



Center for the Study of Traumatic Stress

2014 Annual Report





The reach and impact of our Center’s research, education, and intervention activities are broad — extending from bench to bedside to community. We work to support people and institutions in our local communities, at the national level, as well as globally.

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From the Director

Dear Center Colleagues and Friends,

The Center for the Study of Traumatic Stress (CSTS) was established in 1987, and has been providing service to our nation for 27 years. Our mission is to advance scientific and academic knowledge, interventions, educational resources and outreach to mitigate the impact of trauma from exposure to war, disasters, terrorism, community violence and public health threats. Our Center continues to serve an essential mission for the Department of Defense and the nation.



The Center has built and trained a highly-collaborative, multi-disciplinary team of scientists, educators and clinicians who function in a unified manner. The team promotes clarity of message and uses scholarly and research-oriented problem-solving to address the mental and behavioral health problems of those exposed to war, disaster and other traumatic events. This unity of effort by a multi disciplinary team is what makes the Center unique.

The reach and impact of our Center's research, education, and intervention activities are broad — extending from bench to bedside to community. We work to support people and institutions in our local communities, at the national level, as well as globally.

Many of the Center's unique contributions are the result of the integration of two separate yet interrelated fields — military and disaster psychiatry — that our Center has helped define and advance. Another unique aspect of the Center is our dedication to research in neuroscience and the neurobiology of stress and trauma. We identify effective interventions for a number of health issues of special interest to the military including posttraumatic stress disorder (PTSD), mild traumatic brain injury (mTBI), and suicide. The Center's findings help

inform our nation's policies regarding the impact of traumatic exposure.

In 2014, after more than a decade of collaborative effort by the Center and the Department of Veteran's Affairs National Center for PTSD (NCPTSD), Senator Patrick Leahy (D-VT) and the Veterans Administration (VA) announced the establishment of The Leahy-Friedman National PTSD Brain Bank. Since 2003, the Center, the NCPTSD, and other academic and research institutions, have collaborated in an effort to establish a national PTSD brain bank. This is the first brain tissue repository dedicated to

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researching the physical impact of stress, trauma and PTSD on brain tissue, thereby advancing the scientific knowledge of PTSD and other stress-related disorders.

The Center is also engaged in groundbreaking epidemiologic and neurobiologic and translational studies whose findings inform the Department of Defense. Some of the Center's research activities include:

- The CSTS neuroscience laboratories shed light on associations between brain-derived neurotrophic factor (BDNF) and PTSD, and telomere length and PTSD.
- The child and family research program includes the National Military Family Bereavement Study which is one of the largest studies of grief and bereavement, and the first large, rigorous, scientific study of the impact of a U.S. Service member's death on surviving family members.
- Our epidemiology and Service member research program includes the Army Study to Assess

Risk and Resilience in Servicemembers (Army STARRS) which is the largest study of suicide, and mental health risk and resilience, ever conducted among military personnel.

The Center was actively involved in a wide range of activities in 2014. Some of the highlights of the Center's activities include:

- In response to the international Ebola outbreak, the Center rapidly developed fact sheets for patients, providers and leaders, and distributed them across the nation and overseas where they were utilized by many organizations and individuals.
- The Center provided consultation and knowledge support to the Washington State Department of Mental Health for distribution to National Guard medical personnel and mental health counselors who were on-site responding to the landslides in Washington State.
- The Center was the key contributor to the curriculum recommendations for disaster health professionals developed by the National Center for Disaster Medicine and Public Health.
- The Center worked with the International Atomic Energy Agency of the United Nations (Vienna, Austria) to develop recommendations for science and technology education and research to mitigate the effects of natural disasters effecting nuclear reactors.
- The Center co-chaired a working group at the International Symposium on Disaster Medical and Public Health Management to review the Hyogo framework for action to develop policy recommendations for the United Nations on mental health disaster risk reduction.
- The Center presented Military Cultural Competency at the National Association of State Mental Health Program Directors annual conference which enhanced our ongoing collaboration with the most senior state leaders in mental health care throughout the U.S.

- The Center participated in the Mental Health and Suicide Prevention briefing at the White House with White House and President Obama's Administration officials.

The year 2014 was a year of change for the Center. The U.S. involvement in wars in the Middle East has greatly reduced, one of our largest and highest-impact research projects (Army STARRS) neared completion and began a transition to the next five-year phase, and the Center made additions to the scientific staff and changes to our administrative structure.

Looking ahead, the Center continues to engage in the important task of transmitting its unique knowledge and experience in trauma research, education, consultation and training to our local community, throughout the nation, and across the globe. In particular, we continue to mentor the next generation of dedicated scientists, who will continue to fulfill our mission.

In the pages ahead, we share with you some of the many contributions that we are making to enhance psychological health, recovery and prevention of the consequences of trauma on an individual, family, community and national level in both our military and civilian populations. We are proud of our Center scientists and our work that has assisted the Department of Defense in leading the nation in trauma-informed care.

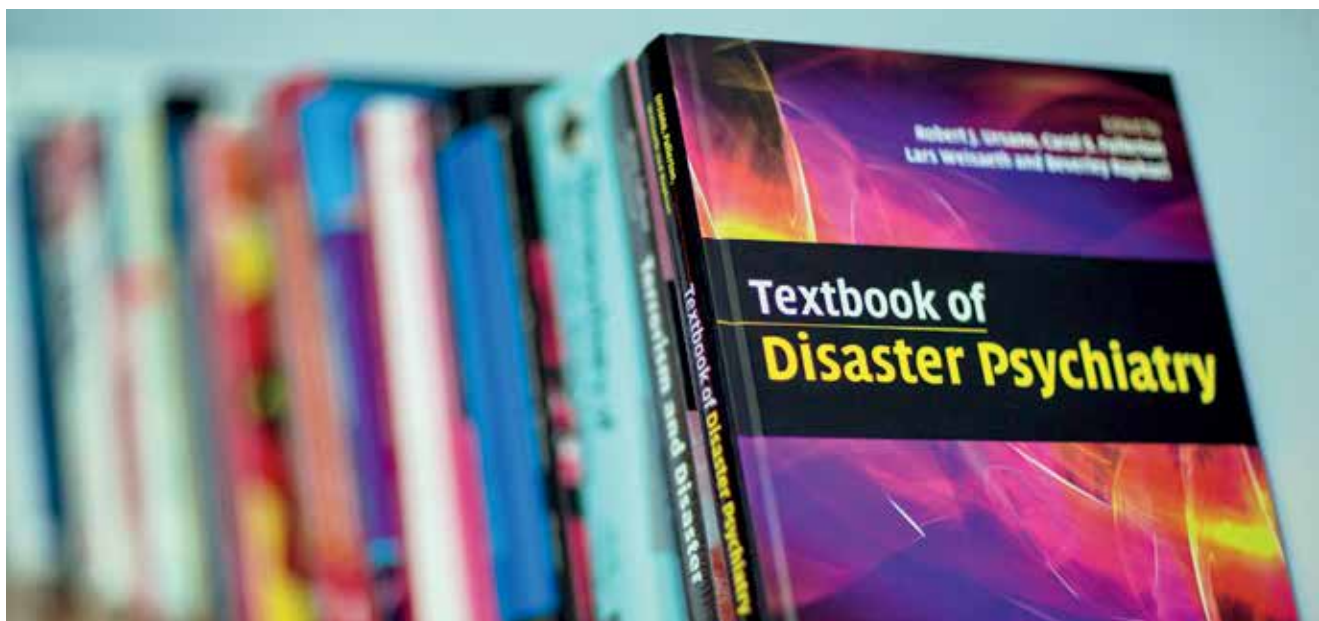
To our many colleagues and friends who have collaborated with us, and who have supported our work throughout the year, we would like to express our sincere and heartfelt gratitude.

