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A version of the National Center for PTSD Fiscal Year 2014 Annual Report is available as a PDF without the appendices, as is each individual appendix, at http://www.ptsd.va.gov/about/mission/annual_reports/index.asp.
## ACRONYMS

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<th>Acronym</th>
<th>Definition</th>
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<td>CAP</td>
<td>Consortium to Alleviate PTSD</td>
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<td>CAPS</td>
<td>Clinician-Administered PTSD Scale</td>
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<td>CBCT</td>
<td>Cognitive-Behavioral Conjoint Therapy</td>
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<td>CBT</td>
<td>Cognitive-Behavioral Therapy</td>
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<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
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<td>CNN</td>
<td>Cable News Network</td>
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<td>CPT</td>
<td>Cognitive Processing Therapy</td>
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<td>CSP</td>
<td>Cooperative Studies Program</td>
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<td>DoD</td>
<td>Department of Defense</td>
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<td>DRRI</td>
<td>Deployment Risk and Resilience Inventory</td>
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<td>DSM</td>
<td>Diagnostic and Statistical Manual of Mental Disorders</td>
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<td>GABA</td>
<td>Gamma-Aminobutyric Acid</td>
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<td>GWAS</td>
<td>Genome-Wide Association Study</td>
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<td>HPA</td>
<td>Hypothalamic–Pituitary–Adrenal</td>
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<td>ICD</td>
<td>International Classification of Diseases</td>
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<td>MHS</td>
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<td>MIRECC</td>
<td>Mental Illness Research, Education and Clinical Centers</td>
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<td>NVVRS</td>
<td>National Vietnam Veterans Readjustment Survey</td>
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<td>OEF</td>
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<td>TBI</td>
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<td>VA</td>
<td>(Department of) Veterans Affairs</td>
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<td>VHA</td>
<td>Veterans Health Administration</td>
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<td>WET</td>
<td>Written Exposure Therapy</td>
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LETTER FROM THE DIRECTOR

On August 29, 2014, the U.S. Department of Veterans Affairs (VA) National Center for Posttraumatic Stress Disorder (PTSD) celebrated its 25th anniversary. Since its inception the National Center has been the leader in research and education for helping those who are living with PTSD. I was privileged to be a part of the team that started the Center, and part of an ever-growing number of people working to further knowledge about consequences of being exposed to a traumatic event.

In 1984 Congress directed VA to form a National Center for PTSD “to carry out and promote the training of healthcare and related personnel in, and research into, the causes and diagnosis of PTSD and the treatment of Veterans for PTSD.” The proposal to create the National Center arose from the recognition of the growing mental health needs of Vietnam Veterans and others. VA established the National Center for PTSD in 1989 as a center of excellence that would set the agenda for research and education on PTSD. The diagnosis of PTSD had been formalized only nine years earlier, in the third edition of the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders (DSM-III, 1980). The new diagnosis significantly increased research on the consequences of exposure to horrific, life-threatening events. In 2013 the American Psychiatric Association published revised criteria for the diagnosis of PTSD — reflecting advances in knowledge gained since the last revision of the criteria in 1994 and generating new research aimed at understanding the implications of the changes.

But science and education are not the only influences that have increased understanding of PTSD. Disasters, wars, and other traumatic high-profile events — the terrorist attacks on 9/11/2001, the subsequent wars in Iraq and Afghanistan, the 2011 tsunami and earthquake in Japan — all have helped to raise public awareness. Media reports on PTSD have played a role in creating awareness, too. I think this is a good thing. Veterans and other trauma survivors who have PTSD do not always understand their reactions, and even if they do, they might not know how to get help. Being informed about the symptoms of PTSD and the treatments available can help people with PTSD take the first steps toward seeking assistance.
Another fundamental change over the past 25 years is an expansion of knowledge about how to treat PTSD. In 1989 few effective treatments had been identified. Many clinicians and their patients thought that PTSD was a disorder that had to be coped with. Now there are effective treatment options — psychotherapies and medications — that can help individuals with PTSD achieve meaningful improvements. VA has implemented national training programs for clinicians to enhance the availability of the most effective psychotherapies for PTSD to Veterans. Researchers are working to make existing treatments more effective and to develop even more effective treatments. And today, we can say with conviction that treatment works.

Technology is also playing a role by widening the distribution of information and access to treatment in multiple channels. For example, in 2011 the National Center partnered with the Department of Defense to create the first publicly available VA mobile app, the award-winning PTSD Coach. AboutFace — an online video gallery developed by the Center that features Veterans talking about living with PTSD and how treatment has turned their lives around — breaks down barriers around seeking care and reduces misconceptions about PTSD and its treatment. We are probably only at the beginning stages of figuring out how to use technology and social media to help individuals with PTSD.

Integrity, Commitment, Advocacy, Respect, and Excellence (I CARE) are the values that define “who the VA is” and the VA’s culture, and help guide the actions of staff across the VA. The National Center’s accomplishments and plans exemplify how we have supported and will continue to support these values. In 2012 the Center began a strategic planning process. Through this work, we identified Center-wide Operational Priorities to help us optimally serve the field and carry out the Center’s mission. These priorities inform areas of research and education focus and include (1) Biomarkers; (2) DSM-5; (3) Treatment efficiency, effectiveness, and engagement; (4) Care delivery, models of care, and system factors; and (5) Implementation. Although the Center has made great strides in research and education, we look forward to making even greater progress in promoting understanding of and advancing scientific knowledge about PTSD.

Dr. Paula P. Schnurr is the Executive Director of the National Center for Posttraumatic Stress Disorder and served as Deputy Executive Director of the Center since 1989. She is a Research Professor of Psychiatry at the Geisel School of Medicine at Dartmouth and Editor of the Clinician’s Trauma Update-Online.
Since its beginning in 1989, the National Center for PTSD has maintained a strong commitment to improve the care of Veterans through research into the prevention, causes, assessment, and treatment of traumatic stress disorders and through education of Veterans, others affected by trauma, professionals, and policy makers.

Through the methodological rigor and collaborative nature of our research, we are dedicated to high professional standards of integrity, excellence, and respect. Our research activities have a uniquely real-world perspective that ensures we are truly Veteran-centric. As a result, the Center is adept at translating basic findings into clinically relevant techniques and at conducting research on the best ways to implement evidence-based practices into care.

Our efforts benefit from continually improving quality — ensuring excellence in the programs and materials we provide to Veterans, their families, and providers. Our respect for military culture and for individual circumstances of Veterans and others impacted by trauma informs all the work we do including the Center’s award-winning website (www.ptsd.va.gov), and our many publications, online resources, and national programs.

Advancing the Scientific Understanding of PTSD

When the National Center opened, research on PTSD was in its early stages. PTSD had been added to the American Psychiatric Association’s official classification of mental disorders only nine years before. The National Vietnam Veterans Readjustment Survey (NVVRS) had just been published the previous year, “an incredibly important study scientifically, historically, and in terms of clinical policy moving forward,” says Matthew Friedman, MD, PhD, Senior Advisor and former Executive Director of the National Center. “It was the first time that any nation had attempted to use rigorous science to assess the consequences of military deployment to a war zone in terms of psychiatric sequelae,” continues Friedman. The survey documented a high prevalence of PTSD in Vietnam Veterans; for example, 30% of all male Veterans who had been deployed to Vietnam had experienced PTSD at some point. Of those, half still have PTSD. “It really underscored the fact that PTSD not only had severe consequences, but was a chronic condition and increased risk of other psychiatric problems,” says Friedman. The NVVRS raised major questions about the scope of the problem that researchers continue to grapple with today: who develops PTSD and why? What happens to people with PTSD over time? Early research started to address these questions to better identify and treat those affected.
Key Milestones IN THE FIRST 25 YEARS

1989
Secretary of Veterans Affairs William Derwinski dedicates National Center for PTSD
At its first meeting, Center launches development of the Clinician Administered PTSD Scale (CAPS)

1990
First issues of PTSD Research Quarterly and NCP Clinical Newsletter are published by the Center
Center participates in first VA/DoD training conference to prepare for casualties from Operations Desert Storm and Desert Shield

1991
PILOTS (Published International Literature on Traumatic Stress) database is made publicly available by the Center; it provides a comprehensive cross-disciplinary index to all published research on trauma

1992
Center prepares to launch the Matsunaga Vietnam Veterans Project, a Congressionally mandated survey to assess the readjustment experiences of American Indian, Japanese American, and Native Hawaiian Veterans of the Vietnam War

Epidemiology of PTSD
Less than a year after the National Center opened, Congress mandated the Center to assess the readjustment experiences of American Indian, Japanese American, and Native Hawaiian Veterans of the Vietnam War. The resulting Matsunaga Vietnam Veterans Project (named for Spark Matsunaga, the former U.S. senator from Hawaii who spearheaded the legislation mandating the study) found significant differences in PTSD prevalence among the groups. Specifically, Northern Plains, Southwest Indian, and Native Hawaiian Veterans had higher PTSD prevalence than did White Veterans; Japanese Americans had lower prevalence (Beals et al., 2002; Friedman, Schnurr, Sengupta, Holmes, & Ashcraft, 2004). Native American Veterans were more exposed to atrocities and combat in Vietnam compared with White Veterans, which seems to have contributed to increased PTSD prevalence in that study group. The study’s results for Japanese American Veterans triggered many questions by researchers “such as, is there sometimes a cultural norm against acknowledging these kinds of problems?” says Friedman. Researchers continue to pursue these types of questions regarding ethnicity and PTSD.

With the increasing number of women in military service, the National Center recognized early on the need to examine trauma and PTSD in this population. Our investigators published one of the first studies on the occurrence and negative impact of sexual harassment and assault in female military personnel (Wolfe et al., 1998). More recent research has expanded the examination of sexual trauma to include male Servicemembers. For example, a study of Reservists indicated that although women are at greater risk for sexual harassment, men might be more negatively affected when harassment is severe (Street, Stafford, Mahan, & Hendricks, 2008). As a result of such findings the VA developed assessment tools for sexual assault, and implemented screening and counseling for military sexual trauma.

Studies with large samples and measurements over time are needed to fully understand the predisposing factors for PTSD and the effects of trauma. In 2003 National Center investigators began one of the largest longitudinal surveys of military personnel: the Neurocognition Deployment Health Study of recently deployed Veterans (Vasterling et al., 2006). This study was one of the first longitudinal studies of military Veterans that included predeployment assessments. The researchers found that soldiers who had been deployed to Iraq were experiencing neurobiological compromise, “a neural alteration that happens when people are functioning under extreme stress,” says Jennifer Vasterling, PhD, study principal investigator. “They had been back a couple of months and were still in this hyperaroused state.” The researchers continue to study subsets of this Veteran cohort. Long-term studies are useful, says Vasterling, “because you can develop predictive models of risk factors for certain psychiatric disorders.”
Neurobiology of PTSD

The National Center has a strong legacy of basic science research into the neurobiological causes and correlates of PTSD. The ultimate aim of our basic science research, led by experts in the Clinical Neurosciences Division, is to improve assessment and treatment of Veterans and others affected by trauma. Center investigators were the first to demonstrate alterations in brain structure, function, and chemistry associated with PTSD. Dysregulation of the stress response system — the hypothalamic–pituitary–adrenocortical (HPA) axis — showed that HPA abnormalities in Veterans with PTSD were different compared with Veterans with depression (Yehuda et al., 1993). Center investigators also found reduced hippocampal volume (Bremner et al., 1995) and a smaller anterior cingulate cortex in Veterans with PTSD. These findings supported the argument that PTSD was a psychiatric disorder, which experts in the field were debating at the time.

The National Center has focused on identifying biomarkers associated with different expressions, or phenotypes, of PTSD. Findings from one key study suggest that a combination of genes involved in one particular neurotransmitter (serotonin) is associated with severity of two clusters of PTSD symptoms — arousal and re-experiencing — and might be a risk factor for PTSD (Pietrzak, Galea, Southwick, & Gelernter, 2013). Center investigators also took part in the first comprehensive scan of DNA samples from many individuals: a Genome-Wide Association Study (GWAS) to see if there are any genetic differences between those with and those without PTSD. They found that a certain gene, called retinoid-related orphan receptor alpha (RORA), was associated with a higher risk of the disorder (Logue et al., 2013). This study opened a new line of inquiry into the role the RORA gene plays in the brain. Mark Miller, PhD, principal investigator at the Center's Behavioral Science Division, says, “The GWAS findings got us thinking about molecular pathways and mechanisms we probably never would have thought about had we not found the association between RORA and PTSD.”

Improving the Assessment of PTSD

Accurate and up-to-date measures are crucial to advancing research on PTSD and the clinical care of Veterans living with PTSD. The development of the Clinician-Administered PTSD Scale (CAPS) was one of the first Center-wide projects. We developed the CAPS because we believed it was essential to moving the field forward, and it was. The CAPS rapidly facilitated reliable and valid PTSD assessment in research around the world (Weathers, Keane, & Davidson, 2001).

Since then, the National Center has expanded its resources by developing additional leading assessment measures for trauma and PTSD for use in the VA, the Department of Defense (DoD), and around the world. These include the Primary Care-PTSD Screen (Prins et al., 2003) and the PTSD Checklist (Weathers, Litz, Herman, Huska, & Keane, 1993). One of the most widely used measures of PTSD symptom severity, the PTSD Checklist is also useful for making a provisional PTSD diagnosis.

As the field's understanding of PTSD has evolved, so have the clinical criteria used to make a diagnosis. Within the newly revised DSM-5, PTSD was reclassified from an anxiety disorder to an event-related disorder
“because not all presentations of PTSD were consistent with conceptualizing the disorder in terms of simple fear or anxiety,” says Paula Schnurr, PhD, Executive Director of the National Center. Dr. Friedman and other Center investigators not only played a leading role in redefining PTSD within DSM-5, but also validated revised assessment measures and examined the impact of the new criteria on rates of the disorder. In one seminal study, a Center research team found that the new criteria yielded prevalence estimates of PTSD similar to those of DSM-IV in both a national community sample and a sample of trauma-exposed Veterans (Miller et al., 2013).

Beyond PTSD-specific measures, National Center investigators developed the most comprehensive assessment instrument for war-related stress: the Deployment Risk and Resilience Inventory (DRRI). Although the DRRI was developed for use by researchers to assess various areas of psychosocial risk and resilience factors from across the deployment cycle, clinicians are increasingly using it as an adjunct assessment. The measure was updated to validate its scales with Veterans from recent conflicts in Iraq and Afghanistan (Vogt et al., 2013). In addition to measuring combat exposure, the DRRI also includes three measures related to family functioning and social support. The focus on family functioning is one of the major advantages of the DRRI “because research shows that family stressors have implications for Veterans’ postdeployment health,” says Dawne Vogt, PhD, Acting Deputy Director of the Center’s Women’s Health Sciences Division.

