firmly at the center of the Department of Defense's efforts. Many of these invisible wounds result from the high rate of TBIs in service members.

The NICoE uses leading-edge, research-supported diagnostic and treatment techniques alongside patient and family education and support in its integrative health approach to promote healing and recovery. These techniques help to improve warfighter brain health and the readiness of our fighting force.

90+%

Patient satisfaction with NICoE services

83%

Of patients rated the care received at the NICoE as the best possible

81%

Of Intensive Outpatient Program (IOP) patients reported clinically significant improvement on standardized self-report surveys



"I am and will be forever grateful to the wonderful staff at NICoE. This has changed my life forever... My kids have their father back... my wife has her husband back!"

**PATIENT**

"We are both so grateful ... and will sincerely be using the tools, resources and education to effect positive outcomes both now and into retirement transition."

**FAMILY MEMBER**

"I am always impressed with the level of attention given to me every time I step into the building."

**PATIENT**

**2,060 patients**

received treatment/services at the NICoE through our Intensive Outpatient Program (IOP) and TBI Outpatient Services in FY 2019 through

**33,950 clinical encounters**

## AN INTEGRAL PART OF THE MHS TBI PATHWAY OF CARE

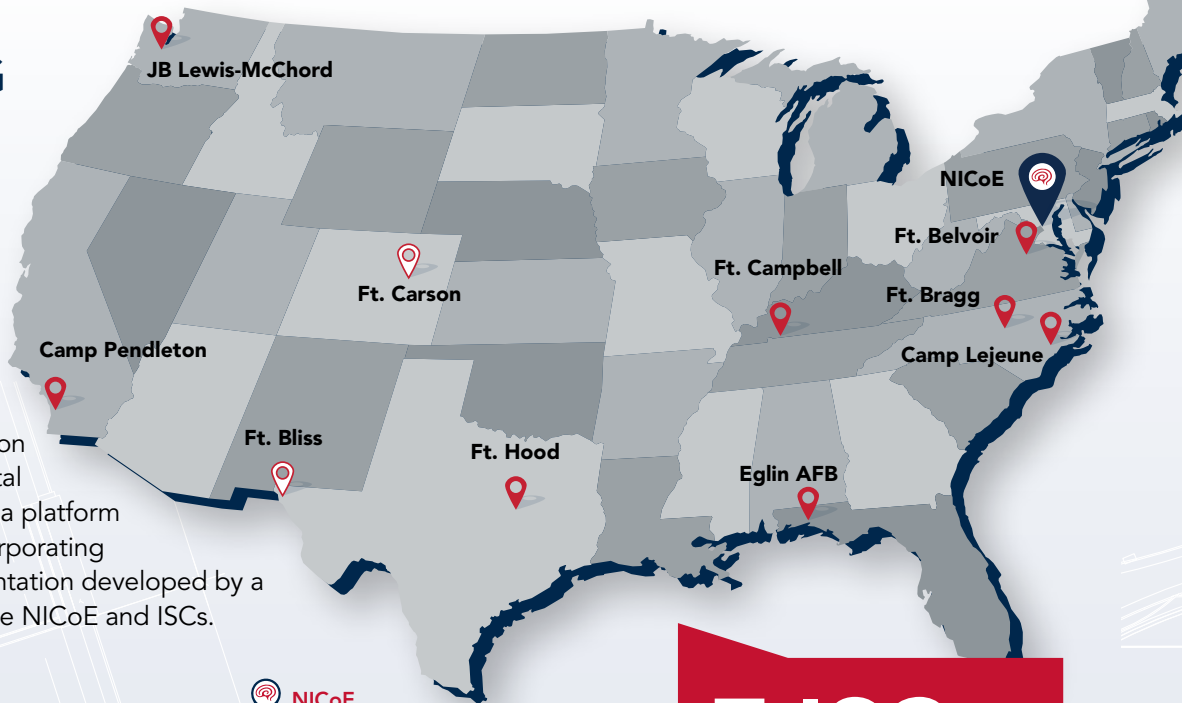
The NICoE plays a vital role in the MHS TBI Pathway of Care, which follows the patient across all stages of care: prevention, screening and identification, diagnosis, treatment and rehabilitation, and reintegration. Ongoing collaborative relationships with DVBC and the Uniformed Services University of the Health Sciences (USU), as well as TBI specialists at military treatment facilities in the U.S. and overseas, ensure that the NICoE's research and clinical expertise benefits service members throughout the pathway.