—Robert J. Ursano, MD
Professor of Psychiatry and Neuroscience
Chair, Department of Psychiatry
Director, Center for the Study of Traumatic Stress
Uniformed Services University

Achieving Our Mission

In 2014, the Center was actively involved in fulfilling its mission:

- 1. RESEARCH:** The Center has taken the lead and been deeply committed to translational research ranging from basic neuroscience to epidemiology and neurobiology of the medical, behavioral, and mental health consequences of trauma and stress. The goal of the research is to better understand the origins of traumatic stress, inform treatment, and impact policies for traumatic stress disorders.
- 2. EDUCATION AND TRAINING:** The Center trains and educates Uniformed Services University (USU) medical students committed to service in our nation's Army, Air Force, Navy and Public Health Service. The Center educates individuals, leaders, and health care providers at public and private agencies. The Center has sponsored conferences, seminars, and symposia that advanced knowledge and education. We continue to provide opportunities for post-doctoral training for medical scientists to conduct research into, and respond to, the health consequences of trauma, disasters and terrorism.
- 3. DEVELOPMENT AND DISSEMINATION OF EDUCATIONAL RESOURCES:** The Center maintains a large archive of medical literature on the health consequences of traumatic events, disasters, and terrorism for individuals, families, organizations and communities. The Center develops and disseminates materials to address timely issues regarding military health and mental health to educate physicians, and other military and civilian healthcare providers engaged in military and trauma-informed care.
- 4. CONSULTATION:** The Center provides real time consultation and collaboration with leadership in the Department of Defense (DoD) and other government agencies, academia, and industry to foster knowledge, develop and make available educational and clinical resources, provide solutions for optimizing and sustaining military health and influence military health policy.



Research

SERVICE MEMBERS

Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS)

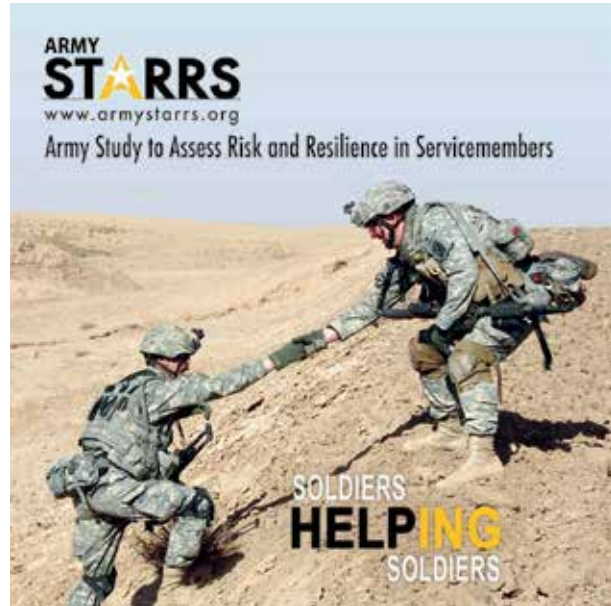
In 2014, Army STARRS entered into its sixth year. Due to the great success of the project, the

 Center received funding from the DoD to continue the Army STARRS platforms, systems, and data for another five years. This will allow the research team to conduct follow-up studies with the cohort of Army STARRS participants to collect additional information for further analysis. This will enhance the Army STARRS research, and provide further benefit for the Army, the DoD, and the nation.

The project, which is the largest research study of mental health risk and resilience ever conducted among military personnel, is under the scientific direction and leadership of the two Co-Principal Investigators, Center Director Dr. Robert Ursano, and Dr. Murray Stein at University of California, San Diego. The management of this complex project is handled by Center Associate Director, Dr. Robert Gifford, Army STARRS Senior Project Director, Center Senior Program Manager, Paul Hurwitz, MPH, and Center Senior Financial Program Manager, Susan Moss, CPA. More than twenty other CSTS scientists and staff supported Army STARRS.

Army STARRS is a collaborative effort between USU, the University of California San Diego, Harvard University, the University of Michigan, the

Army STARRS was designed to examine the mental health and resilience of active duty U.S. Army soldiers to increase our knowledge of the risks and protective factors that underlie vulnerability and resilience in the face of traumatic exposure for Service members who have served and will serve our nation for years to come.



National Institute of Mental Health and the U.S. Army. Army STARRS was designed to examine the mental health and resilience of active duty U.S. Army Soldiers to increase our knowledge of the risks and protective factors that underlie vulnerability and resilience in the face of traumatic exposure for Service members who have served and will serve our nation for years to come. The seven separate but integrated epidemiologic and neurobiologic studies that comprise Army STARRS were designed to be a comprehensive approach to the research questions. The project involves large and representative samples of Army Soldiers, including Regular Army, Army National Guard, and activated Army Reserve. The project includes longitudinal, cross-sectional, historical, and prospective studies. Army STARRS involves the collection, integration and analysis of very large volumes of data. The research team obtained, organized, and prepared to analyze a data file of more than a billion data points from existing Army and DoD administrative records representing more than 1.6 million active duty Soldiers from 2004 to 2009; collected data from nearly 200,000 questionnaires administered to more than 100,000 active duty Soldiers from 2011 to 2014 throughout the

United States and at ten locations overseas; administered questionnaires to Soldiers in Kuwait as they transitioned into and out of combat zones for R&R; obtained data from approximately 400,000 neuro-cognitive tests administered to active duty Soldiers; collected approximately 77,000 tubes of blood from approximately 52,000 active duty Soldiers; used the blood samples to perform a wide-range of different types of state-of-the-art biomarker assays (genetic, metabolomic, proteomic, inflammatory, and neuro-degenerative) from DNA, RNA and plasma derived from the blood; conducted multiple, highly technical and complicated neurobiological analyses of the biomarker assay data; linked the above data to extensive Army and DoD administrative data records; and performed sophisticated and highly-complex data analyses using the huge volume of data.

To date, sixteen Army STARRS papers have been published, three papers are in press, seven papers are under review for publication, and thirty-three additional papers are in various stages of development.

As findings have become available, the researchers have reported results directly to senior Army leadership at in-person briefings at the Pentagon that include the Secretary of the Army, the Army Chief of Staff, the Army Vice Chief of Staff, the Deputy Under Secretary of the Army, Office of the Surgeon General staff, and other senior Army officials. In this way, the Army has the ability to apply the findings to ongoing health-promotion, risk-reduction, and suicide-prevention efforts. The benefit from this extraordinary, groundbreaking, complex, and successful undertaking is beginning to emerge and will increase substantially over time as Army STARRS researchers continue to analyze the large amount of data.

Psychological Stress and Resilience in Army Mortuary Affairs

Army Mortuary Affairs (MA) Soldiers care for the dead of all military services on the battlefield and upon returning home. The Center has worked with this population of Soldiers and civilians for more than 25 years to better understand the stresses and the rewards of this work. Our research with MA Soldiers has implications for intervention with MA



Soldiers as well as other military and civilian populations.

During 2014, we conducted pre- and post-deployment surveys with 209 Soldiers of the 111th and 54th Quartermaster (MA) companies at Fort Lee, VA as part of our ongoing longitudinal study to better understand risk and resilience factors of deployment to Afghanistan. Dr. James McCarroll conducted specialty qualification courses for officers on the psychological stresses of Mortuary Affairs operations at the Joint Mortuary Affairs Center and School in Fort Lee, VA.

The Troop Education for Army Morale (TEAM) study is a stress management and resilience-building early intervention designed to improve post-deployment readjustment in MA Soldiers. In 2014, after six years of recruitment, the enrollment and intervention phase of the study concluded. TEAM is based on the five evidence informed principles of Psychological First Aid: safety (physical and psychological), calming, connectedness, self-efficacy, and hope/optimism. These concepts are delivered through four group workshops, informational handouts, a dedicated website, and are supported through concierge phone and email services. In order to test the effectiveness of TEAM, participants were initially randomized into intervention or non-intervention groups. In 2014, preliminary data analyses of 125 participants indicated that MA Soldiers have a high number of exposures to potentially traumatic events during deployment and high rates of probable PTSD and depression, similar to that of combat troops. The TEAM intervention was well accepted by the Soldiers and the majority reported that overall, TEAM was helpful. We continue to analyze data collected from the Soldiers in order to better understand post-deployment readjustment in areas such as qual-

ity of life, personal functioning, social interactions, stress management, unit and personal morale, as well as examination of posttraumatic symptoms and disorders including PTSD and depression. Some of these data have been presented as posters at research meetings, and are being prepared for publication.

