

Traumatic Brain Injury and Psychological Health Research Program (TBIPHRP)

CUTTING EDGE RESEARCH

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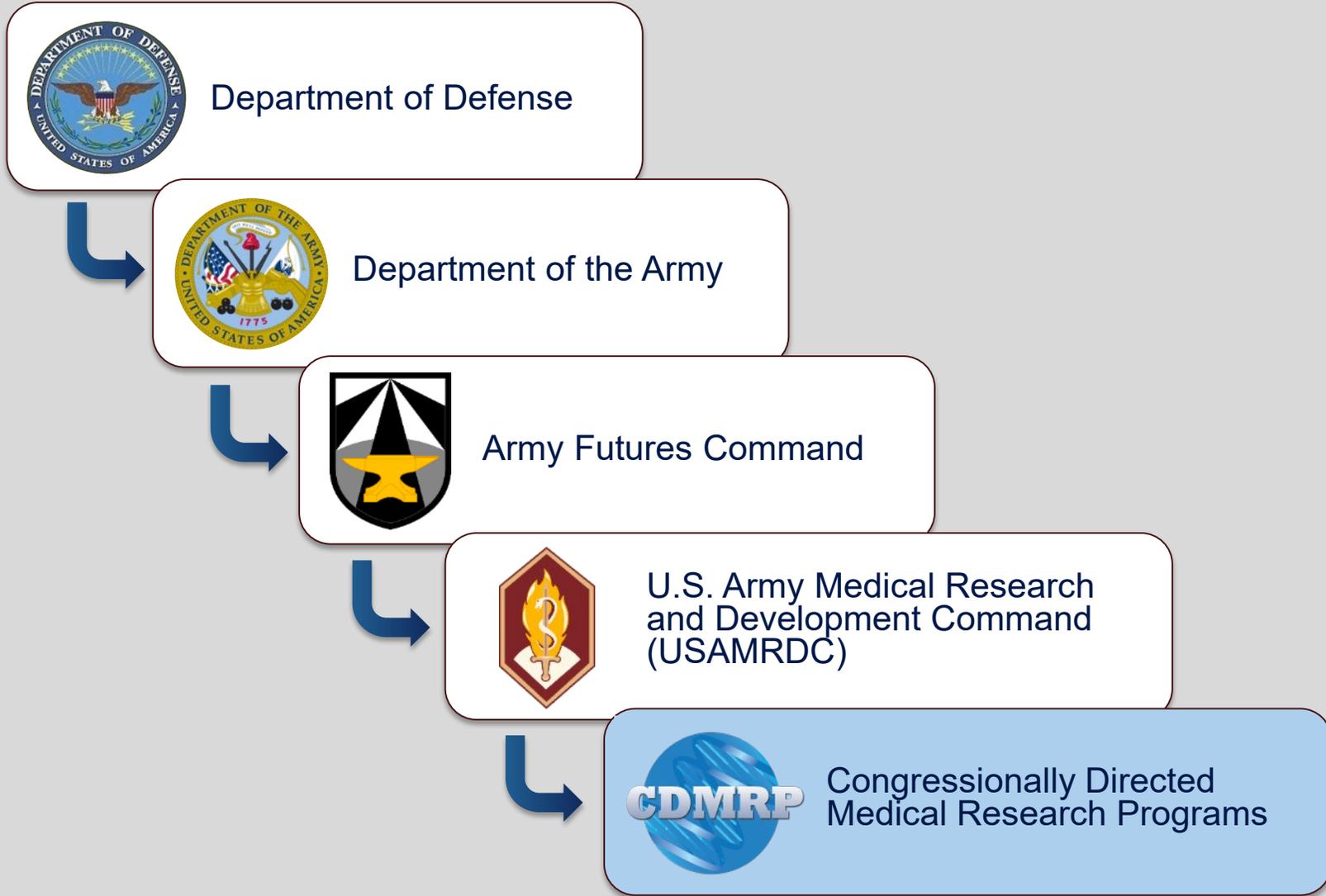
Outline

- ◆ **CDMRP Overview**
- ◆ **TBIPHRP Overview and Anticipated FY22 Funding Opportunities**

CDMRP Overview



WHO is the CDMRP?



