

**Medical University of South Carolina**  
**Federal Appropriations Request**  
**Center for Traumatic Amputation Rehabilitation Research**  
*A Center of Excellence*

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***History of the Project:***

Since 2005 MUSC Professor Mark Sothmann and colleagues at Indiana University and Ohio State University having been working closely with the Department of Defense (DoD) on a project that will beneficially impact the future health and welfare of returning military personnel from the Iraq and Afghan conflicts experiencing war injury, particularly amputations. There is a dearth of information on the long-term life experiences of military personnel with amputation in such areas as health status, healthcare access, prosthetic use, psychosocial adjustment, and economic well-being. In fact, no database currently exists in Veteran Affairs or any other federal or state agency to inform health care personnel or policy makers regarding such experiences. The issue of the life-long experiences of soldiers experiencing amputation from the Iraq and Afghan conflicts is a complex, multifaceted one that will take several years to fully address and is emerging to increasingly national attention. Most recently, at a January, 2008 presentation in Washington D.C. to an "Extremity War Injury Course" the Chairman of the Joint Chiefs of Staff, Admiral Michael Mullin, posed questions of physical and mental recovery for amputees to include how they will cope over decades, how they return to "normal", who provides support, what support does the family need, and how institutions can provide the needed care (personal communication; January 29, 2008; Walter Reed Medical Center). Moreover, the lifelong experiences of traumatic amputees remains a priority within the DoD Telemedicine and Advanced Technology Research Center (TATRC), directed by Major General Waitman, through its managing a portfolio of war-related amputee projects ( TATRC contact: Mr. Troy Turner [Turner@tatrc.org](mailto:Turner@tatrc.org) 301-619-7954) Thus, one of the critical issues we now face with the thousands of injured military personnel from the present conflicts is how we inform health care providers, the war injured and their families what critical health issues will emerge 5, 10, 20, or 30 years out in living with their amputation.

Estimates are that during the Vietnam War anywhere from 6,000-7,000 soldiers experienced amputations, and so have had 30-40 years of coping. Through congressional designated funds for the last 3 years the DoD has funded Dr. Sothmann and his colleagues to establish a unique database of over 500 Vietnam veterans who have lived with a war related amputation. This database emerged through the endorsement of key national veteran service organizations including the Disabled American Veterans, American Legion, American Legion Auxiliary, the Vietnam Veterans of America, and Veterans of Foreign Wars, among others. Research is underway to derive information on the most critical issues over their lifespan, and to inform advanced clinical practice, biomedical engineering for prosthetics and health policy in numerous ways, thus positioning MUSC as a unique national/international leader in the healthcare, engineering and health policy of traumatic amputation, particularly that related to war.

***Request for 2010 Federal Appropriation: Center for Traumatic Amputation Rehabilitation Research located at the Medical University of South Carolina***

The continued funding and expansion of the project to a ***Center for Traumatic Amputation Rehabilitation Research*** to be located at the Medical University of South Carolina will serve three functions:

- 1) One of the principal issues confronting returning veterans with injury is access to care over the lifespan. Thus, a principal focus of the ***Center for Traumatic Amputation Rehabilitation Research*** will be health disparities research in partnership with the Veteran Affairs Center of Excellence in Health Disparities Research located in South Carolina. The 500 Vietnam veterans with amputation will be extensively studied to document access to care issues, including the type of care received, factors restricting care, and necessary services.
- 2) Head trauma with an accompanying traumatic amputation is a serious health issue for returning veterans from the present wars due to the severity of the injuries. In its databank of over 500 Vietnam veterans with amputation a significant cohort report suffering head trauma and so have had a lifetime of coping. The ***Center for Traumatic Amputation Rehabilitation Research*** will partner with the Center of Excellence in Brain Imaging at MUSC to study the lifelong implications.
- 3) The ***Center for Traumatic Amputation Rehabilitation Research*** will conduct comparative analyses with other initiatives currently funded through the DoD Telemedicine and Advanced Technology Research Center such as the Military Extremity Trauma and Amputation/Limb Salvage Study (METALS) housed at Johns Hopkins, and civilian databases with significant cohorts having experienced traumatic amputation such as that maintained by the Regenstrief Institute at Indiana University, as one example. Through this partnering fundamental issues that are now being addressed separately can be focused on collaboratively through research planning and instrument development.

The Medical University of South Carolina is uniquely positioned to conduct research on the lifelong issues our soldiers who have suffered amputation will face, and provide critical policy and caregiver information for the future.