Reserve Component of the U.S. Armed Forces

The Center is strongly committed to supporting the Reserve Component (RC) of the United States Armed Forces. The citizen Soldiers who are members of the RC experience unique stressors when activated, due to having to transition from civilian life to full-time military, and then, following completion of their activation, having to re-integrate back into their civilian communities. Historically, the effects of these special burdens have not been adequately understood, with RC members often studied only as a subset of the Active Component (AC) using the same research instruments.

The Center conducts research to address this imbalance by adapting research to the specific experiences of members of Reserve and National Guard forces. The Center conducted studies of Army National Guard units before and after deployment to Afghanistan, and a study of National Guard units responding to a natural disaster. Our study of a nationally representative sample of RC members is conducted in collaboration with Dr. Sandro Galea, Dean, School of Public Health of Boston University. Findings from the early waves of data collection have been published and more publications are in development. Plans are underway for a fifth wave of data collection so we can examine the health and well-being of this unique cohort over time.

Army STARRS also provides an unprecedented opportunity to examine the physical and mental health of RC members. The New Soldier Study, a study within Army STARRS, includes surveys of approximately 23,000 RC Soldiers during their first week of basic training. Many of these Soldiers provided blood samples for genetic and other biomarker analyses. This collection of data at the beginning of military service provides a unique opportunity to study Soldiers through the course of their military careers and beyond. In addition, Army STARRS

included RC members in the All Army Study and in the in-theater study of Soldiers serving in Afghanistan, again yielding data that can be used in long-term studies while providing a snapshot of their current health and mental health, and creating the opportunity for assessment of concentrations of risk in order to develop future interventions to promote and sustain military health.

As part of its research on RC members, the Center has examined Army National Guard members who were likely to deploy as individual augmentees in support of a unit other than their regular unit compared to active duty personnel. Since high social support is associated with better mental health outcomes following deployment, reservists who deploy without their regular unit may experience less social support and consequently may be at greater risk of mental health problems. However, empirical data on the mental health consequences of deploying without one's regular unit are scant.

These RC research efforts are being conducted in keeping with the CSTS philosophy of examining stress at multiple levels, from the cellular to the community. Because they include genetic assays, individual health and mental health data, and examination of unit issues, the research is able to consider interactions among factors at the biological, psychological, and community levels and to develop not only predictors of vulnerability and resilience, but also interventions for individuals, small groups, units and the communities in which they are embedded.

CHILD AND FAMILY PROGRAM (CFP)

Over a decade of war in Iraq and Afghanistan has taken a toll on thousands of Service members, families and children. Nearly 45% of the more than two million Service members who have deployed in the past ten years have children. While most military families are resilient and have had positive experiences, some military and veteran families will require health and mental health care and services for years to come.

The Center's Child and Family Program (CFP) has been a national leader in advancing scientific and clinical knowledge, as well as providing educational resources that address the needs of children



and families affected by trauma, especially our nation's military families and children. Dr. Stephen J. Cozza, CSTS Associate Director, underscores both the strength of these children and families, as well as their vulnerability resulting from the impact of these experiences. Military and veteran families can benefit from developing skills and strategies to better manage the challenges that they face.

The Child and Family Program addresses these complex issues through pioneering research, by educating professional audiences including military and government stakeholders at presentations and conferences, through scholarly publications and through consultation to DoD leadership and national media outlets.

CFP projects continue to shed light on military bereavement, the combat injured family, and child maltreatment and neglect in military communities. Both the National Military Family Bereavement Study (NMFBS) and the Combat Injury Studies have effectively used the web and social media to engage eligible study participants. These vehicles promote understanding of the study, generate interest in participating, and provide updates through the study's

website or its Facebook page. NMFBS, a national study, has representation from every state.

The Child and Family Program continues to be recognized as a leading authority on military families and children. It is essential to bridge science to inform quality care and interventions that support and sustain populations at risk. The Center has expanded its knowledge and commitment to improve the lives of our military families and children, and to mitigate the impact of trauma on all our nation's children and families.

National Military Family Bereavement Study

The National Military Family Bereavement Study (NMFBS), the first rigorous scientific study to examine the impact of a U.S. Service member death on surviving family members, aims to describe the population of Service members who have died since 9/11 and to identify experiences of the Service member's bereaved family members — how psychological, physical and/or behavioral outcomes of the grieving process are influenced by military-unique contributions, as well as family members' pre-existing psychological and physical health, support, and genetic factors. An optional part of the study examines saliva samples for biomarkers associated with outcomes. The year 2014 saw continued data collection culminating in more than 2,000 completed adult participant Phase 1 questionnaires and more than



The website home page and portal to the National Military Family Bereavement Study (www.militarysurvivorstudy.org).

800 adults and nearly 120 children participating in the longitudinal portion of the study, where data are collected annually for three years. Expert consultants from Columbia University, UCLA and the University of Michigan are also involved and collaborating on study analyses.

Deployment Family Stress: Child Neglect and Maltreatment in U.S. Army Families

The Deployment Family Stress: Child Neglect and Maltreatment in U.S. Army Families study seeks to describe the characteristics of substantiated child neglect cases in the Army, and to identify factors within the family, the military community and the civilian community that contribute to family health or child maltreatment. Findings from this study will help to develop strategies for effective prevention with this population and to foster child and family health in the community. In 2014, activity included the acceptance of three manuscripts using the datasets collected from 1,088 questionnaires representing 26 Army installations in the United States, as well as data collected from the records of 400 substantiated child neglect cases around the country. These findings help us better understand the varying types, subtypes and severity of neglect occurring within families, highlighting the importance of multiple public health strategies to minimize risk.

Impact of Combat Injury on Military Service Families and Children

The Impact of Combat Injury on Military Service Families and Children study has involved the collection of important data from: (1) families participating in the National Military Family Association Operation Purple Healing Adventures Camps; (2) through a longitudinal study comparing combat injured and similarly deployed but non-injured families from Walter Reed National Military Medical Center, San Antonio Military Medical Center and Fort Stewart, GA, and; (3) FOCUS-CI (Families OverComing Under Stress: Combat Injury), a pilot randomized controlled trial that tests the effectiveness of a newly developed family-centered, strength-based intervention to be used with severely combat injured Service members and their families. The

study will better help us understand the experience of combat injury, its impact on children and families, and will inform programmatic intervention that can better address their needs.

Family Violence and Trauma Project (FVTP)

The Family Violence and Trauma Project (FVTP), a part of the Center's Child and Family Program, was initiated in 1995 based on joint interests of the Center and the U.S. Army. The project: (1) reviews scientific protocols and manuscripts on family violence research submitted to the Community and Family Support Center (CFSC); (2) monitors ongoing research for further research needs and policy development, and establishes liaisons with other federal agencies in family violence research; (3) maintains an active scientific data base of family violence literature to assist with the establishment of Centers of Excellence as model Army programs for furthering education and training in family violence; (4) supports the Army Family Advocacy Program (FAP) by providing consultation, briefings, papers, and research studies to answer questions involving spouse and child abuse; and (5) assists investigators in the field with their research. In addition, members of the program consult within the Army, and within the broader federal community, to support Army and civilian investigators in family maltreatment research, and publish the highly praised newsletter *Joining Forces/Joining Families*. During 2014, Dr. McCarroll reviewed the scientific literature on family maltreatment fatalities for the Army Installation Management Command, and produced a paper for the Army on maltreatment fatalities. The paper addressed maltreatment fatalities to educate social services, health care providers, and forensic and law enforcement personnel. This project approaches the prevention of maltreatment fatalities through a public health model that promotes strategies at individual, family, community, and societal levels to address practices, policies, and public attitudes and beliefs about maltreatment.