The National Center has investigated and continues to investigate whether multimodal approaches to assessment might improve PTSD diagnosis. An early milestone in the Center’s research on assessment was VA Cooperative Study #344. A large-scale study, the project addressed whether psychophysiological changes — such as increased heart rate, sweating, and breathing — could differentiate Veterans with and without PTSD. In a sample of more than 1,000 Veterans seeking treatment in VA, investigators found that, on average, individuals with PTSD showed stronger, more distinctive physiological reactions to trauma cues, with the most impaired Veterans experiencing the highest levels of physiological reactivity. But some Veterans with PTSD did not show increased physiological reactivity (Keane et al., 1998), a finding that encouraged additional research and led to increased understanding of the physiology and assessment of PTSD.

Advancing the Treatment of PTSD

Among our highest priorities are supporting VA clinicians, and improving Veterans’ lives through development, research, and dissemination of evidence-based treatments for PTSD. Our investigators have conducted landmark studies on cognitive-behavioral therapy (CBT) for PTSD, particularly the main evidence-based psychotherapies: Cognitive Processing Therapy (CPT) and Prolonged Exposure (PE).

The National Center has carried out the two largest randomized controlled trials of psychotherapy for PTSD ever conducted: (1) VA Cooperative Study #420, launched in 1997, which found no
difference between trauma-focused and present-centered group therapy for PTSD among male Vietnam Veterans (Schnurr et al., 2003); and (2) VA Cooperative Study #494, launched in 2001, the first randomized controlled trial of treatment for PTSD in female Veterans and Servicemembers, which found that PE was more effective than present-centered therapy (Schnurr et al., 2007). A smaller Center-led VA study added support to CPT for the treatment of military-related PTSD (Monson et al., 2006). These studies showed definitively that “we have reliable, evidence-based treatments that work," says Schnurr.

National Center researchers have also led advances in the delivery of evidence-based PTSD treatments and in novel psychotherapeutic approaches. Studies that support CBT delivered via teleconferencing (Morland et al., 2010) and in an Internet-based, therapist-assisted format (Litz, Engel, Bryant, & Papa, 2007) have helped increase access to PTSD treatment nationwide. Another Center-developed innovation, cognitive-behavioral conjoint therapy (CBCT), sought to meet the needs of Veterans and others with PTSD struggling with intimate relationship issues or who want their partners directly involved in their PTSD care. A randomized controlled trial showed CBCT for PTSD alleviates distress, decreases PTSD symptom severity, and improves relationship satisfaction (Monson et al., 2012).

The National Center has a strong commitment to psychopharmacology research trials as well. A multisite study by Center investigators found that sertraline, an antidepressant previously shown to work in civilian populations, was ineffective for Veterans with PTSD (Friedman, Marmar, Baker, Sikes, & Farfel, 2007). More recently, the results of VA Cooperative Study #504 (Krystal et al., 2011), launched in 2004, indicated that an atypical antipsychotic agent, risperidone, did not add any benefits to existing pharmacological treatment for PTSD — a finding that led to revisions of the VA/DoD Clinical Practice Guideline for the Management of Posttraumatic Stress, which describes critical decision points in the management of PTSD and outlines the evidence behind different treatments. Trials testing novel agents that specifically address PTSD are needed, according to Friedman. “What I see looking down the road is research on medications that work on the biological systems we know are dysregulated in PTSD," he says, such as inflammation markers or other neurosteroids or neuropeptides.

Promoting Implementation of Evidence-Based Care

The National Center was instrumental in the development of the VA/DoD Clinical Practice Guideline for the Management of Posttraumatic Stress. The guideline offers clinicians essential information on how to provide consistent quality of care and utilization of resources throughout the health care system. However, the development and dissemination of state-of-the art tools and products are not sufficient to change practice. "We’ve increasingly recognized that dissemination
is not enough,” says Schnurr, “and in order to ensure the uptake of treatment, it’s important also to facilitate implementation and expand our training programs for therapists.”

“The data from this study provided real-world information on patients who were treated while the therapists were learning the treatment. So at the very beginning, with novice therapists learning the treatment, we saw very meaningful improvements.”

To make evidence-based treatment for PTSD widely available to Veterans across the United States, the VA created national clinical training programs in CPT (launched in 2006) and PE (launched in 2007). The National Center led the development and implementation of both programs. As of January 2015, there were nearly 2,000 VA providers trained to deliver PE and more than 6,000 VA and Vet Center providers trained to deliver CPT. Our evaluation of the PE training initiative showed that both PTSD and depression improved significantly for Veterans regardless of gender, war era, or trauma type (Eftekhari et al., 2013). “The data from this study provided real-world information on patients who were treated while the therapists were learning the treatment. So at the very beginning, with novice therapists learning the treatment, we saw very meaningful improvements,” says Schnurr. “This study strongly validated our training program for therapists.” The evaluation of the CPT training program, led by Center collaborator Kathleen Chard, PhD, has found similarly positive outcomes (Chard, Ricksecker, Healy, Karlin, & Resick, 2012).

Online training offers great potential to widely disseminate proven clinical practices. However, there is little information about how to conduct online training to help providers learn and implement new skills. Investigators from the National Center and the New England Research Institutes report encouraging findings from a randomized controlled trial testing a Web-based cognitive-behavioral skills training for PTSD providers. Results suggest that online training, especially with consultation, has potential for large health care systems such as VA (Ruzek et al., 2014).

Pioneering the Use of Technology in Education

The National Center is internationally known as the leader in development of technology-based education and resources for trauma survivors. In 1995 we launched our website, www.ptsd.va.gov. The initial purpose of the website was to provide widespread access to the Published International Literature on Traumatic Stress (PILOTS) online database, a comprehensive, cross-discipline index to all published works on trauma. Starting with just 2,000 records, when it was first made publicly available in 1991, PILOTS now includes more than 53,000 records, with materials in 30 languages.
PILOTS is produced within the Center's PTSD Resource Center, the world's largest collection of literature on traumatic stress.

Early online offerings included fact sheets and other materials about PTSD and its treatment, geared toward providers. Through innovative programming and design, we have widened the scope of our website — with online manuals, mobile apps, toolkits, and videos — and it is now one of the world's leading websites on PTSD for professionals, Veterans, and the public. In fiscal year (FY) 2014, our website had more than five million unique page views (averaging 422,000 views per month); and the mobile site had nearly 72,000 views (averaging 6,000 views per month). Recent offerings for Veterans, their families, and the public include Understanding PTSD, Understanding PTSD Treatment, and the Returning from the War Zone Guides.

As mobile apps have become an integral part of our everyday lives, the National Center has been at the forefront in the application of this technology for PTSD and co-occurring problems. Starting with PTSD Coach, released in 2011, the National Center has continued to create iOS and Android apps for the public and providers. Our apps are evidence-informed, using cognitive-behavioral and other tested principles to help users self-manage symptoms and to augment professional care.

In 2010 the National Center entered the social media arena by establishing a Twitter feed. We launched our Facebook page the following year, and established a presence on YouTube in 2012. We quickly recognized that social media offers great promise as a tool for communication and education. With social media we can deliver our products to new audiences and provide real-time resources when disasters and other large-scale traumatic events occur. Social media has also opened up an interactive communication channel with our audiences, enabling us to gain insights into the concerns and experiences of trauma survivors, and to respond to their questions. The “social” part of social media is also crucial, as those who engage with us share our resources with their own networks of friends, family, and colleagues.

**Outreach to Professionals**

To better, the National Center has moved from passive dissemination strategies toward active outreach. And we have developed mechanisms to make new scientific findings and evidence-based treatments easily accessible.

National Center staff present regularly on national VA calls and at professional meetings to disseminate information. Since 2013 we have made the continuing education courses in our popular PTSD 101 curriculum available as podcasts, so providers can learn about assessment and treatment of PTSD at their convenience. With our PTSD Consultation Lecture Series, which is archived following each live broadcast, providers can keep current on the latest clinical findings and best practices for PTSD care.
The National Center also produces publications aimed at disseminating novel information to the field. The Clinician’s Trauma Update-Online is an electronic newsletter that provides clinicians with summaries of peer-reviewed articles, with an emphasis on the assessment and treatment of Veterans. Published six times a year, the newsletter had more than 34,000 subscribers at the end of FY 2014. The PTSD Research Quarterly, with more than 50,000 subscribers, provides expert reviews of the scientific PTSD literature. Topics covered in FY 2014 included the dissociative subtype of PTSD, partial PTSD, DSM-5 and the upcoming ICD-11, and adjustment to mass shootings.

Looking Towards the Future
To optimally serve the field and carry out the National Center’s mission, we continued to align our research portfolio in FY 2014 with the Operational Priorities identified the previous year. These priorities include (1) Biomarkers; (2) DSM-5; (3) Treatment efficiency, effectiveness, and engagement; (4) Care delivery, models of care, and system factors; and (5) Implementation. Each priority reflects a critical area for development in both research and education.

The development of a clinician-administered PTSD scale

MRI-based measurement of hippocampal volume in patients with combat-related posttraumatic stress disorder

Effectiveness of national implementation of prolonged exposure therapy in Veteran Affairs care

Randomized, double-blind comparison of sertraline and placebo for posttraumatic stress disorder in a Department of Veterans Affairs setting

The Hawaii Vietnam Veterans Project: Is minority status a risk factor for posttraumatic stress disorder?

Utility of psychophysiological measurement in the diagnosis of posttraumatic stress disorder: Results from a Department of Veterans Affairs cooperative study

Posttraumatic stress disorder in a national sample of female and male Vietnam veterans: Risk factors, war-zone stressors, and resilience-recovery variables

Adjunctive risperidone treatment for antidepressant-resistant symptoms of chronic military service–related PTSD: A randomized trial

A randomized, controlled proof-of-concept trial of an internet-based, therapist-assisted self-management treatment for posttraumatic stress disorder

A genome-wide association study of post-traumatic stress disorder identifies the retinoid-related orphan receptor alpha (RORA) gene as a significant risk locus

The prevalence and latent structure of proposed DSM-5 posttraumatic stress disorder symptoms in U.S. national and veteran samples
Effect of cognitive-behavioral couple therapy for PTSD: A randomized controlled trial

Cognitive processing therapy for veterans with military-related posttraumatic stress disorder

Relationships among plasma dehydroepiandrosterone sulfate and cortisol levels, symptoms of dissociation, and objective performance in humans exposed to acute stress

Teledicine for anger management therapy in a rural population of combat veterans with posttraumatic stress disorder: A randomized noninferiority trial

Naltrexone and disulfiram in patients with alcohol dependence and comorbid post-traumatic stress disorder

The primary care PTSD Screen (PC-PTSD): Development and operating characteristics

A randomized clinical trial to dismantle components of Cognitive Processing Therapy for posttraumatic stress disorder in female victims of interpersonal violence

Cognitive behavioral therapy for posttraumatic stress disorder in women: A randomized controlled trial

Randomized trial of trauma-focused group therapy for posttraumatic stress disorder: Results from a department of Veterans Affairs cooperative study

Abnormal noradrenergic function in posttraumatic stress disorder

Neuropsychological outcomes of Army personnel following deployment to the Iraq War

Gender differences in combat-related stressors and their association with postdeployment mental health in a nationally representative sample of U.S. OEF/OIF veterans

Clinician-administered PTSD scale: A review of the first ten years of research

Enhanced suppression of cortisol following dexamethasone administration in posttraumatic stress disorder

* Author names in boldface indicate affiliation with the National Center.
TOP 10 NATIONAL CENTER BOOKS*

Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies (2nd ed.)

Neurobiological and clinical consequences of stress: From normal adaptation to posttraumatic stress disorder

Handbook of PTSD: Science and practice (2nd ed.)

Gender and PTSD

Interventions following mass violence and disasters: Strategies for mental health practices.

Trauma and health: Physical health consequences of exposure to extreme stress

Resilience: The science of mastering life’s greatest challenges

Caring for veterans with deployment-related stress disorders: Iraq, Afghanistan, and beyond

PTSD and mild traumatic brain injury

Assessing psychological trauma and PTSD (2nd ed.)

* Author names in boldface indicate affiliation with the National Center.
The National Center has made great strides in PTSD research and education. The diversity of our initiatives during the past few years speaks to the leadership role we play in informing the prevention, assessment, and treatment of PTSD. The VA I CARE values of Integrity, Commitment, Advocacy, Respect, and Excellence guide this work.

Our reach and our ambitions have grown. The insights gained from our research inform daily clinical practice. Training has expanded from brief courses to comprehensive curricula and expert consultation on PTSD to any provider working with Veterans. Outreach efforts have matured, resulting in a dynamic website with interactive content and mobile offerings.

As we look forward to the next 25 years, we will continue to pursue multiple paths to achieve the goal of enhancing the clinical care and social welfare of those who have experienced trauma.

Increasing Scientific Understanding of Trauma and PTSD
The key to improving care is advancing our understanding of the neurobiology of trauma and PTSD.

Genetics of PTSD: Analysis of RORA and Other Candidate Genes in PTSD
The National Center is continuing its pioneering work on the role of the RORA gene in the development of PTSD (see page 7). The research team is now conducting a more detailed genetic analysis of RORA and PTSD to: (1) identify the complete array of genetic variation in these genes associated with PTSD risk, (2) perform genome-wide expression analysis, (3) analyze additional PTSD-related comorbidity phenotypes, and (4) examine possible gene-gene interactions.

The Consortium to Alleviate PTSD
In 2013 President Obama announced a $45 million award over five years to establish the Consortium to Alleviate PTSD (CAP). The National Center partnered with the STRONG STAR Consortium at the University of Texas Health Science Center at San Antonio to successfully compete for this award. The funding will advance PTSD care for Servicemembers and Veterans. The CAP will provide an array of cutting-edge clinical treatment trials and biological studies including efforts to learn more about the biology/physiology of PTSD development, treatment response to inform diagnosis, prediction of disease outcome, and new or improved treatment methods.
The VA PTSD Brain Bank

Currently there are more than 50 brain banks in the United States. The focus of these brain tissue repositories is on investigating alcoholism, Alzheimer’s disease, depression, schizophrenia, and a variety of neurological disorders. Yet there has never been a PTSD brain bank — until now. With funding appropriated by Congress, the National Center is leading a consortium to develop a national PTSD brain bank — the first brain tissue repository dedicated to studying the physical impact of stress, trauma, and PTSD on brain tissue. Projects overseen by the consortium will advance scientific knowledge about PTSD, particularly biological indicators (biomarkers) associated with the disorder. Dr. Friedman is Director of the consortium, which includes the Uniformed Services University of Health Sciences, the VA Medical Center in San Antonio and in Boston, and the National Center’s Behavioral Science and Clinical Neurosciences Divisions.

Understanding the Longitudinal Course of PTSD

Examining how PTSD develops and changes over time reveals risk and protective factors, as well as effects of the disorder.

