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Chairman Towns and distinguished members of the Committee, thank you for the opportunity to discuss some of the programs at the Uniformed Services University of the Health Sciences (USUHS) and, in particular, the Center for Prostate Disease Research (CPDR). I am here representing Dr. Charles Rice, President of the University. Today I will outline three congressionally directed programs at USU, two well established programs and the newest center that Congress has established.

**The Center for Prostate Disease Research** was established to meet the demands for a better understanding of prostate disease in the military. The CPDR has three components: 1) a clinical research program; 2) a basic science research program; and 3) a tissue repository with an associated database. The Clinical Research Program is located Walter Reed Army Medical Center. It offers military beneficiaries the opportunity to participate in clinical trials for the prevention and treatment of prostate disease. As the committee is aware, prostate cancer is the most common non-skin cancer in America, affecting 1 in 6 men. In 2009, it has been estimated that more than 186,000 men were diagnosed with prostate cancer, and more than 28,000 men will die from this disease in the next year. Today approximately 2 million American men are currently living with prostate cancer.

The goal of CPDR's clinical research program is to combine prostate screening, data collection, clinical diagnosis, education and counseling, and prostate disease clinical trial research in an efficient, personal, patient oriented center. This unique approach to the diagnosis and treatment of prostate cancer and other prostate-related diseases has resulted in significant clinical breakthroughs in these areas. In concert with the basic science research program, the clinical research program's clinicians and researchers have achieved a number of scientific discoveries through extensive patient observation and data analysis.

The Basic Science Research Program of CPDR is a multi-disciplinary research endeavor and represents integration of collaborative efforts of basic science and clinical science researchers. Its mission is to discover and define prostate cancer specific gene alterations for improving diagnosis, prognosis and treatment. To date, this group of researchers has identified new tools for the diagnosis of prostate disease and possible genes for targeted therapy.

The third component of CPDR is the Biorepository and National Database. This component was set up to support translational studies at CPDR, and it complements the efforts of other investigators in the field, by providing human biologic specimens unique to prostate cancer with the mission to collect, process and bank well characterized prostate tissue and blood-related biological samples, and to provide these specimens, linked to clinical and pathological data, for translational prostate cancer research projects within and outside the CPDR. In addition, they are developing and providing cell-based experimental model systems to support translational research by complementing the tissue-based experimental systems derived from human prostate specimens.

Since its inception, the CPDR has published over 300 peer review articles, filed 24 patents, licensed 4 technologies from the existing patents, and trained 24 residents, 29 fellows, 40 medical students and a handful of doctoral students. They have discovered the most common prostate cancer gene alteration, improved our understanding of male hormone receptor defects in prostate cancer, and developed a cancer-associated gene panel to aid in the diagnosis and targeted therapy. It is important to note that the CPDR was the first to report a higher serum PSA in African American patients in the equal-access military healthcare system which led to the current recommendation of age and race-adjusted PSA screening.

A second program I would like to highlight for the committee is the USUHS **Center for the Study of Traumatic Stress**. The Center for the Study of Traumatic Stress (CSTS) is one of the university's first congressionally directed centers. Today it is a highly regarded center that addresses a wide scope of trauma exposure including the consequences of combat, terrorism, natural and human-made disasters, and public health threats. A unique aspect and contribution of the center is the bridging of military and disaster psychiatry and the integration of disaster mental health and public health. In applying the principles and practices for dealing with individuals and groups exposed to extreme environments (in the military), the CSTS has generated and disseminated its subject matter expertise to inform disaster preparedness, response and recovery principles and practices across a wide range of traumatic events and populations.

Today the center is uniquely positioned to respond to DoD mission relevant activities and issues, as well as to educate regional and national stakeholders in government, industry, healthcare, public health, and academia on mitigating the effects of disaster and trauma in the civilian community to foster human continuity and community and national resilience. The CSTS develops and carries out research programs to extend our knowledge of the medical and psychiatric consequences of war, deployment, trauma, disaster and terrorism, including weapons of mass destruction. In addition, CSTS educates and trains health care providers, leaders, individuals and public and private agencies on how to prevent, mitigate and respond to the negative consequences of war, deployment, traumatic events, disasters, and terrorism.