CLINICAL NEUROSCIENCE AND NEUROBIOLOGY

The Center advanced its work in neuroscience and the neurobiology of stress through its continued

oversight and leadership of the National Capital Area Integrated Clinical Study Site. Center Associate Director, COL David Benedek, MD, directs this established network of clinician-researchers at Walter Reed National Military Medical Center (WRNMMC), the DC Veterans Administration Hospital and the Armed Forces Retirement Home. The site is one of 10 study sites across the nation that participates in the INTRuST Consortium for Psychological Health and TBI. In 2014, the Consortium completed data collection for several clinical trials of novel medication and psychotherapy treatment for PTSD and other combat-related disorders. Results of the Consortium's trial of high-dose transcranial magnetic stimulation (TMS) for suicidal ideation and behavior in veterans, conducted at WRNMMC and the Charleston, SC Veterans Administration Hospital, were published in *Brain Stimulation*. The study demonstrated that the delivery of high doses of TMS to the left prefrontal cortex over three days was safe, and that the trend toward more rapid reduction in suicidal ideation noted over control inpatients should be studied in larger patient samples. The Consortium's study of Acceptance and Commitment Therapy (ACT) for patients with deployment-related psychiatric disorders including depression, PTSD, and TBI and a separate study of Ganaxolone — a synthetic neurosteroid — for PTSD both completed enrollment in 2014. Data analysis for ACT was completed and study results are pending publication at this time. Analysis for the Ganaxolone study will be completed in the near future.



Recruiting for Riluzole Study at Walter Reed.

Independent of its affiliation with the INTRuST Consortium, the Center also conducts clinical intervention trials and social and epidemiologic studies to identify modifiable risk and resilience factors in Service members and their families. COL Benedek initiated

collaboration with the Syracuse VA Medical Center in a two-site clinical trial of Riluzole (a glutamatergic modulator used to treat Lou Gherig's Disease) in veterans of recent conflicts with combat-related PTSD who have not experienced relief of their symptoms from current evidence-based treatments. Currently recommended medications for combat-related PTSD increase the availability of serotonin (SSRIs) or serotonin and norepinephrine (SNRIs) in the brain, but do not adequately relieve symptoms for many patients. Therefore, there is an urgent need to investigate other types of medications that may be more effective. Riluzole is a medication that reduces glutamate activity in, and may help reverse damage to, areas of the brain (amygdala, anterior cingulate cortex, and hippocampus) where an excess of glutamate is believed to contribute to PTSD symptoms. This is a randomized controlled, double-blind trial. PTSD, depression, and anxiety symptoms are assessed once a week, and magnetic resonance spectroscopy (1H MRS) is done pre- and post-treatment. The study hypothesized that participants who receive Riluzole will experience greater PTSD symptom improvement and experience greater improvement in depression and anxiety symptoms and overall functioning compared to placebo; and pre- to post-treatment spectroscopy changes in amygdala, anterior cingulate cortex, and hippocampus will associate positively with treatment with Riluzole compared to placebo. This multiyear study continued recruitment and enrollment at both sites throughout 2014 and so far has met 20% of total recruitment targets in its first year.

Brain Indices Study

The Brain Indices Study is conducted in the Brain Assessment Research Laboratory directed by Dr. Connie C. Duncan. The study is funded by the DoD Congressionally Directed Medical Research Programs (CDMRP) and the Center for Neuroscience and Regenerative Medicine (CNRM). The goal of this longitudinal study is to identify measures of brain structure and function that predict later PTSD in Service members with mild TBI, and to identify associations between type of brain injury and outcome.

The past year was one of the busiest years in the seven year history of the Brain Indices Study. Enroll-

ment was completed and a major effort was made to follow-up with participants to complete their three-month and six-month evaluations, as well as recruiting participants for a new study group: Healthy Service Members (HSM). The HSM has proven to be of great significance because analyses of baseline data revealed similar findings between Service members with mild TBI and those who are injured but screen negative for TBI. The healthy Service members, who have significant extra-cranial injuries but apparently no signs of TBI, show similar and highly significant effects on measures of cognitive function as indexed by brain potentials. It is hypothesized that exposure to blast, similar for both groups, may be at the root of the similarity of results. Consequently, efforts have been directed to enroll a group of unexposed, uninjured “healthy” Service members. This has turned out to be an elusive group, especially in active duty Service members. However, we have had some success in recruitment efforts.

The most notable findings to date based on baseline evaluations, which are done within a few months of injury, are: (a) mild TBI delays cognitive processing involved in working memory (an effect previously identified in severe TBI); (b) Service members injured by blast explosions who were rated negative for TBI on standard DoD screening measures showed similar processing delays to Service members with mild TBI. These findings, based on measures of brain electrical activity (ERPs), raise the question of whether current screening measures for TBI lack the sensitivity to detect blast effects on brain function in wounded warriors; (c) mild TBI caused by impact and blast is associated with similar delays in cognitive processing; and (d) processing of novel stimuli appears to be impaired in Service members with impact but not in those with blast-induced TBI. The results suggest that “brain indices” could inform the diagnosis, treatment and recovery from TBI. Enrollment in the new study group of healthy Service members (who had no history of TBI or significant blast exposure) is underway to serve as a comparison group for the injured Service members in the Brain Indices Study.

Some of these data have been presented as post-

ers at national and international research meetings, and are being prepared for publication. This study is producing exciting findings that will ultimately improve the diagnosis and treatment of TBI.

Daily Diary Study

The Daily Diary Study (“Ecological Momentary Assessment of Posttraumatic Stress Symptoms in Service Members Undergoing Rehabilitation”) uses cutting edge ecological momentary assessment methodology to assess daily variability in posttraumatic stress symptoms in Service members with moderate to high symptoms. Soldiers complete four assessments per day over a 15-day period in order to assess daily variability in symptoms associated with psychiatric disorders such as PTSD and depression. Psychiatric disorders, stress symptoms and health risk behaviors such as smoking and alcohol use are assessed at baseline and at one and three months. In Phase I of the study, Service members completed daily assessments using paper questionnaires. In 2014, with enrollment of the 50th participant, we began Phase II of the study. In the second phase, Service members complete daily assessments on an electronic tablet. Electronic assessment has considerable advantages including electronic time stamping that provides an accurate record of when symptoms occur. In addition, participants can be followed in “real time” throughout the day as they complete assessments. Data transfer is also facilitated by the use of electronic assessment. Currently, 16 participants have enrolled in Phase II. Soldiers have had a positive response using the electronic tablets because they are more interactive and efficient. Plans are underway to collect biogenetic samples (blood and saliva) in order to identify potential genetic biomarkers for PTSD, depression and other psychiatric disorders in Service members.



Recruiting for Daily Diary Study at Walter Reed.

Education and Training

The Center scientists educate and train USU medical students committed to service in our nation's Army, Air Force, Navy and Public Health Service. The Center also educates leaders and health care providers in public and private agencies. In addition, the Center sponsors conferences, seminars, and symposia that have educational and training objectives.

The Center has advanced the field of military and disaster psychiatry through presentations, outreach, training, and participation in conferences, international workshops and collaborations, as well as domestic collaborations. The Center's knowledge base has expanded through public health efforts and interventions during and after disasters.