VA Cooperative Study #566: Neuropsychological and Mental Health Outcomes of Operation Iraqi Freedom (OIF)

The VA Cooperative Studies Program funded the latest wave of followup in the Neurocognition Deployment Health Study, which has been examining the psychological impact of war zone stress (including PTSD and TBI) in male and female active duty Army soldiers since 2003 (see page 6). The latest wave of data collection was completed in June 2014, with more than 600 cohort members participating.

Project VALOR: Veterans After-Discharge Longitudinal Registry

The first registry of combat-exposed men and women with PTSD aims to: (1) identify clinical characteristics, risk factors, and comorbidities, (2) describe and evaluate neuropsychological and psychosocial outcomes and treatment trajectories, and (3) compare an undiagnosed group of Veterans who are high health care users with nondeployed Veterans. The registry will provide essential data on the natural history of PTSD including progression, remission, and outcomes associated with the disorder.

SERV Registry: Survey of Experiences of Returning Veterans

A longitudinal cohort study, the SERV Registry aims to determine differences in how male and female combat Veterans readjust to civilian life after deployment by tracking Veterans’ use and continuity of care, physical and psychiatric comorbidity, and medication use and adherence since 2002. As of April 2015 a total of 711 Veterans (480 men and 231 women) have been enrolled. Results will help identify gaps in and barriers to services.
**Enhancing Care for PTSD**

Although we have effective psychotherapies for PTSD, care will be advanced when we understand what works best for whom and offer proven alternative delivery methods. Patient-centered care will also be optimized when new medication options are identified.

**VA Cooperative Study #591: Comparative Effectiveness Research in Veterans with PTSD (CERV-PTSD)**

The National Center is currently leading a $10 million study that will compare PE and CPT, and will help answer whether one treatment is better suited than the other for specific types of patients. Launched in early FY 2014, VA Cooperative Study #591 is the first large-scale comparative effectiveness trial of treatment for PTSD. The study, which will involve 900 Veterans at 17 sites across the country, will help VA leadership, providers, and Veterans in making informed choices about PTSD care in VA, and will also be broadly relevant to the scientific and clinical communities outside VA.

**Novel Approaches to Treatment Delivery**

Two National Center studies examine new delivery methods for PTSD treatment to give patients a range of choices. The first extends our work in telehealth by comparing three ways to provide PE to Veterans with PTSD: in-home in-person, in-home teleconferencing, and in-clinic teleconferencing. If PE can be effectively delivered in these diverse ways, patients will be able to use the option that best suits their needs. A second trial compares Written Exposure Therapy (WET), a brief treatment that requires minimal therapist involvement, with CPT. If results are positive, WET could be an alternative trauma-focused treatment for patients who prefer to write about, rather than talk about, their trauma.

**Novel Pharmacological Approaches**

The most effective medications for PTSD are selected types of antidepressants that work by increasing two important brain neurotransmitters: serotonin and norepinephrine. Other types of medication might offer even more effective alternatives. National Center investigators are planning a trial of ketamine, which is typically used for sedation but also has rapid antidepressant effects, for treating PTSD in active duty military personnel and Veterans who do not respond to antidepressant treatment. The trial is part of the CAP award. A second study is examining the safety and efficacy of URB597, a compound that increases the brain’s production of endocannabinoids, which reduce depression and pain. The same group of investigators is also examining a substance that works on glutamate, the most abundant neurotransmitter in the brain, and important for learning and memory. Lastly, Center investigators completed data collection in a clinical trial of ganaxolone, a steroid that might help alleviate PTSD due to its effects on gamma-aminobutyric acid (GABA), a neurotransmitter that helps regulate anxiety and fear.

**Promoting Awareness of PTSD and Engagement in Evidence-based Treatment**

The first step in encouraging treatment engagement is helping people recognize that they might have a problem that can be helped with treatment.

**AboutFace**

For those trauma survivors who develop troubling symptoms, it can be difficult to take the first step to get care. The National Center created AboutFace to help Veterans and other trauma survivors learn about people who have successfully overcome stigma and other treatment obstacles. AboutFace is an award-winning online video gallery of Veterans telling their stories of how PTSD treatment has turned their lives around. Since its 2012 launch, AboutFace has expanded to include videos from family and friends of Veterans with PTSD, along with insights from clinicians who treat PTSD.
**Animated Whiteboard Videos**

Our collection of six short, hand-drawn, animated videos gives Veterans, family members, professionals, and the general public an accurate and accessible overview of the assessment and treatment of PTSD. Five of the six videos target a public audience: *What is PTSD?*, *Prolonged Exposure for PTSD: Cognitive Processing Therapy for PTSD*, *PTSD Treatment: Know Your Options*; and *“Evidence-based” Treatment: What Does It Mean?* The final video, *Prescribing for PTSD: Know Your Options*, is for providers and includes information about screening for PTSD, prescribing, and referring for psychotherapy.

**Developing Self-Help and Treatment Companion Resources**

The National Center offers trauma survivors innovative tools that are grounded in science.

**Mobile Phone Applications**

In 2011 the National Center partnered with the DoD to launch the first publicly available VA app, **PTSD Coach**. The app offers users self-assessment, coping skills, and other resources, and has received numerous awards. The Center has continued to develop a wide array of apps, including self-help tools and apps that support the delivery of PE, CPT, and CBT for insomnia. Apps provide users with information and assistance wherever they are and whenever they need it. Like all our products, National Center apps are distributed for free.

**PTSD Coach Online**

Inspired by the enthusiastic response to the **PTSD Coach** app, we created **PTSD Coach Online**, a suite of evidence-informed, Web-based tools to help users cope with symptoms like anger, sadness, anxiety, and trouble sleeping. In addition to integrating many elements from the **PTSD Coach** app, **PTSD Coach Online** includes tools that allow users create in-depth plans to tackle the issues they are facing. Integrating video, animation, audio, and interactivity, **PTSD Coach Online** helps those impacted by stress and trauma help themselves.

**VetChange**

Heavy drinking is a common problem in Veterans of the most recent conflicts; and research has shown that Veterans who struggle with problematic drinking patterns often have PTSD symptoms as well. **VetChange**, an online self-management program for Veterans concerned about their drinking, addresses both issues. A randomized controlled trial of an initial version of **VetChange** showed that the intervention helped many Veterans reduce their drinking and PTSD symptoms. A new version — with enhanced interactivity, video tips, and responsive design — is slated for release in 2015.
Educating Professionals about Evidence-based PTSD Care

Online resources give providers within VA and in the community on-demand access to free training.

**Continuing Education Courses**

Educating VA providers in the assessment and treatment of PTSD and related issues is vital to the National Center's mission. Our continuing education resources are all freely available online, making them accessible to not only providers within VA but also community-based providers, researchers, trainees, and paraprofessionals. Our flagship PTSD 101 series offers a broad array of hour-long courses that are available both online and as podcasts. The lecture series *From the War Zone to the Home Front*, a collaboration with the Red Sox Foundation and the Massachusetts General Hospital Home Base Program, features on-demand lectures on topics relevant to caring for Veterans of the Iraq and Afghanistan wars and their families.

Within the past five years, we have expanded our Web-based continuing education offerings to include advanced multimodule courses on specialized treatment approaches. These courses incorporate video vignettes, step-by-step guidance, and patient materials that can help providers integrate these interventions into their practice. Currently available courses include *STAIR: Skills Training in Affect and Interpersonal Regulation* and *Assessment and Treatment of Sleep Problems in PTSD*. Soon-to-be-released courses include *Managing Anger* and *Clinician-Administered PTSD Scale-5 (CAPS-5) Online Training for Providers*.

**Comprehensive Toolkits**

Our toolkits feature fact sheets, handouts, and tutorials to give professionals in a variety of disciplines one-stop access to key resources to help address the needs of the Veterans they serve. Going beyond a focus purely on PTSD, the toolkits cover broader mental health, medical, employment, and educational aspects of Veterans' lives. The *Community Provider Toolkit*, *VA Campus Toolkit*, and *Veterans Employment Toolkit* are currently available online, and additional toolkits are in development.

**Provider Resources to Help Address the Needs of Women Veterans**

Women are the fastest-growing group within the Veteran population. The National Center has taken the initiative to better address their needs, both as patients and as research participants. The online course *Caring for Women Veterans*, available on the Center’s intranet, aims to help VA providers understand common issues that arise in the medical and mental health care of female Veterans. A second online offering, *Conducting Research with Women Veterans*, provides suggestions for study recruitment, research design, data analysis, and reporting results from projects involving women Veterans.
Supporting the Implementation of Evidence-based PTSD Care

These initiatives encourage adoption of evidence-based practices by providers and clinic managers, and the systems in which they work.

**PTSD Consultation Program**

Launched in 2011 the PTSD Consultation Program connects VA providers working within any clinic or setting with expert PTSD consultants. The program’s consultants are available via phone and email, providing information about treating Veterans with PTSD and answering questions related to the disorder. A 61% increase in consults from FY 2013 to FY 2014 demonstrates the program’s impressive growth. This growth will continue as the program begins offering consultation and resources to non-VA providers who see Veterans in the community, starting in 2015.

**VA PTSD Mentoring Program**

PTSD program directors throughout VA face myriad challenges to effective delivery of PTSD treatments to the Veterans seen in their clinics. In 2008 the National Center initiated the VA PTSD Mentoring Program to connect program directors with seasoned mentors within their regions. Mentors work with PTSD program directors to help them meet the increased demand for treatment by restructuring existing programs, and by implementing best administrative and clinical practices.

**Promoting Effective, Routine, and Sustained Implementation of Stress Treatments (PERSIST)**

The ongoing PERSIST research project, launched in 2013, provides the Veterans Health Administration (VHA) with information about factors that interfere with and promote adoption and sustained use of evidence-based psychotherapies for PTSD (PE and CPT). The study will also yield a clinical tool to help provider teams in specialized PTSD outpatient programs and community-based outpatient clinics more readily identify challenges associated with delivery of evidence-based psychotherapies and actionable solutions to those challenges.

**Practice-Based Implementation Network (PBIN) in Mental Health**

National Center researchers are implementing a practice-based implementation network by bringing together VA and DoD clinicians, clinic managers, and implementation scientists to put into practice new treatments and to facilitate the adoption of improvements across systems of care. The project will identify system-specific barriers and facilitators to adoption of mental health best practices. The first practice the PBIN will work to improve is the routine implementation of patient outcomes monitoring, a vital but underused element in ensuring high-quality PTSD care.
Research Overview

In FY 2014, the National Center research portfolio included 109 research grants – including small single-site studies, large multisite projects, research training fellowships, and research infrastructure grants – with nearly $130 million in total award funding. A narrative description of research initiatives at each of the Center divisions is provided in Appendix A. The Center’s FY 2014 research and other funding is provided in Appendix B.

Research productivity at the National Center illustrates the breadth and depth of our scientific pursuits and our impact within the PTSD field. In FY 2014, Center investigators produced 226 print publications (journal articles, book chapters, and books) and had another 168 in-press and advance online publications. The Center also continued to be well represented on the editorial boards of leading journals and at professional meetings and conferences, contributing to more than 263 scientific presentations in FY 2014. Comprehensive lists of our publications, scientific presentations, and editorial board activities can be found in Appendices C, D, E, and F.

Education Overview

The National Center’s educational programs span the dissemination and implementation continuum. Activities in FY 2014 included educational presentations at national conferences and to specific groups, clinical demonstration projects, national consultation, and regional/national trainings of providers and paraprofessionals. We continued our involvement in several VA-wide provider training programs including PE and CPT for PTSD. Highlights from the FY 2014 educational program portfolio and associated funding are provided in Appendix B. A listing of educational presentations by Center staff and affiliates are in Appendix G.

The National Center’s educational products in FY 2014 highlight innovations in technology as well as our commitment to increasing provider use of and patient engagement in evidence-based PTSD care. We made available or are in the process of developing a wide variety of products for VA and community providers, Veterans, families, and the general public. Products include treatment guides and newsletters, mobile applications, online courses, videos, social media channels, and online toolkits.
Communications Overview

The National Center utilizes diverse online communication strategies to disseminate information and share resources. Our website, www.ptsd.va.gov, had more than six million views in FY 2014. We maintained a strong social media presence, ending the FY with more than 18,000 Twitter followers and a Facebook page with more than 83,000 fans. We also continued to share information through our PTSD Monthly Update, an electronic newsletter with more than 84,000 subscribers. The newsletter focuses on a different theme in each issue, highlighting relevant Center products for professionals and the general public.

Even as our reach has expanded with the use of new media, traditional communication channels continue to play an important role in information dissemination. As media interest in PTSD grows each year, National Center staff are increasingly called upon to provide accurate information and context when PTSD and traumatic events are in the news. Just in the past two years, we have responded to more than 80 inquiries from leading newspapers, television channels, and popular magazines. Center leadership and staff have been interviewed by reporters from diverse media outlets, including Time Magazine, The Boston Globe, CNN, Al Jazeera America, and Vermont Public Radio.

And, when leaders and policy makers in VA, the DoD, and other federal agencies need insight into research and practice related to PTSD, they turn to the National Center for PTSD. So too do their international counterparts. Consultations include a wide variety of activities, from responding to a phone call or email, to serving on a task force or work group, to participating onsite in the aftermath of a natural disaster.

Raising PTSD Awareness

The National Center promotes awareness of PTSD and effective treatments throughout the year. In 2010 Congress named June 27th PTSD Awareness Day (S. Res. 455). This year the Senate designated the full month of June for National PTSD Awareness (S. Res. 481), continuing a practice that had begun in 2013. Efforts are under way to continue this designation in future years.

Our efforts around PTSD Awareness Month expanded in 2014. We collaborated with more than 36 organizations and departments to implement a national online and networking campaign to promote raising PTSD awareness. Recognizing the continuing growth and importance of social media, the campaign centered on the theme “#PTSD Awareness — Learn. Connect. Share.” We created the hashtag “#PTSD Awareness” to encourage widespread sharing of the message through social media channels.

In May 2014 we launched a dedicated PTSD Awareness section of our website to provide materials that organizations and individuals could use to raise PTSD awareness throughout June. We developed and disseminated flyers, social media posts, screen savers, and email marketing bulletins. We also encouraged events and postings at VA facilities and public locations across the country.

During the month of June, traffic to our website increased substantially from previous months, with page views for the full site topping 500,000 for the month. We also met our goal to increase Facebook Likes. Thanks to extensive outreach and social networking, our Likes grew to 66,700 by the end of PTSD Awareness Month — a 91% increase from the prior year’s campaign.
The Center was developed with the ultimate purpose of improving the wellbeing, status, and understanding of Veterans in American society.

History
The National Center for PTSD was created in 1989 within the Department of Veterans Affairs in response to a Congressional mandate (PL 98-528) to address the needs of Veterans and other trauma survivors with PTSD. The Center was developed with the ultimate purpose of improving the well-being, status, and understanding of Veterans in American society. The mandate called for a center of excellence that would set the agenda for research and education on PTSD without direct responsibility for patient care. Convinced that no single VA site could adequately serve this unique mission, VA established the Center as a consortium of five divisions.