FY 2019 NICoE contributions included:

- Serving as a key member of the TBI Advisory Committee working group, which is developing TBI clinical outcome measures that will standardize the assessment of treatment effectiveness and provide consistent data to enable future research.
- Providing input into the development of DVBC's Military Acute Concussion Evaluation 2 (MACE 2) concussion assessment tool released in March 2019.
- Contributing to the ongoing development of DVBC's Progressive Return to Activity Following Acute Concussion/Mild TBI Clinical Suite.

# SYNCHRONIZING HEALTH CARE

Regular interaction through weekly tactical and monthly strategic meetings, as well as site visits, enables teams from across the Intrepid Spirit Center (ISC) Partnership Network to learn from each other and share best practices. The implementation of the NICoE-developed TBI Portal across the network also provides a platform to promote synchronization, incorporating standard processes and documentation developed by a working group of experts from the NICoE and ISCs.



**Nearly 48% of TBI encounters across the MHS took place in the NICoE or one of the 10 TBI facilities in the ISC Partnership Network in FY 2019**

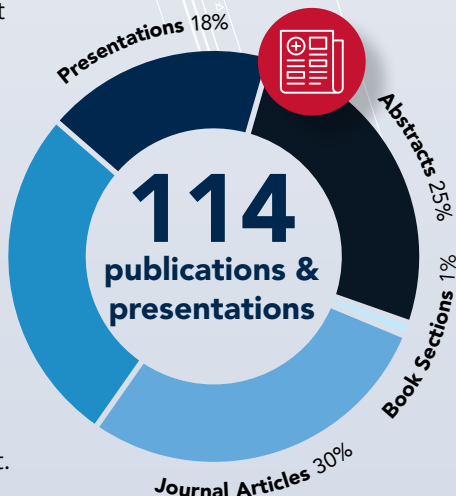
- NICoE
- Intrepid Spirit Centers To-be-built
- Intrepid Spirit Centers Open or under construction

**7 ISCs**  
initiated usage of the TBI Portal in FY 2019

# LEADING INNOVATION THROUGH COLLABORATIVE RESEARCH

The NICoE prioritizes research that improves patient care. With a firm foundation of longitudinal studies that characterize injuries related to TBI and psychological health, the NICoE uses those findings to inform interventional studies on TBI, post-traumatic stress disorder, and depression. Current studies focus on developing more sensitive tools to identify previously undetected injuries, allowing for quicker intervention and treatment.

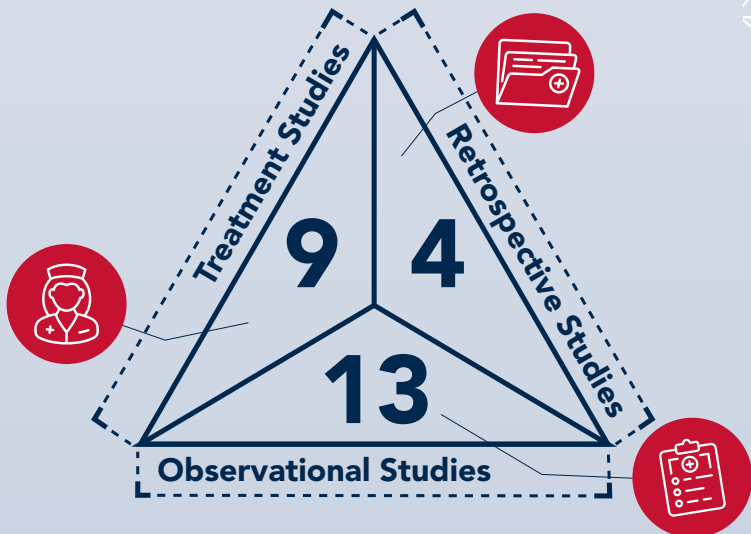
Collaboration is vital to the NICoE's research approach. Establishing strong partnerships with the ISCs, government organizations, and universities provides opportunities to achieve significant research accomplishments. The NICoE's overall research productivity continues to gain recognition, leading to further collaborative opportunities.