Vision and Mission

Vision

Transforming healthcare through innovative and impactful research



Mission

Responsibly manage collaborative research that discovers, develops, and delivers health care solutions for Service Members, Veterans and the American public

About CDMRP



<https://cdmrp.army.mil>

CDMRP FY22 Appropriations

Research Program	FY22 \$M	Research Program	FY22 \$M
Alcohol and Substance Use Disorders	\$4.0	Orthotics and Prosthetics Outcomes	\$20.0
Amyotrophic Lateral Sclerosis	\$40.0	Ovarian Cancer	\$45.0
Autism	\$15.0	Pancreatic Cancer	\$15.0
Bone Marrow Failure	\$7.5	Parkinson's	\$16.0
Breast Cancer	\$150.0	Peer Reviewed Alzheimer's	\$15.0
Chronic Pain Management	\$15.0	Peer Reviewed Cancer (20 Topics)	\$130.0
Combat Readiness Medical	\$10.0	Peer Reviewed Medical (50 Topics)	\$370.0
Duchenne Muscular Dystrophy	\$10.0	Peer Reviewed Orthopaedic	\$30.0
Epilepsy	\$12.0	Prostate Cancer	\$110.0
Hearing Restoration	\$10.0	Rare Cancers	\$17.5
Joint Warfighter Medical	\$40.0	Reconstructive Transplant	\$12.0
Kidney Cancer	\$50.0	Spinal Cord Injury	\$40.0
Lung Cancer	\$20.0	Tick-Borne Disease	\$7.0
Lupus	\$10.0	Toxic Exposures	\$30.0
Melanoma	\$40.0	Traumatic Brain Injury and Psychological Health	\$175.0
Military Burn	\$10.0	Tuberous Sclerosis Complex	\$8.0
Multiple Sclerosis	\$20.0	Vision	\$20.0
Neurofibromatosis	\$20.0	TOTAL = \$1.54 B	

TBIPHRP FY22 Anticipated Funding Opportunities

<https://cdmrp.army.mil/pubs/press/2022/22tbiphrppreann>

<https://cdmrp.army.mil/tbiphrp>



TBIPHRP Vision and Mission

◆ Vision

- ❖ Optimize the prevention, assessment, and treatment of psychological health conditions and/or traumatic brain injuries

◆ Mission

- ❖ Fund research to understand, prevent, assess and treat traumatic brain injury and psychological health conditions that accelerates solutions to improve health, well-being, and healthcare of Service Members, DOD beneficiaries, Veterans, and the American public



Anticipated FY22 Funding Opportunities

\$500K

Investigator Initiated Research Award:

Supports research with the ability to make an original and important contribution to research and/or patient care.

\$1.00M

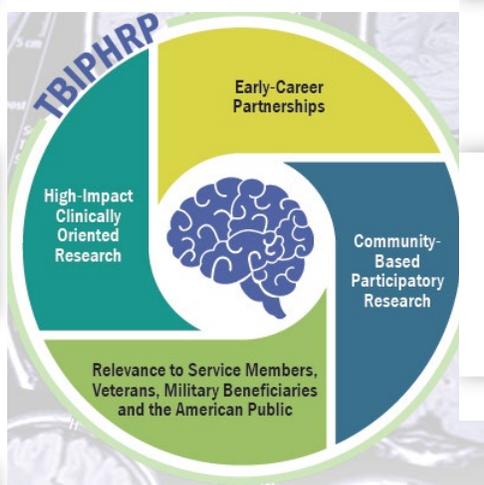
Translational Research Award:

Supports the translation of promising research into clinical application (i.e., preclinical to clinical translation).

\$1.00M

Patient-Centered Research Award:

Aims to bridge the gap between research, practice, and policy by building a knowledge base on how interventions and clinical practices/guidelines and policies can be deployed to targeted populations at the appropriate time at the point of need.



\$500K-\$4.00M

Clinical Trial Award:

Supports clinical trials for pharmacological and non-pharmacological interventions.

\$5.00M

Focused Program Award:

Supports a synergistic, multidisciplinary research program of at least four distinct but complimentary projects addressing an overarching goal.