Organization
The National Center now consists of seven VA academic centers of excellence across the United States, with headquarters in White River Junction, Vermont. Other divisions are located in Boston, Massachusetts; West Haven, Connecticut; Palo Alto, California; and Honolulu, Hawaii; and each contributes to the overall Center mission through specific areas of focus.

The National Center for PTSD is an integral and valued component of the VA’s Mental Health Services (MHS), which itself is within the VHA. MHS and the Center receive budget support from VA, although the Center also leverages this support through successful competition for extramural research funding.
LEADERSHIP IN FISCAL YEAR 2014

Paula P. Schnurr, PhD  
Executive Director, Executive Division, VT  
Research Professor of Psychiatry, Geisel School of Medicine at Dartmouth

Matthew J. Friedman, MD, PhD  
Senior Advisor and founding Executive Director, Executive Division, VT  
Professor of Psychiatry and of Pharmacology and Toxicology, Geisel School of Medicine at Dartmouth

Jessica L. Hamblen, PhD  
Acting Deputy Executive Director and Deputy for Education, Executive Division, VT  
Associate Professor of Psychiatry, Geisel School of Medicine at Dartmouth

Rani Hoff, PhD, MPH  
Division Director, Evaluation Division, CT  
Director of the Northeast Program Evaluation Center  
Professor of Psychiatry, Yale University School of Medicine

Terence M. Keane, PhD  
Division Director, Behavioral Science Division, MA  
Professor of Psychiatry and Assistant Dean for Research, Boston University School of Medicine

John H. Krystal, MD  
Division Director, Clinical Neurosciences Division, CT  
Robert L. McNeil, Jr. Professor of Translational Research and Chairman of the Department of Psychiatry, Yale University School of Medicine

Josef Ruzek, PhD  
Division Director, Dissemination and Training Division, CA  
Professor (Clinical Professor-Affiliated), Stanford University; Associate Professor, Palo Alto University

Amy Street, PhD  
Acting Division Director, Women’s Health Sciences Division, MA  
Associate Professor of Psychiatry, Boston University School of Medicine

James Spira, PhD, MPH  
Director, Pacific Islands Division, HI
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APPENDIX A. FISCAL YEAR 2014
RESEARCH NARRATIVE

The National Center for PTSD helps to improve care of Veterans and others affected by trauma through its strong commitment to research on the prevention, causes, assessment, and treatment of traumatic stress disorders. During fiscal year (FY) 2014, Center investigators led 117 funded studies, ranging from small studies at a single location to large multisite projects. The Center continued to align its portfolio with the Operational Priorities identified in FY 2013 to optimally serve the field and carry out the Center’s mission. These priorities include (1) Biomarkers; (2) DSM-5; (3) Treatment efficiency, effectiveness, and engagement; (4) Care delivery, models of care, and system factors; and (5) Implementation.

A major biomarker initiative that gained momentum in FY 2014 is the VA National PTSD Brain Bank. Dr. Matthew Friedman — Senior Advisor to the Center and its founding Executive Director, is directing the consortium, which includes the Uniformed Services University of Health Sciences, the VA Medical Center in San Antonio and in Boston, and the National Center’s Behavioral Science and Clinical Neurosciences Divisions. The brain bank will acquire and prepare brain tissue, work to establish a definitive psychiatric diagnosis, promote research by distributing brain tissue based on scientific review of proposals, and facilitate intramural research.

Executive Division

The Executive Division (located in White River Junction, Vermont) supports the National Center’s mission by providing leadership, directing program planning, and promoting collaboration to facilitate optimal functioning of each division individually and collectively. The Division specializes in the development of innovative and authoritative educational resources, programs that disseminate and implement best management and clinical practices, and the use of technologies to reach a broad range of audiences.

Clinical Trials

The Executive Division has a long history of participation in VA’s Cooperative Studies Program (CSP). Enrollment began for CSP #591, a groundbreaking study comparing Prolonged Exposure (PE) and Cognitive Processing Therapy (CPT). The study, which will enroll 900 Veterans at 17 sites across the country, will help VA leadership, clinicians, and Veterans make informed choices about the delivery of PTSD care in VA; and will also be broadly relevant to the scientific and clinical communities outside VA.

Investigators continue to focus on issues that frequently co-occur with PTSD. A 5-site randomized clinical trial was completed of Acceptance and Commitment Therapy (ACT) for distress and impairment in Operation Enduring Freedom/Operation Iraqi Freedom/Operation New Dawn (OEF/OIF/OND) Veterans, and analyses are almost complete; two other trials focusing on co-occurring substance use disorders and PTSD are continuing. One trial compares CPT for PTSD, and usual outpatient addiction care versus usual care alone; the other compares PE with Seeking Safety. Data are currently being analyzed to evaluate whether providing Veterans with a brief educational handout on mild traumatic brain injury (mTBI) can improve their knowledge and understanding of TBI, and the meaning of screening results for mTBI. Secondary analyses will identify clinic-level facilitators and barriers to implementing the handout into practice.

Product Evaluation

Analyses are ongoing of data from the evaluation of several of the National Center’s online products. Investigators surveyed civilian and military personnel samples from an online research panel to evaluate the Understanding PTSD Treatment course and its companion PDF, as well as PTSD Coach-Online. Investigators are also analyzing data from an online survey completed by psychiatrists and general practitioners to assess the impact of one of the Center’s PTSD 101 courses, An Overview of the VA/DoD Clinical Practice Guideline for PTSD. These evaluation studies offer insights into user and use characteristics, as well as how various products may improve attitudes, behaviors, knowledge, or mental health.
Dissemination and Implementation Research

The Executive Division continues work on several initiatives aimed at assessing models of care and improving evidence-based practice. A survey study to assess patients’ decisional needs and preferences for PTSD treatment is in the planning stages; the results will inform the development of an online patient decision aid. An ongoing initiative examines the impact of an academic detailing model to reduce inappropriate prescribing practices for PTSD patients and uses decision support tools to encourage the use of shared decision making. A related project will determine whether using a clinical pharmacist in an academic detailing model can improve local PTSD prescribing practices in rural clinics throughout Vermont and Maine.

In addition to projects aimed at improving clinical practices, investigators are continuing to assess the state of VA care for PTSD. Results of a completed study of models of care within PTSD Clinical Teams will enhance the mission of the PTSD Mentoring Program that is managed by the Executive Division. Work also began on a project that applies novel informatics and operational methods to medical and administrative data in order to understand multiple dimensions of quality of PTSD care within VA.

Behavioral Science Division

The Behavioral Science Division (located in Boston, Massachusetts) conducts research on assessment, postdeployment adjustment, genomic and neuroscience mechanisms of psychopathology, and aging and health; and develops innovative approaches to intervention and treatment delivery.

Prospective Cohort Studies

Key projects include two large prospective cohort studies. The first is Project VALOR, a registry of 1,649 combat Veterans, both male and female, who became users of VA services after 2002. This project aims to provide data about health outcomes associated with PTSD, in part supplemented by clinical information from VA electronic medical records. Data collection for the third and final phase is currently is under way. The second large investigation, VA Cooperative Study #566, began data collection at the outset of the Iraq War/OIF in 2003. Military personnel were assessed before deployment and at several intervals afterward — making it the first prospective, longitudinal study ever conducted on the psychological impact of war zone stress. Data collection examines long-term emotional and neuropsychological outcomes of war zone stress and TBI, as well as health-related quality of life and occupational functioning. A component study examines the adjustment of partners and children of military service members.

Epidemiology and Risk/Resilience

The Behavioral Science Division is collaborating with other investigators from the VA Boston Healthcare System to study the long-term effects of military service on mental and physical health among aging Veterans. One project has created a website to provide researchers with information about military service variables that are available in a number of publicly accessible longitudinal data sets. The project recruited a national, multidisciplinary group of experts to develop and implement a research agenda. A conference in May 2014 featured papers examining the long-term effects of military service on aging using data derived from this array of data sets. The papers currently are being readied for publication.

Assessment

Ongoing efforts include a psychometric evaluation of a new measure to assess the dissociative subtype of PTSD and examination of the impact of the dissociative subtype on responsiveness to PTSD treatment. A related line of research involves the use of new Minnesota Multiphasic Personality Inventory-2 (MMPI-2) Restructured Form scales for the assessment of the dissociative subtype of PTSD and PTSD-related malingering. Behavioral Sciences Division investigators also participated in a consortium of private industries, universities, and government agencies working with the Defense Advanced Research Projects Agency (DARPA) to develop novel analytical tools to assess the psychological status of Warfighters. These tools examine patterns in everyday behaviors to detect subtle changes associated with PTSD, depression, and suicidal ideation.
**Biomarkers**

Behavioral Sciences Division investigators are examining neural biomarkers of PTSD and blast-related traumatic brain injury (bTBI) in OEF/OIF/OND Veterans. This research aims to clarify the contribution of mild bTBI and psychiatric conditions to the various deficits experienced by military personnel with blast injury. A recent study found that bTBI accompanied by loss of consciousness is associated with decreased structural integrity of the brain; and, in turn, brain integrity is directly related to memory performance.

Biomarker research at the Division also includes a rapidly growing portfolio of genetic studies. So far, this line of work has yielded the first published genome-wide association study (GWAS) of PTSD, several candidate gene studies, and a new gene expression study implicating a glucocorticoid signaling gene in PTSD. Another line of work continues to evaluate the dissociative subtype of PTSD; and a paper has been published examining genetic markers for the symptoms that define the dissociative subtype. Behavioral Sciences Division investigators also are engaged in neuroimaging-genetic analyses focused on PTSD-related neurodegeneration in collaboration with the Translational Research Center for TBI and Stress Disorders (TRACTS) at VA Boston; and the investigators are collaborating with the Psychiatric Genomic Consortium PTSD workgroup on large-scale genome-wide association and methylation studies.

In collaboration with TRACTS investigators, Division researchers have identified alterations in the brain associated with impulsivity in PTSD. A recent study found impulse control deficits were associated with reduced cortical thickness in frontal brain regions involved in flexible decision-making and emotion regulation. A pilot study is under way to assess motivations for types of reckless and self-destructive behavior in trauma-exposed Veterans; and a related effort aims to validate a new measure of risky, impulsive, and self-destructive behavior.

Lastly, the Division is conducting functional and structural magnetic resonance imaging (MRI) studies to identify neural circuitry involved in PTSD. Preliminary data for these projects suggest specific brain regions within the prefrontal cortex that are active when individuals with PTSD manage negative emotions. The findings may yield new insights into brain pathways that can be targeted to enhance emotional regulation and cognitive performance.

**Treatment Research**

The Behavioral Sciences Division continues to conduct pioneering research on treatments for PTSD, with key aims of overcoming barriers to seeking care, reducing dropout, and increasing efficiency of care delivery. A prime example is a randomized clinical trial of an 8-session Internet-based treatment VetChange, designed for OEF/OIF/OND combat Veterans who report risky use of alcohol and PTSD-related distress. The intervention has been shown to reduce both drinking and PTSD symptoms. A mobile adaptation of VetChange is now under development.

Other efforts are aimed at developing and testing efficient therapist-delivered interventions or treatment extenders. The expectation is that these approaches will require less professional staff time and will be easier for patients to complete. A prime example is a brief, exposure-based treatment for PTSD that previously demonstrated strong effects with non-Veteran patients. Current and future studies are testing whether this brief intervention is as effective as CPT and whether it can be implemented successfully with active duty Servicemembers.

Research on factors that link PTSD with aggression toward intimate partners, particularly within OEF/OIF/OND military families, led to the development and evaluation of interventions designed to reduce ongoing aggression and to prevent aggression toward partners. Clinical trials examining two such interventions have been completed during the past year, and efforts are under way to disseminate these programs more widely within the VA.

In the area of complementary interventions, a pilot study investigating Tai Chi exercise for PTSD-related distress demonstrated high satisfaction and enthusiasm for this treatment modality by Veteran participants. Further studies are planned to examine Tai Chi for Gulf War Illness and to measure the impact of Tai Chi on chronic pain that is comorbid with PTSD. Highlighting the innovative work within the Behavioral Sciences Division, a recently funded study will examine the efficacy of a low-level light treatment protocol for Veterans with TBI that is comorbid with PTSD. This novel approach is extrapolated from established methods in photomedicine, based on preclinical studies showing that doses of red and near-infrared light improve mitochondrial functioning within damaged brain cells. The approach is being applied to Veterans with Gulf War Illness under a VA-funded study that has begun data collection.
Clinical Neurosciences Division

The Clinical Neurosciences Division (located in West Haven, Connecticut) supports the National Center’s mission through its specialization in neurobiological, imaging, and genetic studies of the physical basis of traumatic stress, risk and resilience factors, pharmacotherapy, and targets of rehabilitation for PTSD and comorbid conditions.

Clinical Trials

The Division’s clinical trials program is essential in translating neurobiological knowledge into tangible benefits for patients suffering from PTSD and comorbid disorders. Investigators are examining several new pharmacological agents to target PTSD, including (1) riluzole, a glutamate modulating agent; (2) ketamine, an N-methyl-D-aspartate (NMDA) receptor antagonist; (3) pomaglumetad methionil, a metabotropic glutamate receptor 2/3 (mGlu2/3) agonist; (4) the fatty acid amid hydrolase (FAAH) inhibitor URB597; and (5) neuropeptide Y (NPY), an endogenous neurohormone.

Other trials include the immunosuppressant rapamycin for depression and the sulfonamide anticonvulsant zonisamide, and enhanced CPT for PTSD and comorbid alcohol dependence. Plans are also under way for a trial of buprenorphine and naltrexone for PTSD and comorbid opioid dependence. A trial continues for comparing standard care with an intensive integrated treatment for Veterans with PTSD and comorbid chronic pain. A study of the alpha-1 adrenergic receptor antagonist prazosin for PTSD and alcohol use was recently completed.

Neuroimaging

The Clinical Neurosciences Division is a leader in neuroimaging and contributes to the National Center’s strategic objective of developing PTSD biomarkers. The Division is co-directing the Consortium to Alleviate PTSD (CAP) Neuroimaging Core, which capitalizes on the extensive neuroimaging expertise available through the Center, Yale University, and the South Texas Research Organizational Network Guiding Studies on Trauma and Resilience (STRONG STAR) infrastructures. A main objective of the Neuroimaging Core is to develop new technology and methods allowing noninvasive investigation of human neuronal chemicals, brain structure, and function. Additionally, investigators will conduct an innovative project to explore mechanisms linking social and environmental stress to changes in brain structure and function commonly observed in stress-related disorders. Specifically, research will investigate the effects of glutamate transporter expression on stress response and resilience. Several other projects are also using advanced neuroimaging methodologies, in conjunction with the aforementioned pharmacotherapy trials. Work also continues on a biomarker-informed trial using recently developed 7 Tesla 1H-MRS (magnetic resonance spectroscopy) methods — combined with MRI and functional magnetic resonance imaging (fMRI) — to evaluate the psychopharmacologic effects of riluzole on PTSD symptoms, hippocampal morphometry, and anterior cingulate glutamate levels.

