



US DEPARTMENT OF DEFENSE

# BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE

## Risk Assessment and Surveillance

### Four-year Health Outcomes of Combat Amputee and Limb Salvage (LS) Patients

Combat amputee and LS patients injured in Iraq and Afghanistan conflicts present new challenges for DoD and VA providers. Researchers from NHRC, San Diego VA Healthcare System and UCSD, and the Naval Medical Center San Diego, with funding from the BUMED WII Program, tracked the health outcomes and medical care of combat amputee and LS patients over the first four years post-injury to assess the likelihood of these outcomes and provide preventative interventions. Records from NHRC's EMED were reviewed to identify patients with lower limb combat injuries sustained in Iraq and Afghanistan during the period 2001–2008. Health outcomes data were obtained from DoD and VA databases. The cohort consisted of 625 extremity-injured casualties and was followed for 48 months postinjury. The cohort comprised 440 early amputees (EA; < 90 days postinjury), 78 late amputees (LA; > 90 days postinjury), and 107 LS patients (no amputation). EAs had reduced likelihood of pain, musculoskeletal, osteoarthritis, mood disorders, substance abuse, PTSD, anxiety, and adjustment disorders than LA or LS patients, but had increased odds of osteoporosis. LAs had higher rates of osteoarthritis, lumbago, and late effects of injury diagnoses than EA or LS patients. The prevalence of PTSD generally increased after the first year postinjury. Obesity, substance abuse, or tobacco disorders were prevalent in 20–50% of all patients. Further, EAs had reduced prevalence of secondary complications and psychological disorders than LA or LS, particularly during the first several years. These findings may help inform treatment decisions and health care planning to reduce adverse outcomes associated with early amputation. Continuation studies are needed to monitor the development of musculoskeletal disease and associated health care needs.