



US DEPARTMENT OF DEFENSE

# BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE

## Neurocognitive and Psychological Health Treatment Strategies

### Evaluation of a Novel Integrative and Intensive Virtual Rehabilitation Program for Service Members Post Traumatic Brain Injury (TBI)

Researchers at Bright Cloud International Corp created BrightBrainer™, a computerized virtual reality system that provides a combination of cognitive as well as motor skill training in an engaging and repetitive manner. In this clinical feasibility pilot study, researchers will recruit Defense Enrollment Eligibility Reporting System eligible patients with a diagnosis of TBI to participate in a trial of the BrightBrainer™ Virtual Reality Rehabilitation system (BBVR). The objective of this project is to assess the feasibility and clinical benefit of utilizing the BBVR to augment the rehabilitation of Service Members with TBI. To be enrolled, potential subjects must have a diagnosis of TBI and report cognitive, emotional, and/or physical symptoms. In FY16, researchers successfully received scientific and administrative IRB approvals, executed a sub-award agreement, and recruited 11 subjects. The study team has been trained on the Bright Cloud system and has engaged the occupational therapy team. The purpose of the study is to evaluate the feasibility and effectiveness of a novel virtual reality therapeutic rehabilitative device (BrightBrainer™) to treat patients with TBI. These Service Members with TBI, with and without upper limb dysfunction, can use uni- and bi-manual virtual reality exercises to improve cognitive and motor function, as well as mood. If this pilot study is successful, the study team will work with other healthcare providers to disseminate information and help train others on how to use this system.