Positron emission tomography (PET) imaging techniques also are being utilized to integrate complex neurobiological models across several neurochemical systems and structures in order to provide a more comprehensive understanding of PTSD. This includes use of a newly developed paradigm to study the effects of ketamine on metabotropic glutamate receptor 5 (mGluR5) availability, as well as use of a new radioligand to examine the cholinergic system in PTSD and mood disorders. A project is evaluating kappa opioid receptor availability in an amygdala-ventral striatal-anterior cingulate cortical circuit and its relationship to a heterogeneous research domain criteria-based (RDoC-based) phenotypic expression of depression.

The Clinical Neurosciences Division also has a number of cognitive neuroscience projects using fMRI. Areas of exploration include: (1) the neural correlates of aversive learning, (2) contextual fear conditioning, (3) cognitive-affective interference within a model of inescapable stress, (4) neurocognitive mechanisms related to impaired decision-making, and (5) reconsolidation-extinction learning. Cognitive neuroscientists at the Division are also continuing to evaluate the effect of the cannabinoid system on extinction learning using delta-9-tetrahydrocannabinol (Delta9-THC) and a novel fatty acid amide hydrolase (FAAH) inhibitor. Work also continues on evaluating the efficacy of neurofeedback in conjunction with real-time fMRI for reducing PTSD symptomatology.

Molecular Neuroscience, Genetics, and Stress Vulnerability

The Clinical Neurosciences Division is the main research site for the VA National PTSD Brain Bank, which characterizes molecular and cellular pathophysiology underlying PTSD. Recent work in this area includes whole genome microarray
expression to examine abnormally expressed gene products, including serum and glucocorticoid-regulated kinase 1 (SGK1) and regulated in development and DNA damage responses 1 (REDD1), in PTSD postmortem brain samples as compared with matched controls. Results from this and other novel postmortem work will be made available to the scientific community via an online system, affording the most widespread use of this critical information.

The molecular study of stress response on neural circuitry and cellular physiology also may help to identify areas of risk vulnerability and novel diagnostic approaches to better inform treatment response. Several current projects in this area include: (1) the mediating effect of childhood trauma, cortical thinning, and increased negative outcomes following military combat; (2) the role of social and environmental stress on structural and functional brain changes observed in PTSD; (3) the role of ketamine in fear extinction; and (4) the use of glutamatergic-based pharmacotherapies to enhance the functioning and glutamate expression on stress response and resilience of GLT1, the glutamate transporter.

The Division continues its collaboration with the Psychiatric Genomics PTSD Consortium, and co-leads a VA PTSD GWAS project with colleagues from University of California, San Diego. The project has been highly productive in establishing linkage and association paradigms identifying chromosomal regions and genes influencing risk for anxiety disorders. Other areas of focus include the analysis of PTSD-associated DNA methylation changes, and the use of a new statistical modeling strategy to study sex and genetic variant interactions. This modeling approach is expected to detect more novel genetic variants via genome-wide scan and may explain the higher prevalence of PTSD in women than in men following trauma exposure. Additionally, data from 16,000 participants in the Army Study to Assess Risk and Resilience in Service members (Army STARRS) are being analyzed to identify behaviors, genetic and gene-environmental (GxE) risk predictors associated with morbidity and mortality.

Research on resilience and stress vulnerability continues in children and their families who have been exposed to high levels of stress and trauma. In collaboration with the Yale Child Study Center, researchers from the Division have collected and are analyzing surveys that were completed by children and their parents facing serious medical illness, from both national and international locations. Data collection is also ongoing in a study of child and family adjustment to parental combat deployment and soldier reintegration among active duty military families at Ft. Drum, New York.

Translational Epidemiology

The Clinical Neurosciences Division continues to examine the epidemiology of traumatic stress, with a major focus on identifying protective psychosocial factors that promote resilience. The National Health and Resilience in Veterans Study aims to characterize psychosocial, genetic, environmental, and GxE determinants of PTSD — and related health outcomes — in a nationally representative sample of Veterans, with a special emphasis on older Veterans. This work has led to publications in the areas of posttraumatic growth, correlates of successful aging and the national prevalence of lifetime and current PTSD, and a model of PTSD typologies among Veterans. Studies funded by the Centers for Disease Control and Prevention/National Institute for Occupational Safety and Health also continue to examine a host of psychosocial, genetic, epigenetic, and neuroendocrine factors associated with the longitudinal trajectories of PTSD symptoms in a large cohort of first responders involved in to attacks on the World Trade Center.

Dissemination and Training Division

The Dissemination and Training Division (headquartered in Palo Alto, California), conducts research on (1) needs and preferences of providers and patients; (2) implementation and effectiveness of evidence-based assessments and treatments in VA and community settings; and (3) development and testing of novel assessments and treatments that exploit the potential unique benefits of technology-based delivery of services to improve access, quality, and outcomes in VA care.

Dissemination and Implementation Research

Three new studies funded in FY 2014 focus on providers. The first study concerns the use of Web technology in training clinicians in evidence-based interventions and testing variations in training procedures as they impact quality of skills in implementing the interventions. The second study is the development of a 28-site practitioner network across both the VA and the Department of Defense (DoD) that focuses on implementation of measurement-based care, specifically on the use
of symptom measures during the course of treatment to guide treatment planning. This study will evaluate the impact of different facilitation models in regard to success in uptake of measurement-based treatment across all sites. The third study is a randomized controlled trial (RCT) that focuses on increasing awareness of, receptivity to, and implementation of clinical practice guidelines for management of posttraumatic stress.

**Barriers to Care and Patient Preferences**

Several survey studies continue to address identification and engagement of Veterans in need of care. One is testing a brief screen for drug use among primary care patients with and without PTSD; another examines barriers to cannabis treatment among Veterans with PTSD. Along with collaborators at the Women’s Health Sciences Division, staff at the Dissemination and Training Division completed research and evaluation work on screening and treatment of military sexual trauma. Continuing projects include studies on patient preferences for gender-specific mental health care and barriers to treatment engagement among male Veterans who experienced military sexual trauma.

**Treatment Research**

Randomized controlled trials are under way evaluating implementation strategies and patient outcomes in a variety of treatment settings. A large multisite clinical trial funded by the National Institutes of Health (NIH) is assessing the effectiveness of a flexibly delivered evidence-based PTSD treatment among civilian public sector women and will examine how variations in delivery affect patient outcomes. Two new trials that have obtained funding address substance use. One study will evaluate ACT in patients with comorbid PTSD and substance use problems; the other will evaluate the effectiveness of exercise in resolving cannabis dependence.

Evaluation of the national rollout of PE psychotherapy continued, with recent results confirming PE’s effectiveness in a national sample of more than 1,800 Veterans. Investigators from the Dissemination and Training Division and the Minneapolis VA obtained funding for a study of organization- and team-level factors influencing the use of evidence-based PTSD psychotherapies in VA clinics.

Technology has been introduced to support and extend treatment. A new study is assessing the efficacy of group STAIR delivered via telemental health for female Veterans living in rural areas. A DoD-funded trial of telephone case management for Veterans with PTSD has been completed. Dissemination and Training Division staff also collaborated with colleagues at the Center’s Pacific Islands Division on two clinical trials of psychotherapy delivered via video teleconferencing; the results of these trials have been recently published. Several pilot studies are assessing the potential of the PTSD Coach smartphone app in helping Veterans and civilians cope with PTSD. A pilot RCT study has been completed that identified benefits of introducing PTSD Coach among patients waiting for treatment, and has demonstrated reduction in PTSD symptoms as compared with those in waitlist-as-usual. The Division is also collaborating with investigators from the Minneapolis VA Medical Center on a study testing an online intervention to help National Guard families encourage their loved ones to seek mental health care.

Other studies address novel approaches to clinical problems in trauma survivors. Funding has been obtained to assess adaptive changes in cardiac autonomic status, physical activity, social cognition, and social interaction in real time among Veterans participating in the VA Service Animal Training Intervention program. NIH funding is supporting an investigation of online social networks for a highly stressed population (cancer survivors) to evaluate the types of social networking activities and level of engagement that may be related to positive mental and physical health outcomes. A DoD-funded study is testing whether teaching relaxation skills improves OEF/OIF/OND Veterans’ driving behavior.

**Evaluation Division**

The Evaluation Division (headquartered in West Haven, Connecticut) supports the National Center’s mission through a programmatic link with the VA’s Northeast Program Evaluation Center (NEPEC), which has broad responsibilities within the VA Office of Mental Health Operations (OMHO) to evaluate their programs, including those for specialized treatment of PTSD.

NEPEC has continued to monitor and assess PTSD treatment at the VA. The monitoring includes both residential and outpatient specialty treatment programs, as well as PTSD treatment by trained providers not working within one of the PTSD specialty programs. The Evaluation Division via NEPEC also monitors the effort to improve psychotropic medication
prescribing practices at the Veterans Health Administration (VHA). Two of the measures in this initiative are the use of antipsychotics to treat PTSD and the use of benzodiazepines without an appropriate diagnosis or medical indication. It should be noted that although NEPEC is primarily engaged in evaluation research, it is also engaged in independent research projects related to the treatment of PTSD.

The Evaluation Division continues research on PTSD health service research, pain management, and the role of pain in the treatment of PTSD, as well as on sex differences in the health of returning Veterans. The Division is about to begin the third year of data collection on a National Institute of Mental Health (NIMH) Research Project Grant Program (R01), investigating the implementation of two evidence-based treatments, PE and CPT, in 38 Department of Veterans Affairs’ residential treatment programs for PTSD. Findings have been published on provider perspectives on perceived effective residential treatment ingredients, provider perceptions of dissuading factors to the use of PE and CPT, and changes in implementation of PE and CPT over time. Recruitment continued for the Survey of Returning Veterans (SERV) study, which examines sex differences in OEF/OIF/OND Veterans. Currently, approximately 550 participants have been recruited into the study, and follow-up rates remain at or above 90%. The Division also submitted a Health Services Research and Development (HSR&D) grant to extend the SERV study, in an attempt to better understand why symptomatic Veterans elect not to seek services to address their difficulties.

Over the next year the Evaluation Division will examine further the role of pain in specialized PTSD treatment and in the treatment of comorbid disorders; continue the SERV study, publishing results from the qualitative interviews of participants and continuing the establishment of a longitudinal cohort of returning Veterans; and embark on a study of impulse control issues among people in treatment for PTSD. In addition, the annual survey of all specialized PTSD programs that is conducted by NEPEC has been changed and expanded to include questions about the dissemination of evidence-based therapies within specialized programs. The national psychopharmacology initiative has just begun and will be continuing throughout the year. The Division is also working with OMHO, Mental Health Services (MHS), and the Executive Division to establish a technical assistance group that will respond to requests from specialized programs and staff in the field on policy, operations, handbook implementation, and the provision of evidence-based practices (EBPs).

Pacific Islands Division

The Pacific Islands Division (located in Honolulu, Hawaii) was created to advance PTSD work in the Pacific Rim, and to focus on improving access to care for active duty personnel and Veterans by: (1) improving understanding of cultural attitudes; and (2) using advanced technology, such as telemedicine, to reach out to Veterans unable to otherwise access adequate care.

Assessment

DoD funding has allowed for the development of several new assessment tools including one to assess neurocognitive and psychosocial functioning in Veterans with PTSD. A mobile version, used by frontline medical support personnel, enables them to more rapidly and accurately detect PTSD and concussion in Servicemembers to help facilitate their access to appropriate treatment as quickly as possible. Results show excellent reliability and validity for these instruments. The Pacific Islands Division is also part of a DoD-sponsored team that developed and tested an assessment-guided intervention app. Delivered within the app are both subjective and psychophysiological assessments that trigger relevant psychoeducational skill-based interventions for use with combat Veterans with PTSD.

Treatment Research

Investigators recently completed trials of evidence-based PTSD treatments delivered via videoconferencing: (1) CPT to rural Community-Based Outpatient Clinics (CBOCs), (2) CPT for female Veterans, (3) polytrauma treatment via Home-Based Telehealth by a team of specialists to Veterans who have difficulty leaving their homes for treatment, and (4) couples therapy when one member of the couple is a rural Veteran with PTSD. A recently funded study examines the amount and location of PTSD treatment among Veterans based on presence or absence of a comorbid substance use disorder. In addition, a qualitative (focus group) project examined the interface of individual, family, and community factors associated with PTSD service utilization among rural Veterans. Lastly, a data repository of RCTs that used evidence-based treatment for Veterans with PTSD is being assembled to foster research to advance understanding into factors influencing PTSD treatment.
Other projects emphasize advanced technology to reach rural Veterans with PTSD who do not have easy access to specialized care for their PTSD. As an example, an anger management app, developed in collaboration with the Behavioral Sciences Division, was tested on a pilot sample.

Specific Populations
A completed survey study of partners of Veterans with PTSD yielded evidence of knowledge gaps; identified opportunities for education and support that could be targeted to spouses and families; and provided substantial qualitative data indicating both positive and negative impacts on spouses’ (partners’) emotional, physical, and social well-being. Several ongoing studies examine ethnic minority populations with regard to prevalence of PTSD and the corresponding functional status, stigma, access to care for Veterans with PTSD, and the role of spousal support; additionally, the studies identify unique risk and resilience correlates of PTSD in ethnoracially diverse Veterans.

Women’s Health Sciences Division
The Women's Health Sciences Division (located in Boston, Massachusetts) specializes in the study of women and female Veterans, with an additional focus on understanding gender differences in trauma exposure and posttrauma psychopathology.

Biomarkers
Work at the Division includes studies aimed at elucidating basic biological processes underlying PTSD including a recently completed VA-funded study of sex hormones and derivatives associated with increased fear conditioning across the menstrual cycle in PTSD; a study of GABAergic neuroprotective steroids in men and in women across the menstrual cycle; and a series of NIMH-funded studies of the gene-environment interplay in the comorbidity of PTSD and eating disorders.

Treatment Research
Division investigators are also focused on developing and testing psychopharmacological interventions for PTSD, with several recently completed projects that include a DoD-funded double-blind, randomized, placebo-controlled trial of ganaxolone; and a study, co-funded by the Center for Integration of Medicine and Innovative Technology (CIMIT) and the DoD, investigating event-related potentials as a predictor of selective serotonin reuptake inhibitors (SSRI) response in individuals with PTSD.