EDUCATIONAL CONFERENCES

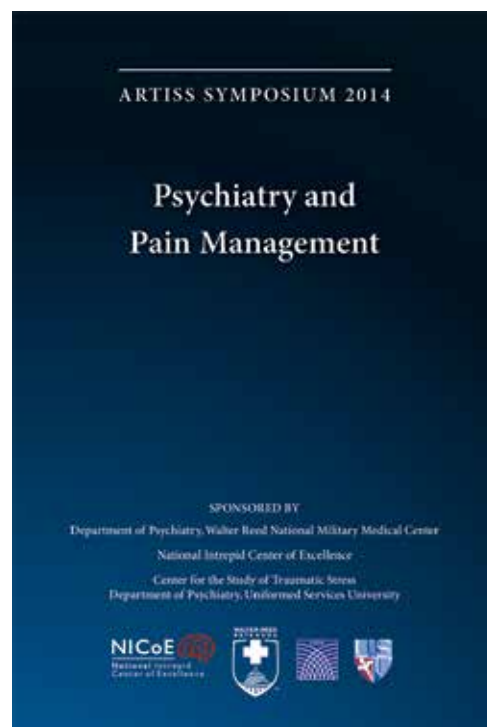
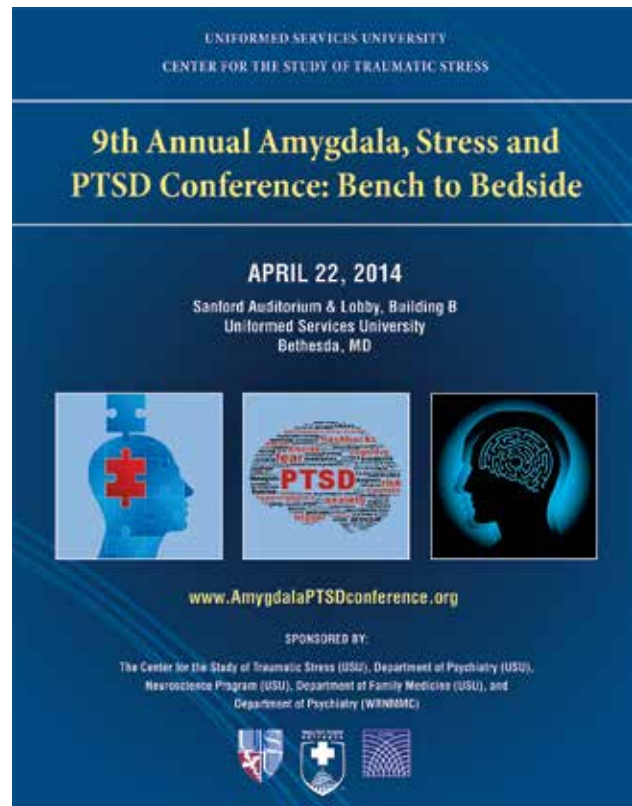
The Center sponsored two conferences in 2014, the Amygdala, Stress and PTSD Conference and the Artiss Symposium.

Amygdala, Stress and PTSD Conference: Bench to Bedside

The Center held the 9th Annual Amygdala, Stress and PTSD Conference at the Uniformed Services University. With more than 400 individuals registered, the Amygdala conference was a robust meeting that brought together scientists, clinicians and policy makers working toward solving the biological basis of stress, fear, and PTSD. The conference speakers represented prestigious universities and research institutions across the country and internationally. For the first time the conference was simulcast to our colleagues at the Naval Medical Center San Diego.

Artiss Symposium: Psychiatry and Pain Management

The Center was a sponsoring partner of the Artiss Symposium along with the Department of Psychiatry, Walter Reed National Military Medical Center (WRNMMC), and the National Intrepid Center of



Excellence (NICoE) for the annual Artiss Symposium. Kenneth L. Artiss, MD (1913–2001), the namesake of the symposium, was an Army officer, a research psychiatrist and instructor at Walter Reed Army Medical Center who inspired generations of military psychiatry residents to conduct high quality research. This year's symposium, "Psychiatry and Pain Management," brought together several renowned speakers to discuss pain from a biopsychosocial approach. The biopsychosocial approach systematically considers biological, psychological, and social factors in the complex interaction in understanding health, illness and the healthcare delivery system. The Artiss Conference Report is widely distributed and is a reference resource that can be found on the Center's website (www.CSTSONline.org).

NEUROSCIENCE MODULE FOR PRE-CLERKSHIP USU MEDICAL STUDENTS

The neuroscience module prepares pre-clerkship medical students for their clerkship period, as well as providing a foundation of knowledge that will inform their long-term education. The neuroscience module covers a breadth of information from basic neuroanatomy to clinical skills in neurology and psychiatry. The Class of 2017 chose the Neuroscience Module Directors as the Best Module Directors of the year: LTC Gary Wynn, MD, USU, Department of Psychiatry and CSTS scientist and Dr. David Mears, USU, Department of Anatomy, Physiology and Genetics.

HOMELAND SECURITY

The Department of Homeland Security (DHS) and the Center are collaboratively developing and pilot testing a cutting-edge resilience training program that incorporates findings from an initial assessment of existing DHS programs and includes elements of Psychological First Aid, Decision Making in High Stress Environments, and individual and team resilience. The Center conducted the assessment of existent resiliency programs for DHS employees and made recommendations based on that assessment. The Center is currently developing the pilot calibration training curriculum, and will provide ongoing consultation, specifically related to program evaluation, data collection and the Institutional Review

Board process, as DHS potentially expands its Responder Resiliency and Decision Making program.

FIREARM SAFETY

The Center partnered with the Yellow Ribbon Reintegration Program (YRRP) and the Defense Suicide Prevention Office (DSPO) to develop a series of multi-modal educational materials on personal firearm safety. This program is a targeted effort that strategically supports the DoD suicide prevention efforts by implementing education and assessment components of personal firearm safety. This training program, implemented in conjunction with pre-and post-deployment events, promotes evidence-based gun safety practices to enhance the safety of Service members and their families.



TEXTBOOK OF DISASTER PSYCHIATRY (Second Edition)

Since the publication of the first edition of the *Textbook of Disaster Psychiatry* in 2007, there has been a proliferation of disasters worldwide, including natural and human-made disasters, terrorist events, and an escalation of the war in the Middle East. The second edition of the *Textbook of Disaster Psychiatry* advances the goals of the first edition by bringing together a distinguished group of international experts providing an updated, comprehensive review of the psychological, biological, and social processes of response to, and intervention for, disaster mental health needs. The second edition represents a decade of advances in disaster psychiatry: the epidemiology of disaster response, the neurobiology of disaster exposure, socio-cultural issues, interventions, actionable research, and advances in public health responses to disaster. The second edition has a Scientific Advisory Board, Section Editors and Associate Editors comprised of distinguished scientists, scholars, practitioners and researchers who are leaders on the cutting edge of the field of disaster psychiatry. The second edition has an expected publication date of 2016.

Development and Dissemination of Educational Resources

The Department of Defense featured a piece on the Center and its expert role in disaster psychiatry in a web-based article titled, “Disaster Psychiatry Emerges as DoD Field of Study.” CDR Joshua Morganstein and COL Benedek provided an overview of the rapid response process and the Center’s role in disaster response, consultation and education.

COL Benedek presented a webinar titled “Promoting Resilience in Disaster First Responders” for the National Center for Disaster Medicine and Public Health which had attendees from across the country.

The Center published an article in *Psychiatric Times* that was disseminated to 40,000 mental health professionals that provided education and guidance on caring for individuals affected by the Ebola virus.

Center educational resources on Ebola were used at Johns Hopkins University Hospital in Baltimore, MD to educate distressed hospital employees after the hospital was designated as one to receive Ebola patients.

In partnership with the National Center for Disaster Medicine and Public Health, Center scientists

co-authored the first Curriculum Recommendations for Disaster Behavioral Health Professionals. This comprehensive document provides the framework and resources needed to create customized training and education curriculum that can be used to educate healthcare professionals, first responders, leaders, policy makers and others on nearly all facets of disaster behavioral health world-wide. The Curriculum Recommendations can be found on the NCDMPH website and were presented at the annual Learning in Disaster Health conference.

