TRAUMATIC BRAIN INJURY AND PSYCHOLOGICAL HEALTH RESEARCH PROGRAM



MISSION: Fund research to understand, prevent, assess, and treat psychological health conditions and/or traumatic brain injuries that accelerates solutions to improve the health, well-being, and health care of Service Members, their Families, Veterans and the American public

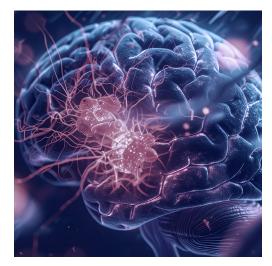
Congressional Appropriations FY07-FY24: \$2.575B total



"As a combat Veteran that has been diagnosed with multiple mental health disabilities, I think this program is

impacting the military and general public greatly with innovative and 'out-of-thebox' thinking that will provide support in so many ways to the Soldiers and civilians for years to come while incorporating their Families and communities."

1st Sgt. Tomas Cruz, U.S. Army Retired, One CommunityUSA, FY24 Programmatic Panel Member



SCOPE OF THE PROBLEM

3 million Americans sustain a mild TBI each year¹



Nearly 16% of civilians diagnosed with TBI also received a diagnosis of PTSD³

In 2020, over

\$280B spent on mental health services for civilians in the U.S.²

RELEVANCE TO MILITARY HEALTH

- More than 468,000 U.S. Service Members diagnosed with a TBI between 2000 and 2023⁴
- More than 2 million behavioral healthrelated medical encounters among active-duty members in 2021⁵



Within 2 years of a TBI diagnosis, a cohort of Service Members also received diagnoses of:6

- Cognitive disorders
- Sleep disorders
- Posttraumatic stress disorder
- Emotional disorders
- Anxiety disorders

PROGRAM PRIORITIES

- **Understand:** Research that fills knowledge gaps in epidemiology and etiology
- Prevent and Assess: Development of prevention, screening, diagnosis, or prognosis tools for psychological health conditions and/or TBI
- **Treat:** Development of novel and repurposed interventions to improve outcomes of psychological health conditions and/or TBI

NEW FOR FY24

• Emerging Research Topics Award: Blast/impulse exposure and psychological/cognitive health, diagnosis and treatment of anger, risk and protective factors for harmful behaviors at the interpersonal and organizational levels, relationship between social media and mental health

¹https://pubmed.ncbi.nlm.nih.gov/31654620/

²https://www.whitehouse.gov/cea/written-materials/2022/05/31/reducing-the-economic-burden-of-unmet-mental-health-needs/

3https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6857464/

*https://www.health.mil/Military-Health-Topics/Centers-of-Excellence/Traumatic-Brain-Injury-Center-of-Excellence/DOD-TBI-Worldwide-Numbers ⁵https://www.health.mil/Reference-Center/Technical-Documents/2022/12/14/D0D-Health-of-the-Force-2021

⁶https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9825245/#sup1





PROGRAM IMPACT AND OUTCOMES





ONGOING RESEARCH AIMED TO IMPROVE TBI AND/OR PSYCHOLOGICAL HEALTH OUTCOMES

- I-HEAL an implementation science study to improve access and engagement in high-quality evidence-based health care services for Veterans and Service Members with TBI
- Pregnenolone, a neurosteroid, for the treatment of chronic TBI and co-occurring conditions such as depression, PTSD and pain – a phase 2 clinical trial
- Brain Stimulation Treatments for PTSD a phase 2 clinical trial using two FDA-cleared methods to provide personalized non-invasive brain stimulation
- A Non-Drug Treatment for Insomnia an intervention that combines aspects of two established approaches, mindfulness and cognitive behavioral therapy, for Service Members with TBI and co-occurring insomnia and posttraumatic stress

RESEARCH BREAKTHROUGHS IN MILITARY MEDICINE

• Improving Clinical Care

- TBI and Psychological Health Clinical Practice Guidelines and recommendations utilized by the DOD and VA
- Improvements in the prevention and management of TBI in collegiate and professional sports
- Accelerating the Development of FDA-Approved Products
 - Ahead: wearable EEG to assess brain state following closed head injury
 - BrainPort®: wearable non-invasive, oral electronic vision aid
 - i-STAT[®] TBI whole blood test: rapid TBI evaluation assay
 - **Swoop**[®] **MRI:** portable magnetic resonance imaging device
 - **EYE-SYNC®:** device for identifying visual tracking impairment



Point of Contact: CDMRP Public Affairs usarmy.detrick.medcom-cdmrp.mbx.cdmrp-public-affairs@health.mil