Several other intervention studies examine more efficient treatment formats for CPT. With funding from the DoD via the South Texas Research Organizational Network Guiding Studies on Trauma and Resilience (STRONG STAR) consortium, investigators are completing studies that examine the relative effectiveness of CPT delivered in a group versus individual format, in-office as compared with in-home, and via telehealth as compared with in-person. In addition, the Women's Health Sciences Division is investigating a variable-length CPT protocol to evaluate whether treatment benefits may be achieved in fewer sessions. Investigators are also examining strategies to more efficiently train clinicians in CPT and to monitor fidelity in routine care settings — including an ongoing NIMH-funded study focused on improving and sustaining the delivery of CPT among previously trained clinicians who treat Veterans with PTSD. Another VA-funded study examines the effect of tobacco use on recovery from PTSD during CPT treatment.

Other intervention studies focused on traumatized populations include a recently completed VA-funded examination of the efficacy of contingency management–supported tobacco cessation in Veterans with and without PTSD, and a newly VA-funded study that will apply a physical exercise intervention to elucidate the shared neurobiology of PTSD and chronic pain. An NIMH-funded intervention study is under way to examine the effectiveness and fit of a transdiagnostic treatment, the Unified Protocol, for trauma-exposed Veterans with co-occurring diagnoses. Additionally, an ongoing DoD-funded project examines a mindfulness-based training as a tool to assist Veterans coping with postdeployment intrusive thoughts.

Gender Differences
The Women’s Health Sciences Division is continuing its research on the OEF/OIF/OND cohort, particularly in regard to the experiences of female Veterans. A large national survey of OEF/OIF Veterans that included the updated Deployment Risk
and Resilience Inventory-2 (DRRI-2) is now being used to investigate a wide range of research questions regarding the relationship between deployment experiences and postdeployment mental health.

The Division is also continuing a large, national survey of male and female returning OEF/OIF Veterans (with females oversampled) designed to examine gender differences in deployment experiences and postdeployment adjustment. Recent work with this sample has included investigations of predictors of suicidal ideation and associations between deployment stressors, PTSD, and nicotine use. Work with the OEF/OIF/OND cohort also includes a VA-funded examination of the effects of deployment stressors and associated mental health sequelae on occupational and family functioning over time in female Veterans compared with male Veterans.

Investigators are also conducting research on the associations between PTSD, treatment for PTSD, suicidal behavior, and death from suicide among VA health care users. For example, a cohort study, funded by the American Foundation for Suicide Prevention, examines differences in both suicide and suicide attempts in female and male VHA patients with and without PTSD, with a particular focus on gender differences in the role of PTSD treatment as a moderator of these relationships.

**Military Sexual Trauma and Partner Violence**

Exposure to interpersonal violence is a key issue of study at the Women's Health Sciences Division. Research related to military sexual trauma (MST) includes a recent qualitative investigation aimed at identifying unique factors associated with sexual trauma that occur within a military context; and a newly funded investigation of Veterans' experiences with and preferences for the VHA's universal MST screening program. Intimate partner violence (IPV) among female Veterans is a growing area of focus. Researchers are examining best practices for IPV identification, assessment, treatment, and coordination of care within the VHA context. Focusing on interpersonal trauma more broadly, a recently initiated project will examine VHA primary care providers’ experiences with and reactions to providing care to female Veterans with interpersonal trauma histories.
# APPENDIX B. FISCAL YEAR 2014 FUNDING

## I. Funding for Research Projects and Research Infrastructure

### VA Cooperative Studies

<table>
<thead>
<tr>
<th>Principal Investigators</th>
<th>Title of Project</th>
<th>Years</th>
<th>Total Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gelernter &amp; Stein</td>
<td>CSP #575B: Genomics of Posttraumatic Stress Disorder</td>
<td>2013-2016</td>
<td>$3,166,739</td>
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<td>Schnurr, Chard, &amp; Ruzek</td>
<td>CSP #591: Comparative Effectiveness Research in Veterans with PTSD (CERV-PTSD)</td>
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<td>Vasterling &amp; Concato</td>
<td>CSP #566: Neuropsychological and Mental Health Outcomes of Operation Iraqi Freedom (OIF): A Longitudinal Cohort Study</td>
<td>2008-2014</td>
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### Other VA Sources

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<tr>
<th>Principal Investigators</th>
<th>Title of Project</th>
<th>Funding Source</th>
<th>Years</th>
<th>Total Award</th>
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<tbody>
<tr>
<td>Babson</td>
<td>The impact of CBT-I on Cannabis Cessation Outcomes</td>
<td>CSR&amp;D</td>
<td>2014-2019</td>
<td>$989,691</td>
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<td>Bernardy</td>
<td>Strategies to Decrease the Prescribing of Benzodiazepines to Veterans with PTSD and a History of Mild TBI</td>
<td>HSR&amp;D</td>
<td>2013-2014</td>
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<td>Bernardy</td>
<td>Strategies to Improve PTSD Care</td>
<td>HSR&amp;D</td>
<td>2014-2015</td>
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<td>Bonn-Miller</td>
<td>Safety and Efficacy of Cannabis for the Treatment of Medical and Psychiatric Disorders</td>
<td>HSR&amp;D</td>
<td>2014-2015</td>
<td>$10,000</td>
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<td>Carlson</td>
<td>Assessing Risk of Chronic Posttraumatic Mental Disorder in New Veterans</td>
<td>CSR&amp;D</td>
<td>2010-2014</td>
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<td>Calhoun &amp; Ruzek</td>
<td>Practice-Based Implementation Network in Mental Health</td>
<td>VA/DoD Joint Incentive Fund</td>
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<td>Gelernter</td>
<td>The Genetics of Anxiety Disorders</td>
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<td>Gelernter</td>
<td>Genetic Studies of Dual Diagnosis Populations</td>
<td>MIRECC</td>
<td>2013-2017</td>
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<td>Hamblen</td>
<td>CBT for PTSD in Veterans with Co-Occurring Substance Use Disorders</td>
<td>CSR&amp;D</td>
<td>2012-2015</td>
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<td>Harpaz-Rotem &amp; Otis</td>
<td>Intensive Treatment for Chronic Pain and PTSD for OEF/OIF Veterans</td>
<td>RR&amp;D</td>
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<td>Hayes</td>
<td>Neuroimaging Genetics of Mild TBI</td>
<td>RR&amp;D</td>
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<td>Heinz</td>
<td>Cognitive Remediation for Alcohol Use Disorder and PTSD</td>
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<td>Iverson</td>
<td>Intimate Partner Violence, Health, and Healthcare Use Among Women Veterans</td>
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<td>Iverson</td>
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<td>Japuntich</td>
<td>Tobacco Treatment as Augmentation to Cognitive Processing Therapy for PTSD (CDA2)</td>
<td>CSR&amp;D</td>
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<td>Keane</td>
<td>Boston Area Network of Designated Enrollment Sites (BARN)</td>
<td>ORD, VACO, CSP</td>
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<td>Kimerling</td>
<td>The WOMAN Study: Role of Patient Activation and Gender Specific Preferences in Access to and Engagement with Mental Health Services among Women Veterans</td>
<td>HSR&amp;D</td>
<td>2012-2014</td>
<td>$81,729</td>
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<td>Krystal &amp; Abdallah</td>
<td>CAP-Neuroimaging Core</td>
<td>VA/DoD CAP</td>
<td>2013-2018</td>
<td>$1,676,267*</td>
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## Appendix B. Fiscal Year 2014 Funding

<table>
<thead>
<tr>
<th>Principal Investigators</th>
<th>Title of Project</th>
<th>Funding Source</th>
<th>Years</th>
<th>Total Award</th>
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<tr>
<td>Mansfield</td>
<td>Access to PTSD Care Among Veterans With and Without Substance Use Diagnoses</td>
<td>HSR&amp;D</td>
<td>2013-2014</td>
<td>$100,000</td>
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<td>Mansfield</td>
<td>Fee Basis vs. in-VA Mental Health Care for Veterans</td>
<td>HSR&amp;D</td>
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<td>Meis, Eftekhari (Site PI), &amp; Rosen (Site Co-PI)</td>
<td>Building a Family Systems Model to Promote Adherence to PTSD Treatment</td>
<td>HSR&amp;D</td>
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<td>$50,000 (NCPTSD)</td>
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<td>Miller</td>
<td>The Structure of PTSD Comorbidity</td>
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<td>2011-2014</td>
<td>$600,000</td>
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<td>Miller</td>
<td>Analysis of RORA and Other Candidate Genes in PTSD</td>
<td>BLR&amp;D</td>
<td>2013-2015</td>
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<td>Norman</td>
<td>Integrated Alcohol Disorder and PTSD Treatment</td>
<td>CSR&amp;D</td>
<td>2012-2017</td>
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<td>Norman</td>
<td>Effectiveness of Evidence Based Treatments for Alcohol/Substance Use Disorders and Co-Occurring PTSD Symptoms and Related Mental Health Problems Among Veterans</td>
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<td>Peterson &amp; Keane</td>
<td>Consortium to Alleviate PTSD (CAP)</td>
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<td>Rasmusson</td>
<td>Project 2: Cognitive Processing Therapy (CPT) Intervention for Comorbid TBI/PTSD</td>
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<td>Rasmusson &amp; Pineles</td>
<td>Contingency Management Supported Tobacco Cessation &amp; Predictors of Relapse in Veterans With and Without PTSD</td>
<td>CSR&amp;D</td>
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<td>Rosen</td>
<td>Monitoring Evidence-Based PTSD Treatment among Veterans With and Without Substance Use and TBI Diagnoses.</td>
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<td>Scioli</td>
<td>Neurobiological and Psychological Benefits of Exercise in Chronic Pain and PTSD</td>
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<td>Shiner</td>
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<td>Sloan</td>
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<td>Taft</td>
<td>PTSD, TBI, and Neuropsychological Factors in Partner Violence Among Veterans</td>
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<td>Tiet</td>
<td>SUD Treatment for Dually Diagnosed Patients in PTSD Outpatient Programs</td>
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<td>Drug Screen for Primary Care Patients</td>
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<td>Turchik</td>
<td>Gender &amp; Access to VA Mental Health Care: The Example of Military Sexual Trauma</td>
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<td>Wolf</td>
<td>The Genetics of Posttraumatic Psychopathology</td>
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*BLR&D Biomedical Laboratory Research & Development Service; CAP Consortium to Alleviate PTSD; CSP Cooperative Studies Program; CSR&D Clinical Science Research and Development Service; DoD Department of Defense; HSR&D Health Services Research and Development Service; MIRECC Mental Illness Research, Education and Clinical Center; ORD Office of Research and Development; RR&D Rehabilitation Research and Development Service; VA Department of Veterans Affairs; VACO CA Central Office

* Sub-award within the total $45million CAP award
### Department of Defense (DoD)

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<th>Principal Investigators</th>
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<th>Years</th>
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<tr>
<td>Keane &amp; Marx</td>
<td>Project VALOR: Trajectories of Change in PTSD in Combat-Exposed Veterans</td>
<td>2012-2016</td>
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<td>New Approaches to the Measurement of Suicide-related Cognition</td>
<td>2013-2015</td>
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<td>Deployment Related Anxiety Reduction Training (DART)</td>
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<td>Meis, Eftekhari (site PI), &amp; Rosen (site Co-PI)</td>
<td>VA Implementation of PTSD Treatment through Family Involvement</td>
<td>2014-2015</td>
<td>$4,000 (NCPTSD)</td>
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<td>Morland &amp; Mackintosh</td>
<td>Remote Exercises for Learning Anger and Excitation Management (RELAX)</td>
<td>2013-2015</td>
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<td>Morland</td>
<td>Telemental Health and Cognitive Processing Therapy for Female Veterans with Military-related PTSD</td>
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<td>Morland</td>
<td>Telemental Health and Cognitive Processing Therapy for Rural Combat Veterans with PTSD</td>
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<td>In-Home Exposure Therapy for Veterans with PTSD</td>
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<td>Evaluation of the Safety and Efficacy of the FAAH Inhibitor URB597 in Veterans with PTSD</td>
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<td>Peterson &amp; Resick</td>
<td>Clinical Effectiveness Trial of In-Home Cognitive Processing Therapy for Combat-Related PTSD</td>
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<td>Pineles</td>
<td>Event-Related P2 Slope as a Predictor of Response to SSRIs in a Veteran Population</td>
<td>2011-2014</td>
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<td>Rasmusson</td>
<td>Proof-of-Concept, Double-Blind, Randomized, Placebo-Controlled Study of Ganaxolone in PTSD</td>
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<td>Rasmusson &amp; Familoni</td>
<td>Randomized Controlled Trial: Tailored Evaluation and Treatment for PTSD Progression and Suicide Prevention by Application of Thermal Imaging</td>
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<td>Homecoming Line: Telephone Support for Veterans</td>
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<td>Randomized, Controlled Trial of CBT Training for PTSD Providers</td>
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<td>$2,877,735</td>
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<td>Shipherd</td>
<td>Enhancing Post-Deployment Training: Preventing PTSD by Coping with Intrusive Thoughts</td>
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<td>Southwick</td>
<td>Mental Health and Resilience</td>
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<td>Spira</td>
<td>DANA - Defense Automated NeuroBehavioral Assessment</td>
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<td>PHIT For Duty: Personal Health Information Tool for Assessing Transition from Combat Deployment</td>
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<td>Wachen &amp; Resick</td>
<td>Variable Length Cognitive Processing Therapy for Combat-Related PTSD</td>
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<td>Woodward &amp; Bonn-Miller</td>
<td>Can a Canine Companion Modify Cardiac Autonomic Reactivity and Tone in PTSD?</td>
<td>2014-2017</td>
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### National Institutes of Health (NIH)