CSTS ONLINE

In 2014, the Center developed a new website (www.CSTOnline.org) focused on information dissemination in support of our mission to advance scientific and academic knowledge, interventions, educational resources and outreach to mitigate the impact of trauma from exposure to war, disasters, terrorism, community violence and public health threats. Over the past 27 years, the Center has developed and published an extensive collection of resources for citizens, academia, leaders, healthcare personnel and government agencies. These resources include books and book chapters, journal articles, conference summaries, presentations and reports and educational fact sheets. The website is a portal to this rich collection of knowledge and provides users with advanced features to access this information through extensive search capabilities and optimized viewing on mobile devices.

ENTERING THE REALM OF SOCIAL MEDIA

In 2014, the Center also ventured into the world of social media for dissemination of information via both Facebook and Twitter. The use of social media allows the Center to broaden its audience and ensure that valuable information reaches those who may not regularly visit the website. “Like” the Center on Facebook. Follow us on Twitter.

Facebook: www.facebook.com/USU.CSTS

Twitter: www.twitter.com/CSTS_USU



Consultation

The Center provided consultation in response to national disasters and public health threats that occurred in 2014.

The Center also provided informal consultation to the Centers for Disease Control and Prevention (CDC) in directing their public response to the Ebola virus incidents that occurred within the United States.

The Center adapted and customized fact sheets in response to the mudslides in Washington State. The fact sheets were posted on the CSTS website and rapidly disseminated to several thousand stakeholders supporting the response and management of the mudslides including:

- The National Association of State Mental Health Program Directors (NASMHPD)
- The Mental Health Commissioner in Washington State
- The U.S. Surgeon General's office
- The American Psychiatric Association
- The National Guard medical personnel
- Local mental health counselors

The Missouri Department of Mental Health contacted the Center to provide informal consultation following the shootings in Ferguson, MO. They were primarily interested in reviewing current crisis behavioral health issues and interventions, and planning more long-term efforts. The Center provided several relevant fact sheets.

Center Associate Director, Dr. Brian Flynn, was appointed to the SAMHSA Disaster Distress Helpline (DDH) advisory committee. This new advisory committee works to establish, monitor and maintain evidence-informed standards and best practices in the areas of outreach, communications and training for the Disaster Distress Helpline, ensuring that the project provides the most effective services possible.

GLOBAL HEALTH IMPACT

The Center plays an important role in the national and global response to war, disasters, terrorism and public health threats. The Center partners with national and international organizations in response



Center scientists provided subject-matter expertise on the mental health effects of extreme weather in support of a federal multi-agency report on the current status of climate change.

to global health care needs.

The Curriculum Recommendations for Disaster Behavioral Health Professionals that Center scientists co-authored in partnership with the National Center for Disaster Medicine and Public Health were distributed internationally to a wide range of global stakeholders involved in the education, training and delivery of disaster behavioral health planning, preparation, response and recovery.

Center scientists provided subject-matter expertise on the mental health effects of extreme weather in support of a federal multi-agency report on the current status of climate change being prepared for Congress and the President of the United States. This report, to be released in 2015, represents extensive collaboration between federal agencies and the private sector to provide contemporary and evidence-based information to our government's most senior leaders for the purposes of informing national and global policy.

Dr. Ursano co-chaired the working group on psychosocial/mental health concerns and community resilience at the International Symposium on Disaster Medical and Public Health Management:

Review of the Hyogo Framework for Action (HFA). Dr. Ursano, along with Dr. Hiroaki Tomita (International Research Institute of Disaster Science at Tohoku University in Japan), led a team of international subject-matter experts, including other Center scientists, in the development of policy recommendations to be disseminated globally to United Nations member countries that assist with reducing the risk of adverse psychosocial and mental health impacts of disasters. Dr. Ursano co-authored the first Psychosocial and Mental Health Guidelines as part of the United National General Assembly's 2015-2025 global Hyogo Framework for Action, which provides the international community with guidance

on Disaster Risk Reduction.

Center scientists participated in the Defense Centers of Excellence Psychological Health and Traumatic Brain Injury's Psychological Health and Resilience Summit held at the Defense Health Agency Headquarters. The Summit included onsite and virtual formats that facilitated interaction with more than 800 behavioral health and primary care professionals and program leaders within the DoD and VA locally and worldwide.

The Center provided consultation and educational materials in support of the response to the South Korea ferry disaster.

David H. Marlowe, PhD

In 2014, the Center lost a friend and an important source of research guidance and wisdom: David H. Marlowe PhD, former Chief of the Department of Military Psychiatry at Walter Reed Army Institute of Research (WRAIR) and senior lecturer in the Department of Psychiatry at USU as well as a senior consultant to the leadership of the Center for the Study of Traumatic Stress. Dr. Marlowe died at the age of 83 after a prolonged illness.



A lifetime of study of the effect of social structure and belief upon responses to human conflict, war, and natural disasters made him an extremely valuable colleague to the Center. The occasion of his death brings to mind his substantial contributions and the challenges that he has bequeathed us.

As a social anthropologist, he conceptualized culture and ideology as resulting from and defined by relationships to others. Throughout his career Dr. Marlowe was concerned with how people organize their relationships with other

people — close relatives, loved ones, coworkers, neighbors, members of the congregation, commanders, subordinates, peers, strangers, co-religious, those with shared culture or nationality, and those from other cultures. He pursued these interests and applied his insights within the context of military populations and groups, demonstrating how these relationships had a profound effect on both performance and health.

He was also committed to the concept that one learns about Soldiers by going to them in their operational environments and where they live. His research took him and the research teams he led to combat zones in Vietnam, Panama, the Persian Gulf, and Somalia. He was as much at home in tents with junior Soldiers as he was in the offices of the senior generals who sought his advice. He was willing to share hardship and risk with Soldiers to acquire the knowledge necessary to understand them and ultimately to make their lives better.

Releasing lanterns into the sky is a Thai tradition. Dr. Marlowe spent considerable time doing research in Thailand and developed a deep appreciation for Thai traditions.

Interview with Senior Program Manager, Paul E. Hurwitz, MPH

Paul Hurwitz joined the Center in 2010 as the Senior Program Manager for the Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS), which is the largest study of mental health risk and resilience ever conducted among military personnel, and he assumed an expanded role in the Center in 2014. He is also an Instructor in the Department of Psychiatry of the Uniformed Services University. Mr. Hurwitz received his MPH from the University of Michigan with a dual major in Epidemiology and Health Administration. He has more than 30 years of experience in the administration and management of large and complicated health research projects. This interview with Mr. Hurwitz reflects the perspective of a member of the Center who is not a scientist.



You have been with the Center since 2010. Can you share your perspective about working at the Center?

I accepted the position at the Center for two main reasons: the project I would be working on, and the people I would be working with. I was intrigued by my first project assignment, managing Army STARRS. Army STARRS is a large and complicated project involving several concurrent epidemiologic studies that include scientists from several different institutions, working together toward the same goal. The project involved tackling the difficult but important issue of suicide in the military. I was impressed by the team of people working on the project, and the dedication of people at the Center. The intellectual caliber and the international reputations of the personnel I have had the honor to work with at the Center, and the outstanding work they were involved in, made it an enticing opportunity that I could not refuse. Since joining the team at the Center, I have had the privilege of working with bright, dedicated, and hard-working people who have inspired me and my work.

Can you tell me more about what made you excited about your first project assignment?

Army STARRS sounded like a management challenge, because of the size, complexity, the many different personnel involved, and the large number of moving parts that had to be managed, but that was part of the appeal. When I joined the project in the early, formative phase of the research, I thought Army STARRS could benefit from some additional organization, management, structure and documentation. The scientists and statisticians were incredibly busy working on so many aspects of the project such as designing the multiple studies, developing and testing the many different questionnaires, determining how to select large and representative samples of Soldiers to recruit, and writing consent forms and study protocols for submission to IRBs. As a result, the scientists had little to no time available to devote to managing, tracking, and documenting these processes. The team was composed of many scientists who possessed more than enough scientific know-how, but the project was very large and complicated, and needed someone who could step back and look at the big picture to help make sure all the many parts fit together, to keep everything moving in the same direction and according to schedule, and to help avoid having any pieces fall through the cracks. There were what seemed like many hundreds of detailed steps that needed to be defined, monitored, and moved forward harmoniously. It was a long and difficult process to get where we are now, but looking back at what the team has accomplished in the past five years, I am extremely proud of what I see.