The center published a book entitled "Individual and Community Responses to Trauma and Disaster." This book and the CSTS's work on the effects of trauma on first responders helped shape the landscape of disaster and trauma research, education and consultation. In response to the events of 9/11, CSTS was instrumental in educating leadership at the federal, state and local level about individual and community responses to terrorism. The center expanded its research to encompass workplace preparedness for terrorism and disaster, and provided consultation to the U.S. Senate, the U.S. House of Representatives, the U.S. Department of State, the U.S. Department of Transportation, a number of Fortune 100 corporations, and numerous government leaders.

Recently the CSTS was awarded an NIH/Army sponsored grant to study suicide in the military. This is the largest study of suicide anywhere, in any population and it has the potential to include as many as 400,000 people. The research began in July 2009 and is a

direct response to the Army's request to NIMH to enlist the most promising scientific approaches for addressing the rising suicide rate among soldiers. During the next five years, the Army, NIMH and the four research institutions under CSTS guidance will examine mental health, psychological resilience, suicide risk, suicide-related behaviors, intervention strategies and suicide deaths in the Army. This consortium brings together interdisciplinary research teams that are internationally known for their expertise in research on military health, health and behavior surveys, epidemiology and suicide – including genetic and neurobiological factors involved in suicidal behavior.

This study will not only identify risk and protective factors, but how those factors fit together to cause a person to lose hope. The study's findings will be applicable across all services, as well as the civilian community. Researchers are currently gathering archival data sets from the Army from the past five years to be analyzed for risk and protective factors. The findings gathered during the study will help determine the nature of the Army's suicide prevention and intervention efforts and identify who is at risk very rapidly. As new data is collected and new programs are implemented, investigators will continue to update and refine their recommendations.

Finally the CSTS has a robust Child and Family Program that has expanded the Center's reach and expertise on the effects of trauma on families and children from war, natural disaster, terrorism and bioterrorism. This program generates and disseminates knowledge related to military childhood experiences, develops effective public education materials, and expands and studies effective intervention strategies to advance the health and mental health of military children and family. This CSTS program has led Department of Defense activities in the study of U.S. Army family violence and child maltreatment and child abuse in particular. The CSTS continues to be at the forefront of understanding the contribution of military community and family stress to these measured changes in child maltreatment.

The last USUHS Center that we would like to highlight for the committee is the newest center that Congress has asked the University to establish. This is the **Center for Neuroscience and Regenerative Medicine**. The Center for Neuroscience and Regenerative Medicine (CNRM) was established to address the current needs of the medical community to better diagnose and intervene for the prevention of the long term consequences resulting from traumatic brain injury (TBI), particularly in the context experienced by service members in Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). The Congressional language establishing the CNRM specifically stated to study combat casualties cared for at Walter Reed Army Medical Center and the National Naval Medical Center using neuroimaging technology at the National Institutes of Health Clinical Center. CNRM is working to ensure the development of a set of mutually reinforcing programs among collaborating DoD facilities and the National Institutes of Health focused on the diagnosis and treatment of uniformed personnel with traumatic brain injury.

TBI, especially as a consequence of blast explosions, has come to the forefront as a "signature injury" among the U.S. Armed Forces serving in OIF and OEF. Members of

the Armed Forces are increasingly experiencing neurologic impairments caused by primary, as well as repeated, blast exposure without a direct blow to the head or outward sign of significant injury. Further, the incidence of post traumatic stress disorder (PTSD) has become an important factor in the diagnosis and treatment of TBI in these service members where psychological trauma is occurring in tandem with TBI. Despite the advancements in body armor and battlefield medicine, soldiers continue to be critically wounded and face the possibility of TBI.

To respond to Congress the CNRM is bringing together the expertise of clinicians and scientists across disciplines to catalyze innovative approaches to TBI research with an emphasis on aspects of high relevance to the military populations. The CNRM has broadly involved and considered all avenues to improve TBI recovery and developed these approaches into six integrated Programs to interact as the CNRM. The CNRM seeks to capitalize on its unique opportunity to develop a set of mutually reinforcing programs among collaborating DoD facilities and the NIH to focus on the needs for diagnosis and treatment of soldiers.

In conclusion, we would like to thank the Committee and Congress for their support. The leadership at USUHS believes that these three examples of Congressionally directed programs illustrates how USUHS can be used to quickly address health care issues important to both military medicine and public health.