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<th>Principal Investigators</th>
<th>Title of Project</th>
<th>Funding Source</th>
<th>Years</th>
<th>Total Award</th>
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<tr>
<td>Abdallah</td>
<td>Examining The Effect Of Ketamine On Glutamate/Glutamine Cycling</td>
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<td>2013-2018</td>
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<td>Amstadter &amp; Gelernter</td>
<td>Stress Induced Drinking in OEF/OIF Veterans: The Role of Combat History and PTSD</td>
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<td>Cloitre</td>
<td>The Implementation of an Evidence-Based PTSD Treatment in Public Sector Settings</td>
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<th>Principal Investigators</th>
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<td><strong>Cook</strong></td>
<td>Sustained Use of Evidence Based PTSD treatment in VA residential settings</td>
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<td><strong>de Graaf, Behar, &amp; Sanacora</strong></td>
<td>Ex Vivo Assay for In Situ Brain-Wide Mapping of Glutamate/ GABA Metabolism</td>
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<td><strong>Duman</strong></td>
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<td>Role of mTOR and Synaptic Protein Synthesis in the Rapid Antidepressant Actions of NMDA Receptor Blockade</td>
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<td><strong>Gelernter</strong></td>
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<td><strong>Gelernter &amp; Malison</strong></td>
<td>Drug Dependence Through the Lifespan U.S. Thai Training Program</td>
<td>NIH &amp; Fogarty</td>
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<td><strong>Gradus</strong></td>
<td>Constructing a Danish Reaction to Severe Stress Cohort</td>
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<td><strong>Han &amp; Gelernter</strong></td>
<td>Fine mapping a gene sub-network underlying alcohol dependence</td>
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<td><strong>Hayes</strong></td>
<td>Neuroimaging of Trauma Memory and Cognitive Reappraisal in PTSD</td>
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<td>2009-2014</td>
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<td><strong>Kaufman &amp; Gelernter</strong></td>
<td>Risk &amp; Resilience in Maltreated Children</td>
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<td><strong>Krystal</strong></td>
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<td><strong>Levy</strong></td>
<td>Cognitive Bases of Risk-Taking Over the Lifespan: Psychophysics &amp; Brain Imaging</td>
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<td><strong>Miller</strong></td>
<td>Neuroimaging-Genetics of PTSD</td>
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<td>The Interplay of Genetic and Environmental Factors in the Comorbidity of PTSD and Disordered Eating</td>
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<td><strong>Neumeister &amp; Pietrzak</strong></td>
<td>An mGlu2/3 Agonist in the Treatment of PTSD</td>
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<td>$768,467</td>
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<td>1/3-Efficacy and Tolerability of Riluzole in Treatment-Resistant Depression</td>
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<td>Effects of Stress and Glutamatergic Agents on Glutamate Cycling and Behavior</td>
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<td>New Rapidly Acting Treatments for Treatment Resistant Depression</td>
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<td><strong>Sloan</strong></td>
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<td>NIMH</td>
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<td><strong>Spiro &amp; Aldwin</strong></td>
<td>Lifespan Outcomes of Military Service</td>
<td>NIA</td>
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<td><strong>Tyrka &amp; Gelernter</strong></td>
<td>Childhood Maltreatment: Risk and Resilience</td>
<td>NIMH</td>
<td>2009-2014</td>
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<td><strong>Vasterling &amp; Taft</strong></td>
<td>Family Adaptation to OIF Deployment</td>
<td>NIMH</td>
<td>2012-2016</td>
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## Appendix B. Fiscal Year 2014 Funding

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<tr>
<th>Principal Investigators</th>
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<th>Funding Source</th>
<th>Years</th>
<th>Total Award</th>
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<tr>
<td>Wiltsey-Stirman</td>
<td>Influences on the Sustainability of Evidence-based Psychotherapies</td>
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<td>Wiltsey-Stirman</td>
<td>Leveraging Clinical Materials to Monitor Fidelity to Cognitive Processing Therapy (CPT) for PTSD</td>
<td>NIMH</td>
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NCI National Cancer Institute; NCRR National Center for Research Resources; NIA National Institute on Aging; NIAAA National Institute on Alcohol Abuse and Alcoholism; NIDA National Institute on Drug Abuse; NIMH National Institute of Mental Health

### Other Sources

<table>
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<tr>
<th>Principal Investigators</th>
<th>Title of Project</th>
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<th>Years</th>
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<tr>
<td>Abdallah</td>
<td>Examining Glutamate/Glutamine Cycling In The Frontal Brain Of Healthy Volunteers During Ketamine Infusion</td>
<td>Brain &amp; Behavior Research Foundation</td>
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<td>Abdallah</td>
<td>Glial and Glutamatergic Deficits In Posttraumatic Stress Disorder (PTSD)</td>
<td>Brain &amp; Behavior Research Foundation</td>
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<td>Bonn-Miller</td>
<td>A Test of the Efficacy of Compass Cultivation Training for Veterans with PTSD</td>
<td>Mind and Life 1440 Award</td>
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<td>Foynes</td>
<td>Primary Care Providers’ Experiences with Female Patients with Interpersonal Trauma Histories</td>
<td>Boston University School of Medicine</td>
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<td>American Foundation for Suicide Prevention</td>
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<td>Marx</td>
<td>Healing Heroes: Medical Informatics and Analysis Toolkit (MINAT)</td>
<td>DARPA</td>
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<td>McCaslin</td>
<td>Military Acculturation and Transition to the Civilian Setting</td>
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<td>Monson &amp; Wiltsey-Stirman</td>
<td>Implementation of Evidence-Based Psychotherapy for PTSD: Does Technology-Enhanced Consultation Improve Treatment Fidelity and Outcomes?</td>
<td>Canadian Institute of Health Research</td>
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<td>Improving and Sustaining Clinician Use of CPT</td>
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<td>Pietrzak</td>
<td>Examining the Utility of Latent Class Analysis in Describing Differential Risk Pathways Linking Childhood Adversity to Negative Adult Outcomes</td>
<td>PreVAIL Research Network</td>
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<td>Southwick &amp; Pietrzak</td>
<td>Biomarkers of Psychological Risk and Resilience in World Trade Center Responders</td>
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<td>Modifiable Risk and Protective Factors for Suicidal Behaviors in the US Army</td>
<td>Henry M. Jackson Foundation for the Advancement of Military Medicine</td>
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<td>Wolf</td>
<td>The MMPI-2-RF for the Assessment of DSM-5 PTSD and its Subtypes</td>
<td>University of Minnesota Press, Test Division</td>
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CDC Centers for Disease Control and Prevention; DARPA Defense Advanced Research Projects Agency; NCIRE Northern California Institute for Research and Education; NIOSH National Institute for Occupational Safety and Health
### Appendix B. Fiscal Year 2014 Funding

#### Pending

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<td>Gradus</td>
<td>Predicting Suicide Attempts among Veterans Health Administration (VHA) Patients</td>
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<td>Gutner</td>
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<td>Examining Large-Scale Networks in PTSD using Functional and Structural MRI</td>
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<td>Hayes</td>
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<td>Hayes</td>
<td>Neuroimaging Genetics of Neurodegenerative Disease in Blast-Induced Mild TBI</td>
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<td>Knight</td>
<td>LED Light Therapy To Improve Cognitive-Psychosocial Function in TBI-PTSD Veterans</td>
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<td>Krystal &amp; Abdallah</td>
<td>CAP-Ketamine for Antidepressant-Resistant PTSD: A Translational Neuroscience, Biomarker-Informed Clinical Trial</td>
<td>VA/DoD CAP</td>
<td>2013-2018</td>
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<td>Mackintosh &amp; Morland</td>
<td>Extending Treatment Science for PTSD among Veterans: A PTSD Treatment Repository</td>
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<td>Contact-based Intervention to Reduce Stigma and Increase Service Use in Veterans</td>
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<td>Rasmusson &amp; Liverant</td>
<td>A Clinical Trial of Exemestane (Aromasin) for the Treatment of Irritable Aggression in PTSD</td>
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<td>Rasmusson &amp; Marx</td>
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<td>Strength at Home-Couples Program to Prevent Military Partner Violence</td>
<td>CDC</td>
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<td>VA Chronic Effects of Neurotrauma Consortium</td>
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<td>Vogt</td>
<td>The Veterans Metrics Initiative: Linking Program Components to Post-Military Well-Being</td>
<td>VA, DoD, Henry Jackson Foundation</td>
<td>2014-2020</td>
<td>$538,000 (NCPTSD)</td>
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<tr>
<td>Wiltsey-Stirman &amp; Monson</td>
<td>Improving and Sustaining CPT for PTSD in Mental Health Systems</td>
<td>NIMH</td>
<td>2015-2019</td>
<td>$3,000,000</td>
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</tbody>
</table>

CAP Consortium to Alleviate PTSD; CDC Centers for Disease Control and Prevention; CSR&D Clinical Science Research and Development Service; DoD Department of Defense; HSR&D Health Services Research and Development Service; NARSAD National Alliance for Research on Schizophrenia and Depression; NIAAA National Institute on Alcohol Abuse and Alcoholism; NIDA National Institute on Drug Abuse; NIMH National Institute of Mental Health; RR&D Rehabilitation Research and Development Service; VA Department of Veterans Affairs

* Sub-award within the total $45 million CAP award

## II. Other Funding

<table>
<thead>
<tr>
<th>Leads</th>
<th>Program/Project Title</th>
<th>Funding Source</th>
<th>Years</th>
<th>Total Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernardy</td>
<td>Rural Provider and Health Care Staff Training and Education Initiative</td>
<td>VA Rural Health Training Program Office</td>
<td>2013-2016</td>
<td>$415,433</td>
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<td>Bernardy</td>
<td>Rural Health Telepharmacy Clinical Support Program</td>
<td>VA Rural Health Training Program Office</td>
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<td>Eftekhari, Ruzek, &amp; Crowley</td>
<td>Prolonged Exposure National Training Program</td>
<td>VA Mental Health Services</td>
<td>2007-2014</td>
<td>$1,419,068</td>
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<td>Prins, Bramlett, &amp; Vinatieri</td>
<td>Veterans Integration To Academic Leadership (VITAL) program at San Jose State University</td>
<td>VA Mental Health Services</td>
<td>2012-2015</td>
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<td>Slone</td>
<td>From the War Zone to the Home Front Educational Series 2014</td>
<td>Jack and Dorothy Byrne Foundation</td>
<td>2014-2014</td>
<td>$45,000</td>
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<td>Spira</td>
<td>Home-based Telemental Health for Rural Veterans with PTSD</td>
<td>VA ORH</td>
<td>2012-2015</td>
<td>$970,000</td>
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<td>Street</td>
<td>Advanced Women’s Health Fellowship</td>
<td>VA OAA</td>
<td>2014-2015</td>
<td>$180,000</td>
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<td>Watson</td>
<td>Stress First Aid Training for Law Enforcement Personnel</td>
<td>Oregon State Department of Public Safety</td>
<td>2013-2014</td>
<td>$45,600</td>
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<td>Whealin</td>
<td>Solutions to Barriers to Care: Culturally-Adapted VTel Therapy for Couples in Rural Locations Extension</td>
<td>VA ORH</td>
<td>2012-2015</td>
<td>$485,616</td>
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</tbody>
</table>

DoD Department of Defense; OAA Office of Academic Affiliations; ORH Office of Rural Health


Appendix C. Fiscal Year 2014 Publications


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Appendix C. Fiscal Year 2014 Publications


Appendix C. Fiscal Year 2014 Publications


Appendix C. Fiscal Year 2014 Publications


152. **Nilini, Y. I., Nosen, E., Williams, P. A., Tracy, M., Coffey, S. F., & Galea, S.** (2013). Unique and related predictors of major depressive disorder, posttraumatic stress disorder and their comorbidity after Hurricane Katrina. *Journal of Nervous and Mental Disease, 201*, 841-847. doi:10.1097/NMD.0b013e3182a430a0


Appendix C. Fiscal Year 2014 Publications


Appendix C. Fiscal Year 2014 Publications


Appendix C. Fiscal Year 2014 Publications


Appendix C. Fiscal Year 2014 Publications


APPENDIX D. FISCAL YEAR 2014
IN PRESS AND ADVANCE ONLINE PUBLICATIONS


17. Cloitre, M. Over 60% of US adolescents have experienced a potentially traumatic event, almost 8% of whom have associated PTSD [Commentary]. Evidence-Based Mental Health. doi:10.1136/eb-2013-101538


Appendix D. Fiscal Year 2014 In Press and Advance Online Publications

24. **Cook, J., Dinnen, S., Ruzek, J. I., Coyne, J. C., & Schnurr, P. P.** A quantitative test of an implementation framework in 38 VA residential PTSD programs. *Administration and Policy in Mental Health and Mental Health Services Research.*


Appendix D. Fiscal Year 2014 In Press and Advance Online Publications


52. **Hoff, R.** Female veterans of Iraq and Afghanistan seeking care from VA specialized PTSD programs: Comparison with male veterans and female warzone veterans of previous eras. *Journal of Women's Health.*


55. **Hundt, N., Mott, J., Cully, J., Mondragon, S., & Teng, E.** Factors associated with low and high use of psychotherapy in veterans with PTSD. *Psychological Trauma: Theory, Research, Practice, and Policy.*


60. **Kachadourian, L., Quigley, B. M., & Leonard, K. E.** Alcohol-aggression expectancies and their evaluations in alcohol-related intimate partner aggression. *Journal of Studies on Alcohol and Drugs.*

61. **Keane, T. M.** Toward a greater understanding of mental health issues in today’s military [Editorial]. *Depression and Anxiety.*


68. **Klingensmith, K., Tsai, J., Mota, N., Southwick, S., & Pietrzak, R. H.** Military sexual trauma in U.S. veterans: Results from the National Health and Resilience in Veterans Study. *Journal of Clinical Psychiatry.*


78. Levy, B., Pilver, C., & Pietrzak, R. H. Lower prevalence of psychiatric conditions when negative age stereotypes are resisted. Social Science & Medicine.


84. Mason, A. E., Boden, M. T., & Cucciare, M. A. Prospective associations among approach coping, alcohol misuse and psychiatric symptoms among Veterans receiving a brief alcohol intervention. Journal of Substance Abuse Treatment.


Appendix D. Fiscal Year 2014 In Press and Advance Online Publications


98. Mott, J., Galovski, T. E., Elwood, L. S., & Walsh, C. Changes in trauma narratives and perceived recall ability over a course of cognitive processing therapy for PTSD. *Traumatology*.


110. Petrakis, I., Sofuoglu, M., & Rosenheck, R. VA patients with high numbers of opioid prescriptions: A national study of sociodemographic and diagnostic characteristics, health service and psychotropic medication use. *Addictive Disorders & Their Treatment*. doi:10.1097/ADT.0000000000000058


Appendix D. Fiscal Year 2014 In Press and Advance Online Publications


132. Sherman, M., Kauth, M., Shipard, J., & Street, R. Provider beliefs and practices about assessing sexual orientation in two VHA hospitals. LGBT Health. doi:10.1089/lgbt.2014.0008


Appendix D. Fiscal Year 2014 In Press and Advance Online Publications


154. Watson, P. How different is Psychological First Aid from other psychotherapeutic modalities? In G. Quitangon, & M. Evces (Eds.), *Vicarious trauma and disaster mental health.* New York, NY: Taylor Francis/Routledge.


158. Whealin, J., Kuhn, E., & Pietrzak, R. H. Applying behavior change theory to technology promoting veteran mental health care seeking. *Psychological Services.*


Appendix D. Fiscal Year 2014 In Press and Advance Online Publications


APPENDIX E. FISCAL YEAR 2014
SCIENTIFIC PRESENTATIONS

ACADEMYHEALTH ANNUAL RESEARCH MEETING – SAN DIEGO, CA, JUNE 2014


2. Iverson, K. M., & Dichter, M. D. VA patient and provider perspectives on IPV screening and counseling procedures in VA.