Can you tell me more about your view of the work at the Center aside from Army STARRS?

The work at the Center is primarily geared toward psychiatry and psychology, and it clearly pro-

vides tremendous research, educational and other benefits to professionals working in those two fields. But the work also benefits many other people. I have personally had the opportunity to help people in my community by sharing with them materials developed by Center scientists.

Can you give me an example?

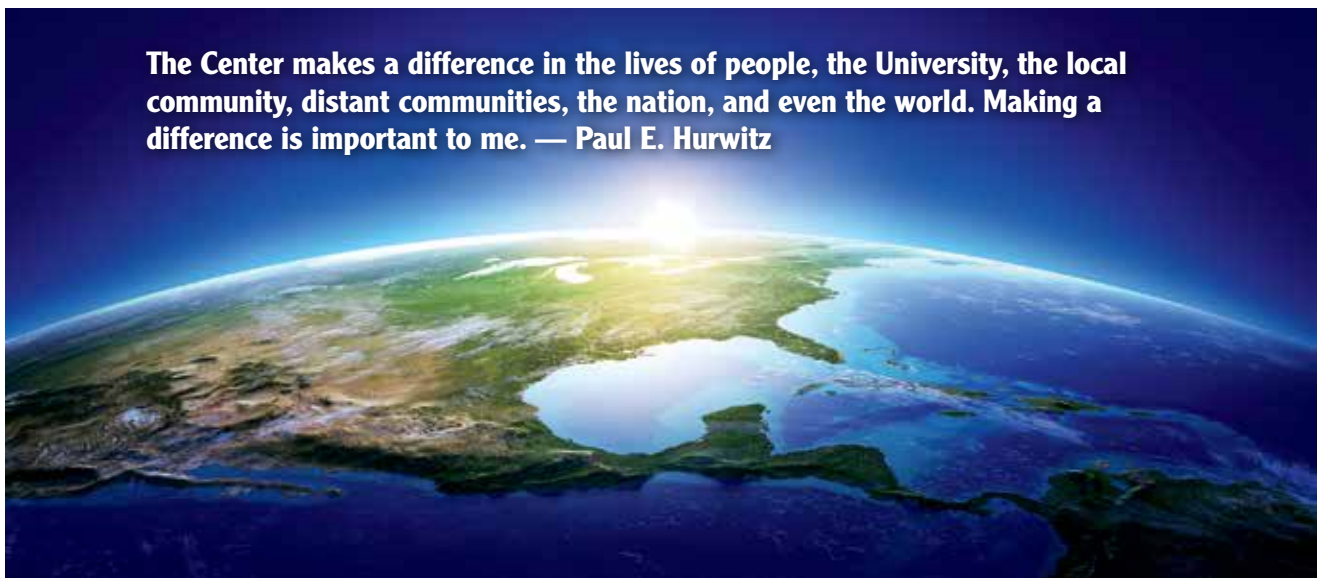
When major disasters, or other traumatic events take place, Center scientists spring into action. They often travel to the disaster site to offer direct help and consultation, and they provide educational materials regardless of whether they visit the site. Some of these materials are what they refer to as fact sheets, and the Center provides them to those who deal with the aftermath of these events. Separate fact sheets are produced for, and distributed to, different groups of people such as community leaders, first responders, health care providers, parents, teachers and other workers. We have had a series of mass shooting incidents in schools and workplaces over the past several years. I had friends and neighbors who as school teachers, or as parents, were struggling with how to discuss, or how to avoid discussing, these incidents with their students or their children. I have posted fact sheets on my Facebook page, and emailed them to friends and neighbors, after some of these traumatic events. I was amazed by the number of people who thanked me and told me

how much the information helped them discuss the events with children. It helped them know what to say and how to say it. This is a good example of how the Center responds to traumatic events and offers real and immediate help.

What else do you want to tell me about your view of working at the Center?

The Center makes a difference in the lives of people, the University, the local community, distant communities, the nation, and even the world. Making a difference is important to me. There is a Hebrew expression, “tikkun olam,” that my parents repeated often and engrained in me growing up. In English it means “repairing the world” or “healing the world.” My folks said everyone has this responsibility. It refers to humanity’s shared responsibility to heal, repair and transform the world. In my 30 years of conducting and managing epidemiologic research before coming to the Center, there have only been a couple of instances I can recall when my research directly made a tangible difference. Clearly, research results add to general scientific knowledge, but so many research results just sit on a shelf. At the Center, I feel that pretty much all of our research and education efforts actually make a difference, improve people’s lives, and contribute to the concept of “tikkun olam.” I am honored to have had the opportunity to work at the Center over the past five years.

The Center makes a difference in the lives of people, the University, the local community, distant communities, the nation, and even the world. Making a difference is important to me. — Paul E. Hurwitz



CSTS Publications in 2014

(Names in bold text are CSTS staff)

Journal Articles

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CSTS Presentations, Briefings, and Interviews in 2014

Presentations

Disasters and Resilience: Behavior, Communicating and Caring, Ursano, R.J., the International Atomic Energy Agency's (IAEA) Technical Meeting on Radiation, Health and Society: for a better understanding of the psycho-social consequences of Fukushima nuclear accident, IAEA headquarters, Vienna, Austria, January 2014.

Military Response to Terrorism: A Public Health Approach, Benedek, D.M., George Washington University, Washington, DC, April 2014.

Complementary and Alternative Approaches to PTSD in Advances in PTSD, Benedek, D.M. (Co-Chair and Presenter), Annual Meeting of the American Psychiatric Association, New York City, NY, May 2014.

Interactive Session Update on PTSD, Benedek, D.M.,

Annual Meeting of the American Psychiatric Association, New York City, NY, May 2014.

Military Cultural Competence: Impact on Research, Benedek, D.M., Annual Meeting of the American Psychiatric Association, New York City, NY, May 2014.

Committee on Psychiatric Dimensions of Disaster, Ursano, R.J., Annual Meeting of the American Psychiatric Association, New York, NY, May 2014.

Veterans and the Criminal Justice System, Howe, E., American Psychological Association and the American Bar Association National Conference, Confronting Family and Community Violence: The Intersection of Law and Psychology, Washington, DC, May, 2014.

Thirty-Day Prevalence of DSM-IV Mental Disorders among Nondeployed Soldiers in the US Army: Results from the Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS), Ursano, R.J., Uniformed Services University Research Days Conference Lecture in support of receiving the James Leonard Award, Bethesda, MD, May 2014.

Gender and Position of Authority and the Risk of Depression and Post-Traumatic Stress Disorder among a Representative Sample of U.S. Reserve Component Personnel, Cohen, G., Sampson, K., Fink, D., Wang, J., Russell, D., Gifford, R.K., Fullerton, C.S., Ursano, R.J., Galea, S. Society for Epidemiologic Research Annual Meeting, Seattle, WA, June, 2014.

War, Combat and Outcomes, Institute of Medicine Annual Meeting, Ursano, R.J. (invited speaker), Washington, DC, June 2014.

Amerithrax and Insider Threat: Challenges and Opportunities at the Military-Civilian Interface, Benedek, D.M., Forensic Expert Behavioral Analysis Panel Briefing to American Red Cross and US Capitol, Washington, DC, June 2014.

Military Cultural Competency, Morganstein, J., National Association of State Mental Health Pro-



Dr. Ursano speaking at the Italian Embassy.

gram Directors Annual Conference, Washington, DC, July 2014.

Learning in Disaster Health, Morganstein, J., National Center for Disaster Medicine and Public Health Annual Conference, Fort Myer, VA, September 2014.

