



US DEPARTMENT OF DEFENSE

## BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE

### **Neurocognitive Function and Psychological Health Glasgow Coma Scores, Early Opioids, and Posttraumatic Stress Disorder among Combat Amputees**

Two studies sponsored by BUMED under the WII program and conducted at NHRC investigated the association between the prevalence of PTSD and the use of IV morphine and fentanyl in combat amputees. The purpose of this research was to determine whether early post injury treatment with morphine (relative to fentanyl) could prevent the consolidation of traumatic memory and reduced risk for later PTSD. Combat casualty records from OIF and OEF from 2001–2008 were reviewed, which documented Glasgow Coma Scale (GCS) scores and/or morphine, fentanyl, or no opioid treatment within hours of injury. The psychological diagnoses of combat amputees were assessed at two years using military data (Study 1) and through four years post-injury using combined military and VA health data (Study 2). Results showed that IV morphine (relative to IV fentanyl only) administered within hours of injury reduced the risk of PTSD diagnoses over the first two years at military and/or VA facilities among amputees. The results of Study 2 showed increasing prevalence of PTSD between the first and second year after injury. These findings can inform screening and preventive programs for PTSD, particularly after the first year post-injury.