For more information visit
<https://cdmrp.army.mil/funding/tbiphrp>



FY22 Mechanism Features

◆ Improve impact and stakeholder engagement → Community-Based Participatory Research (CBPR)

- ❖ Enables establishment and utilization of lived experience subject matter experts, care providers, and community-based organizations in the design and execution of research



◆ Maximize reproducibility and translational potential → Animal Research Plan (with associated review criteria)

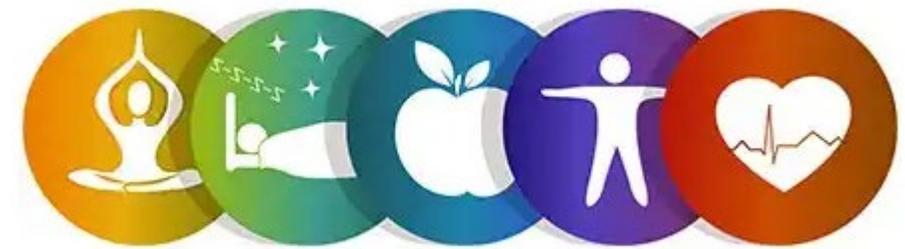
- ❖ Requires applicants to validate or corroborate animal studies to human data/populations
- ❖ Take steps to reduce possibility that animal findings cannot be translated to humans



FY22 Cycle Mechanism Features (cont.)

◆ Relevance to military health

- ❖ All applications must be relevant to the healthcare needs of Service Members, DOD beneficiaries, and Veterans.



◆ Bring new ideas/perspectives → Early-Career Investigator Partnering Principal Investigator (PI) Option

- ❖ Pairs established Investigator and an early-career investigator as partners
 - Receive independent awards and work together to complete the same Statement of Work
 - Investigators must be less than 10 years from a terminal degree (excluding time spent in medical residency/fellowship or family medical leave) at the time of application submission deadline

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FY22 TBIPHRP Focus Areas

UNDERSTAND: Address knowledge gaps in foundational science, epidemiology, and etiology of psychological health conditions and/or traumatic brain injuries

- ❖ Understanding of risk, protective, and biological factors contributing to an individual's vulnerability to, response to, and long-term outcomes of psychological health conditions and/or TBI.
 - **Psychological health trajectories associated with trauma and suicidality** that incorporate internal and external factors. For example, factors could include time course, demographic characteristics, career course, history of trauma exposure, and community and cultural factors.
 - Understanding the approach to **psychiatric diagnosis in the military and the association of psychiatric diagnosis** with occupational impairment and military separation.
 - The role of genetics, endophenotypes, health demographics, previous injuries or repetitive exposures, **psychological health conditions**, pathophysiology, and environmental factors (e.g., extreme temperatures/pressures) on TBI.
 - Computational models from clinical data to forecast the long-term and/or late effects of brain exposures, such as TBI, and co-occurring conditions.
 - Contribution of pre- and post-injury patient, family and caregiver education, as well as cultural, demographic, stigma, and bias factors that may relate to treatment-seeking and adherence.
 - Communication and tools/technology adoption that would facilitate clinical translation and identification of risk factors, educational barriers, social determinates of health, and other factors that may impede clinical translation.

FY22 TBIPHRP Focus Areas

UNDERSTAND: Address knowledge gaps in foundational science, epidemiology, and etiology of psychological health conditions and/or traumatic brain injuries

- ❖ **Understanding sexual harassment and assault prevention, perpetration, victimization, and response. Methodologies that ensure anonymity for participants are encouraged.**
 - Understanding processes of shame, stigma, and institutional betrayal among sexual assault victims and their units/teams and evaluation of approaches to mitigate these experiences. Experiences of marginalized groups, male victims, and victims of intimate partner and family violence are of particular interest.
 - Understanding how organizational-level factors influence interpersonal and individual conditions, choices, and behaviors as they relate to sexual assault and harassment prevention, perpetration, and response. Measurement and analysis of organizational-level factors, such as culture and climate, beyond aggregating individual perceptions are encouraged. Research could include the progression from sexual harassment to sexual assault and factors influencing sexual harassment.
 - Understanding barriers to reporting sexual assault and factors that contribute to retaliation within units/teams and evaluation of approaches to mitigate barriers and prevent retaliation. Research could include data from influencers, bystanders, and perpetrators, as well as environmental, structural, and demographic factors (e.g., workplace culture, climate, senior leader diversity, age, gender).
 - Understanding the physical and psychological consequences of intimate partner and family violence.

FY22 TBIPHRP Focus Areas

PREVENT AND ASSESS: Address the prevention or progression of psychological health conditions and/or TBI through population, selective, and indicated prevention approaches.