Focusing on DSM-5, Regier, D., World Psychiatric Association Meeting, Madrid, Spain, September 2014.

Suicidality, TBI, and National Security, Ursano, R.J., United Kingdom/United States VA-DoD Joint Task Force on Suicide and Mental Health, VA Central Office, Washington, DC, October 2014.

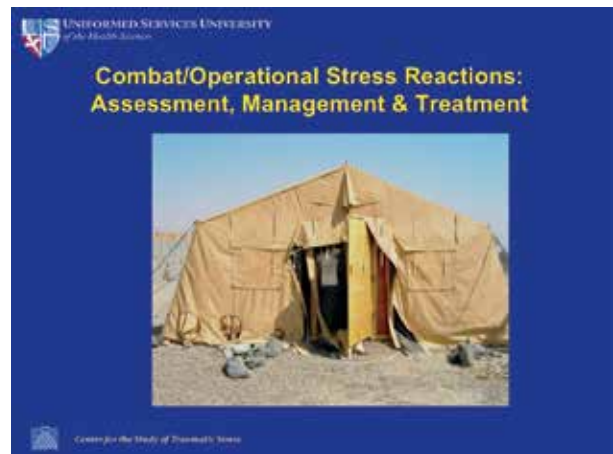
PTSD and Trauma Related Disorders: PTSD, Suicide and TBI, Ursano, R.J., Clinical Neuroscience Grand Rounds, NIND/NIMH, Bethesda, MD, October 2014.

Effect of Relationship-to-Deceased and Military Pride on Adaptive Grief Reactions in Parentally Bereaved Children of U.S. Service Members, Cozza, S.J., Fisher, J., Ortiz, C., Kaplow, J., Layne, C., Harrington-Lamorie, J., Zhou, J., Liu, A., Grein, K., Fullerton, C.S., Ursano, R.J., presented by Cozza, S.J., Annual Meeting of the International Society for Traumatic Stress Studies, Miami, FL, November 2014.

Interactive Effect of Early Childhood Adversities and Mental Health Symptoms on Family Function in Military Wives Following Combat Deployment, La Flair, L., Holmes, A., Sullivan, J., Beech, E., Kansky, J., Fullerton, C.S., Ursano, R.J., Cozza, S.J., presented by La Flair, L., Annual meeting of the International Society for Traumatic Stress Studies, Miami, FL, November 2014.

Effectiveness of Post-Deployment Early Intervention for U.S. Army Mortuary Affairs Soldiers: Results from Four Years, Biggs, Q., Fullerton, C.S., McCarroll, J.E., Kansky, J., Zatzick, D., Ursano, R.J., presented by Biggs, Q., Annual Meeting of the International Society for Traumatic Stress Studies, Miami, FL, November 2014.

Effects of Prior Trauma on Grief after U.S. Military Service Member Death. Fisher, J., Ortiz, C., Harrington-LaMorie, J., Zhou, J., Grein, K., Liu, A., Fullerton, C.S., Ursano, R.J., Cozza, S.J., poster presented by Fisher, J., Annual Meeting of the In-



ternational Society for Traumatic Stress Studies, Miami, FL, November 2014.

Effects of chronic intravenous morphine self-administration on in vivo brain glucose utilization (18FDG-PET) and transcriptome expression (RNA Sequencing) in rats. Choi, K.H., Le, T., Sukumar, G., Wilson, C.M., Selwyn, R.G., Dalgard, C.L., Ursano, R.J., poster presented by Choi, K.H., at the Society for Neuroscience Meeting, Washington, DC, November 2014.

The Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS): Design and early results. Naifeh, J.A., Kessler, R.C., Nock, M.K., Schoenbaum, M., Colpe, L.J., Fullerton, C.S., Heeringa, S.G., Stein, M.B., Ursano, R.J., presented by Naifeh, J., 5th Annual Forum of the Canadian Institute for Military and Veteran Health Research, Toronto, Canada, November 2014.

Planning Committee for Disaster Research Response Workshop, Ursano, R.J., IOM Forum on Medical and Public Health Preparedness for Catastrophic Events, New Orleans, LA, November 2014.

Military Mental Health Response to Terrorism, Benedek, D.M., George Washington University (Northern VA campus), Alexandria, VA November 2014.

DSM-5 for Clinical Practice-RDoC for Research, Regier, D., presentation to the editorial staff of the journal *Health Affairs*, Bethesda, MD, November 2014.

Association of childhood anxiety disorders and quality of life in a primary care sample, Ramsawh,

H.J., Chavira, D.A., presented by Ramsawh, H.J., at the 48th Annual Convention of the Association for Behavioral and Cognitive Therapies in Philadelphia, PA, November 2014.

Update on Posttraumatic Stress Disorder: Phenomenology and Treatment, Benedek, D.M., Grand Rounds, Department of Psychiatry, Walter Reed National Military Medical Center, Bethesda, MD, December, 2014.

PTSD: The Evolution of Diagnostic Conceptualization and Approach to Management, Benedek, D.M., George Washington University Medical School, Departments of Pharmacology and Psychiatry Seminar on the History of Mental Well-Being, Washington, DC, December 2014.

Fostering Resilience in First Responders: Self-Care and Peer Support, Benedek, D.M., US Drug Enforcement Administration FAST Peer Support Training Conference, Stafford VA, December 2014.

Briefings

Department of Homeland Security Chief of Staff and Deputy Chief of Staff for Operations and Coordi-

nation Briefing, Benedek, D.M., Washington, DC, February 2014.

Senior Army Leadership briefing on the latest actionable findings from the Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS), Ursano, R.J., Pentagon, Arlington, VA, September 2014.

Invited Participant: Mental Health and Suicide Prevention Briefing with White House and Obama Administration Officials. Ursano, R.J., September 2014.

Interviews

DSM-5 and the NIMH Research Domain Criteria, "BioCentury This Week," CBS Network, interview with Dr. Thomas Insel, NIMH Director, and Dr. William Carpenter, Professor of Psychiatry, University of Maryland, Regier, D., September 2014.

New York Times interview, "Prevalence and Correlates of Suicidal Behavior among New Soldiers in the US Army: Results from the Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS)," Ursano, R.J., October 2014.



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P11: a Biomarker for Memory Retrieval	USAMRMC
Resilience Building for Homeland Security A Specialized Training and Collaborative Consultation	DHS
Development of an Education Curriculum for Personally Owned Firearms Safety Enhancement Initiative	DSPO
Family Violence and Trauma Project	IMCOM
Riluzole Augmentation Treatment for Complicated PTSD	USAMRMC
Stress and Biomarkers in a Military Population	USAMRMC
Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS)	NIMH
Continuation of the Army Study to Assess Risk and Resilience in Servicemembers (STARRS 2)	DHP
Brain Indices of Risk for PTSD after Mild TBI	UCSD
Reliability and Initial Validation of the INTRuST Structured Assessment for Evaluation of TBI	UCSD
Brain Indices Structure and Function	CNRM
The Impact of Service Member Death on Military Families: A National Study of Bereavement	CDMRP
A Preventive Intervention with Children and Families of the Combat Injured	USAMRMC
PTSD/TBI Clinical Consortium Coordinating Centers	UCSD
Behavioral-Based Predictors of Workplace Violence in the Army STARRS	Harvard
Deployment Family Stress: Child Neglect and Maltreatment in US Army Families	CDMRP
Mortuary Affairs Soldiers: Early Intervention and Altering Barriers to Care for PTSD	USAMRMC
Addressing the Needs of Children and Families of Combat	CDMRP
A Proof-of-Concept, Double-Blind, Randomized, Placebo-Controlled Study of Ganaxolone in PTSD	UCSD
PTSD, Comorbidity and Service Utilization among National Guard	USAMRMC
The Injury and Traumatic Stress (INTRuST) Consortium Biorepository	UCSD
CSTS Program Grant	DHP

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