**IDENTIFYING INTERVENTIONS THAT ENHANCE RESILIENCE**

The NICoE's research efforts over the past nine years, combined with its clinical experience, have increased the understanding of the effects of traumatic brain injury. This greater understanding will allow the NICoE to not just improve outcomes for injured service members, but also to establish criteria to improve resilience, recognize disturbances more quickly, and advance care and clinical maintenance to prevent injuries in the future.

**26 active studies, including 6 multi-site collaborations with military treatment facilities and academic institutions**





TBI Dashboards  
accessed  
**8,200+**  
times

**465+**  
active users  
of the TBI Portal

**250k+**  
visits  
to the TBI Portal

## HARNESSING THE POWER OF DATA & DEVELOPING PREDICTIVE ANALYTIC MODELS

The TBI Portal provides a wealth of information that enables the exploration of clinical data to identify trends, monitor health outcomes, and support TBI research. The NICoE's informatics team is developing predictive models to identify a variety of factors, such as the likelihood of developing various clinical conditions and even of returning to duty. Early identification of these factors through predictive models will facilitate earlier intervention and support both warfighter brain health and readiness. The TBI Dashboards support clinical operations and administration by providing a single analytical framework to help TBI organizations understand patient demographics, referral patterns, encounter trends, patient health outcomes, and other key metrics.

## ENSURING WARFIGHTERS KNOW WHERE TO GET HELP

The NICoE continually works to bring visibility to the invisible wounds of war. We support MHS awareness campaigns on brain and mental health issues targeted at service members and play an active role in MHS Brain Injury Awareness Month. Our work synchronizing clinical care and implementing the TBI Portal helps to ensure that everyone in the TBI Pathway of Care and across the MHS knows where to send warfighters to get the right care. Our researchers' published studies and participation in military healthcare and specialty conferences promote our work on TBI and associated health conditions across the MHS and beyond.

## CONTINUOUS IMPROVEMENT

This year, the NICoE launched a multi-phased program evaluation initiative, Project Intrepid, to review all aspects of its operations for effectiveness, efficiency, satisfaction, and quality. The evaluation process gathers input from staff, patients, and family members. Early results for the pilot focusing on the NICoE's wellness program identified several potential opportunities that were immediately implemented. Once complete, the NICoE will share its findings with the ISCs and make the full program evaluation process available for ISC implementation.

## BRAIN INJURY AWARENESS MONTH (March 2019)

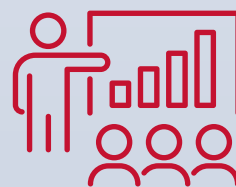
**2,170+** people reached at **12 events**

**250k+** people reached through **5 media placements**

**41k+** people reached on **social media** throughout the month



**350+** continuing  
education credits provided



**21** experiential  
learners received  
hands-on training

**35** didactic &  
clinical education

lectures offered for NICoE  
staff and colleagues





## **The National Intrepid Center of Excellence**

4860 South Palmer Road | Bethesda, MD 20889

**For more information on the NICoE, please visit our website:**  
[https://www.tricare.mil/mtf/WalterReed/Health-Services/M\\_S/NICoE](https://www.tricare.mil/mtf/WalterReed/Health-Services/M_S/NICoE)  
Email: [dha.bethesda.wrnmmc.mbx.nicoe@mail.mil](mailto:dha.bethesda.wrnmmc.mbx.nicoe@mail.mil)

**To view the NICoE's past award-winning annual reports, visit:**  
[https://tricare.mil/mtf/WalterReed/Health-Services/M\\_S/NICoE/About/Annual-Reports](https://tricare.mil/mtf/WalterReed/Health-Services/M_S/NICoE/About/Annual-Reports)