- ❖ Identification and validation of biomarkers or other objective markers for diagnosis, prognosis, or monitoring of psychological health conditions and/or TBI, repetitive exposures, and associated sequelae (e.g., chronic migraine, dizziness, neurocognitive symptoms, sleep, post-traumatic headache, secondary complications).
- ❖ Approaches or tools to prevent or reduce risk of psychological health and/or TBI conditions.
 - Translation of environmental sensor outputs to conditions within the brain.
 - Development of innovative materials and technologies that can prevent or reduce risk of TBI.
 - Generation of physiological evidence regarding the safety, efficacy, and utility of candidate neuroprotective measures. Animal models, if used, should be validated and well justified within the literature and should demonstrate clear alignment to clinical populations.
 - Validation of objective tools/methods for assessing and real-time health status monitoring of psychological health conditions and/or TBI.
 - Development of clinical decision-making frameworks or tools that incorporate objective assessments and long-term outcomes to return to activity/duty decisions.

FY22 TBIPHRP Focus Areas

PREVENT AND ASSESS: Address the prevention or progression of psychological health conditions and/or TBI through population, selective, and indicated prevention approaches.

- ❖ Development of injury thresholds and exposure standards.
- ❖ **Development, evaluation, and implementation of cross-cutting prevention approaches targeting upstream factors or leveraging communities and peers to address multiple adverse outcomes such as suicide, multiple forms of violence, and alcohol and substance misuse.**
 - Optimized messaging for successful dissemination and implementation.
 - Inclusion of families and evaluation of impacts thereon.
 - Culturally acceptable approaches to reducing access to lethal means and promoting means safety for suicide and violence prevention.

FY22 TBIPHRP Focus Areas

PREVENT AND ASSESS: Address the prevention or progression of psychological health conditions and/or TBI through population, selective, and indicated prevention approaches.

- ❖ **Solutions to increase readiness and resilience in individuals, small teams, families, and communities to ameliorate the potential negative impacts of specific military and life stressors.**
 - Effective pharmacologic or non-pharmacologic prevention interventions. Solutions for prevention of ASRs and PTSD may be proposed.
 - Preparation of Service Members and units for missions and to help reset between deployments within the Sustainable Readiness Model².
 - Effective solutions to support relationships and parenting, prepare families for potential secondary trauma exposure, and empower families to access tailored support and resources.

- ❖ **Solutions to address aspects of workplace culture and climate (e.g., leadership attitudes, group characteristics, group identification factors) that are associated with increases in harmful behaviors.**

FY22 TBIPHRP Focus Areas

TREAT: Address immediate and long-term treatments and improvements in systems of care, including access to and delivery of healthcare services

- ❖ Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.
 - **Rapid assessments and treatments for psychological health conditions.**
 - Interventions focused on sensory and motor dysfunction after brain injury.
 - Interventions that address neurodegenerative processes associated with TBI.
 - Interventions that restore cognitive reserve and functioning.
 - Novel therapeutic candidates based on evolving changes of pathophysiology and/or theoretical mechanisms of **psychological health** and/or TBI.
 - Interventions and/or the delivery of healthcare services to improve the ability to treat **co-occurring TBI and PH conditions.**
 - **Personalized medicine approaches to treatment that may include tailoring treatment to the biological and endophenotypic elements present.**
 - Considerations for sequencing and optimal combinations of pharmacologic and non-pharmacologic interventions.
 - Effective, early interventions for delivery in rural or other resource-limited environments (e.g., far-forward military environments), and/or by non-clinicians (e.g., peers, teams, first responders/medics).

FY22 TBIPHRP Focus Areas

TREAT: Address immediate and long-term treatments and improvements in systems of care, including access to and delivery of healthcare services

- ❖ Validated individual-, peer-/unit-/team-, leader-, family-, caregiver-, community-, and enterprise-level methods for reducing barriers to care for psychological health and/or TBI challenges (e.g., PTSD, suicidal ideation or behaviors, alcohol and substance use, anxiety, depression) and understanding mechanisms of change in help-seeking behavior.
- ❖ Implementation, follow-up, and services research to increase provider adoption and availability of evidence-based treatments, as well as treatment engagement, follow-up care, and understanding of long-term outcomes.
- ❖ Effective community-level postvention strategies to address social connectedness during reintegration of individuals into workplace teams or the community following a sexual assault, suicide event, or other severe trauma.

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