AMERICAN PSYCHOLOGICAL ASSOCIATION – WASHINGTON, DC, AUGUST 2014


ANXIETY AND DEPRESSION ASSOCIATION OF AMERICA – CHICAGO, IL, MARCH 2014

10. Abdallah, C. Hippocampal volume tracks hippocampal NAA in response to a glutamate-modulating agent in GAD.


14. Keane, T. How can mobile-connected technologies expand treatment opportunities for anxiety disorders?

15. Keane, T., & Brief, D. J. Effective treatments for PTSD and comorbid conditions: Predictors of treatment response.


24. Wisco, B., Baker, A. S., & Sloan, D. Does emotional reactivity to exposure treatment mediate PTSD treatment outcome?

Appendix E. Fiscal Year 2014 Scientific Presentations

ASSOCIATION FOR BEHAVIORAL AND COGNITIVE THERAPIES – NASHVILLE, TN, NOVEMBER 2013


29. Bovin, M., Wolf, E. J., & Resick, P. Change in PTSD is associated with change in personality disorder features.


42. Gutner, C., Nilni, Y. I., Suvak, M., Wiltsey-Stirman, S., & Resick, P. Does anxiety sensitivity change the course of PTSD treatment?

43. Gutner, C., Resick, P., Steenkamp, M., Suvak, M., Gradus, J., & Monson, C. Natural recovery in the aftermath of trauma: Impact of gender and trauma type on depression and PTSD.

44. Heinz, A. J., Peters, E. N., Boden, M. T., & Bonn-Miller, M. Delay discounting as a predictor of cannabis use outcomes following a self-guided cessation attempt: A comprehensive examination among a clinical sample.


46. Keane, T., Cody M., & Beck J. G. Understanding the relationship between PTSD and health outcomes.


49. LaMotte, A., Taft, C., Weatherill, R., Scott, J. C., & Eckhardt, C. I. Concordance in intimate partner aggression reports among returning veterans and their partners.


Appendix E. Fiscal Year 2014 Scientific Presentations

54. Lehavot, K., Der-Martirosian, C., Simpson, T. L., Shepherd, J., & Washington, D. PTSD and military social support predict physical health and VHA utilization in women veterans.


57. Muralidharan, A., & Vogt, D. Impact of racial/ethnic minority status on deployment-related experiences and PTSD in a national sample of female and male veterans.

58. Patton, S., Nilni, Y. I., Pineles, S. L., Rouse, M. H., Sawyer, A. T., & Rasmusson, A. M. Evidence suggesting a fluctuation in psychological symptoms across the menstrual cycle in women with PTSD.


60. Pruiksma, K. E., Taylor, D. J., Resick, P., Wachen, J. S., Mintz, J., & Young-McCaughan, S. Do sleep disturbances remain after PTSD treatments?


64. Resick, P. Early life trauma and major depressive disorder: Effects on biological, neurological, and affective processes.


67. Taylor, D. J., Pruiksma, K. E., Resick, P., Wachen, J. S., Mintz, J., & Young-McCaughan, S. Do baseline sleep disturbances predict response to PTSD treatments?


71. Wiltsey-Stirman, S. Training clinicians in public sector mental health settings.


INTERNATIONAL SOCIETY FOR TRAUMATIC STRESS STUDIES – PHILADELPHIA, PA, NOVEMBER 2013


76. Borah, E. V., Resick, P., Mintz, J., Litz, B., Borah, A., Young-McCaughen, S., & Peterson, A. The role of trait resilience and unit cohesion in PTSD treatment outcomes among active duty soldiers.


78. Carlson, E. B., Ruzek, J., & Spain, D. Development and initial validation of a risk factor screen for PTSD and depression.

79. Chard, K. M., Healy, E., Cogan, C. M., Resick, P., & Hansel, J. E. Dissemination of CPT in the VA: Where are we now?


82. Dodson, T., Bovin, M., Marx, B., Joos, C. M., Gregor, K. L., & Pineles, S. L. Self-blame as a mediator of tonic immobility and posttraumatic stress symptom severity.

Appendix E. Fiscal Year 2014 Scientific Presentations


86. Gutner, C., Suvak, M., & Resick, P. Longitudinal course of anxiety sensitivity and PTSD symptoms in cognitive-behavioral therapies for PTSD.


94. Iverson, K. M., Mercado, R., Carpenter, L., & Street, A. E. Intimate partner violence among women veterans: Previous interpersonal trauma as a risk factor.


97. Joos, C., Japuntich, S., Wright, J. D., & Pineles, S. L. The importance of substance use assessment in trauma studies.

98. Keane, T. Recent findings on prolonged exposure treatment and its mechanisms.


100. King, M. W., Street, A. E., Gradus, J., Vogt, D., & Resick, P. All symptoms were not created equal: An item response theory analysis of PTSD Checklist responses in a U.S. veteran sample.


104. Larsen, J., Wiltsie-Stirman, S., & Resick, P. Symptom exacerbations in cognitive processing therapy for PTSD: Barrier to treatment?


107. Marx, B., Holowka, D., Kaloupek, D. G., & Keane, T. Personality, warzone, and symptom predictors of post-military aggressive behavior reported by Vietnam veterans.


110. Mechanic, M., Griffin, M., Newton, G., & Resick, P. The impact of intimate partner stalking on PTSD and psychophysiological reactivity in survivors of intimate partner violence.


114. Norman, S. B. How to retain patients in evidence-based care.
Appendix E. Fiscal Year 2014 Scientific Presentations


116. Patton, S., Dodson, T., Nillini, Y. I., & Pineles, S. L. Examining physiological non-response by way of avoidance and peritraumatic dissociation in a trauma exposed sample.

117. Pineles, S. L., Nillini, Y. I., Patton, S., Resick, P., Rasmusson, A. M., & Orr, S. P. Menstrual cycle effects on conditioned fear acquisition in women with and without PTSD.


120. Rasmusson, A. M. How sex and sex-related hormones may affect psychophysiological and psychological correlates of PTSD.

121. Rasmusson, A. M., Pineles, S. L., & Scioli-Salter, E. A role for GABAergic and other neuroactive steroids in supporting resilience and recovery from extreme stress.

122. Resick, P. Augmentation of trauma-focused therapy: Can we improve outcomes?

123. Resick, P. CPT vs. PCT: Final results of an RCT with an active military sample.

124. Resick, P., Suvak, M., Mintz, J., Wachen, J. S., Borah, A., & Peterson, A. L. The chicken and the egg: Do cognitions precede or follow change in PTSD?

125. Resick, P., Wachen, J. S., Mintz, J., Dondanville, C., Pruiksma, K., Borah, K., & Peterson, A. CPT vs. PCT: Final results of a randomized controlled trial.

126. Rosen, C., Adler, E. P., & Tiet, Q. Predictors of substance use lapses among veterans with PTSD.


132. Southwick, S. How 4 minutes can impact a community: Lessons learned from Newtown.

133. Southwick, S. Resilience as related to definition, theory & challenges.


143. Wolf, E. J. The genetics of posttraumatic psychopathology.


Appendix E. Fiscal Year 2014 Scientific Presentations

VA HSR&D CONFERENCE ON ENHANCING PARTNERSHIPS FOR RESEARCH & CARE OF WOMEN VETERANS - ARLINGTON, VA, JULY/AUGUST 2014

146. Creech, S., **Iverson, K. M.**, & Street, A. Sexual revictimization and PTSD symptoms in women veterans presenting to primary care.

147. Creech, S., Swift, R., **Street, A. E.**, Zlotnick, C., & Taft, C. Deployment stressors, mental health and family functioning among OEF/OIF/OND women veterans.


155. Marsiglio, M., & **Iverson, K. M.** Intimate partner violence and mental health symptoms among women veterans: The role of partners’ military service status.


159. Schnurr, P. P. U.S. VA and DoD Research: Opportunities for collaboration and recommendations for success.


161. Nilni, Y. I., Gradus, J., Gutner, C., Luciano, M., Shipherd, J., & Street, A. E. Deployment stressors and physical health among OEF/OIF veterans: The role of PTSD.


OTHER VA AND MILITARY


Appendix E. Fiscal Year 2014 Scientific Presentations


OTHER


186. **Carlson, E. B.** (2014, March). *Progress in the conceptualization and assessment of dissociation and its relation to posttraumatic disorders.* European Society for Trauma and Dissociation, Copenhagen, Denmark.

187. **Cauterucio, C., Trau, J., Rundio, C., & Drescher, K.** *Qualitative chaplain perspectives on moral injury.*

188. **Currier, J. M., Drescher, K., & Holland, J. M.** *Spirituality, forgiveness, and quality of life among veterans with PTSD: Testing an initial meditational model.*


Appendix E. Fiscal Year 2014 Scientific Presentations


192. **Duman, R.** (2014). Neurobiology of stress, depression, and antidepressants: Remodeling synaptic connections. Department of Neurobiology and Behavior, Stony Brook University, Stony Brook, NY.


196. **Gelernter, J.** (2013, October). Genomewide associations study identifies TLL1 as a PTSD locus. World Congress of Psychiatric Genetics, Boston, MA.

197. **Gelernter, J.** (2013, October). GWAS of alcohol dependence traits in three populations. World Congress of Psychiatric Genetics, Boston, MA.


Appendix E. Fiscal Year 2014 Scientific Presentations


Appendix E. Fiscal Year 2014 Scientific Presentations


245. **Schnurr, P. P.** (2014, June). *The National Center for PTSD.* Institute of Medicine Committee to Evaluate the Department of Veterans Affairs Mental Health Services, Washington, DC.


256. **Street, A. E.** (2014, April). *Trauma-informed care for women veterans: Lessons learned through research and clinical care.* Society for General Internal Medicine, San Diego, CA.


260. **Vogt, D.** (2013, October). *Family-related risk and resilience factors during deployment and OEF/OIF veterans’ postdeployment mental health.* Military Family Research Institute Colloquium Series, Purdue University, Indianapolis, IN.


APPENDIX F. FISCAL YEAR 2014
EDITORIAL BOARD ACTIVITIES

Addiction
Bonn-Miller (Assistant Editor)

Addictive Behaviors
Bonn-Miller (Assistant Editor)

Administration and Policy in Mental Health Services and Mental Health Services Research
Wiltsey-Stirman

American Journal of Medical Genetics, Part B
Gelernter

Asian Biomedicine (Research Reviews and News)
Gelernter

Behavior Therapy
Sloan (Associate Editor); Wolf

Behaviour Research and Therapy
Ruzek; Sloan (Consulting Editor)

Biological Psychiatry
Duman; Gelernter; Krystal; Sanacora

Clinical Case Studies
Marx (Consulting Editor)

Clinical Psychology: Science and Practice
Shipherd (Guest Editor)

CNS Spectrums
Sanacora

Cognitive and Behavioral Practice
Shipherd

Community Mental Health Journal
Harpaz-Rotem

Critical Reviews in Neurobiology
Duman (Editorial Advisory Board)

Disaster Health
Watson (Editor)

European Journal of PsychoTraumatology
Cloitre (Associate Editor)

International Journal of Emergency Mental Health
Keane (Consulting Editor)

Journal of Abnormal Psychology
Miller (Consulting Editor); Sloan (Consulting Editor); Taft (Consulting Editor); Wolf (Consulting Editor)

Journal of Addiction
Tiet

Journal of Anxiety Disorders
Keane (Consulting Editor); Ruzek

Journal of Child and Family Studies
Tiet

Journal of Clinical Psychology
Sloan (Consulting Editor)

Journal of Consulting and Clinical Psychology
Marx (Consulting Editor); Resick (Associate Editor); Taft (Consulting Editor)

Journal of Contemporary Psychotherapy
Sloan (Consulting Editor)

Journal of Depression and Anxiety
Tiet

Journal of Family Psychology
Taft (Consulting Editor)

Journal of Family Violence
Taft (Consulting Editor)

Journal of Interpersonal Violence
Keane (Consulting Editor)

Journal of Neurochemistry
Duman (Handling Editor)

Journal of Rehabilitation Research and Development
Bernardy (Associate Editor); Harpaz-Rotem

Journal of the International Neuropsychological Society
Vasterling (Consulting Editor)

Journal of Trauma and Dissociation
Carlson; Marx (Consulting Editor)

Journal of Trauma Practice
Keane (Consulting Editor)

Journal of Traumatic Stress
Schnurr (interim Editor-in-Chief); Miller (Associate Editor); Rosen; Street; Wolf (Editorial Advisory Board)

LGBT Health
Shipherd

Mental Health Services and Administration and Policy in Mental Health
Hoff

Military Behavioral Health
Spira

Molecular Pharmacology
Duman

Neuropsychology
Duman

Neuropsychopharmacology
Duman (Associate Editor); Gelernter (Associate Editor); Sanacora

Partner Abuse
Taft (Consulting Editor)

Psychiatric Genetics
Gelernter

Psychological Trauma
Carlson; Marx (Consulting Editor)

Psychological Trauma: Theory, Research, Practice and Policy
Keane (Consulting Editor); Miller (Consulting Editor); Ruzek; King, D (Associate Editor); Taft (Associate Editor); Vogt; Wolf (Consulting Editor)

Psychology of Addictive Behaviors
Bonn-Miller (Consulting Editor)

Psychopharmacology
Duman (Editorial Board and Advisory Editor)

Psychosomatic Medicine
Sloan (Consulting Editor)

The Behavior Therapist
Wiltsey-Stirman (Associate Editor)

Trauma, Abuse, and Violence
Keane (Consulting Editor)
APPENDIX G. FISCAL YEAR 2014
EDUCATIONAL PRESENTATIONS

AMERICAN PSYCHOLOGICAL ASSOCIATION – WASHINGTON, DC, AUGUST 2014

1. Knight, J. A. Traumatic brain injury and PTSD.
3. Shipherd, J., & Kauth, M. VHA transgender and LGBT initiatives and services.
4. Shipherd, J., & Kauth, M. LGBT veteran care is coming out of the closet.

INTERNATIONAL SOCIETY FOR TRAUMATIC STRESS STUDIES – PHILADELPHIA, PA, NOVEMBER 2013

5. Keane, T. Responding to the Boston marathon bombing.
6. McCaslin, S. E., Ruzek, J., Kemp, J., & Batten, S. Getting the word out: Enhancing the care of veterans with PTSD through the community provider online toolkit.
7. Resick, P. Narrow focus, wide effects: Beyond PTSD symptom reduction in trauma-focused therapy.
10. Schnurr, P. P., Keane, T., Krystal, J., Kilpatrick, D., & Ursano, R. J. Special session in honor of Dr. Matthew Friedman.
11. Walser, R. Acceptance and Commitment Therapy: Mindfulness and compassion in the treatment of PTSD.
14. Watson, P. Psychological First Aid: Keeping providers’ skills up.

OTHER

Appendix G. Fiscal Year 2014 Educational Presentations


53. Sanacora, G. (2013, November). Using a pathophysiological model to guide antidepressant drug development. Department of Psychiatry Grand Rounds, University of Texas Southwestern Medical Center, Dallas, TX.

Appendix G. Fiscal Year 2014 Educational Presentations

55. **Sanacora, G.** (2014, March). *Novel antidepressant treatments in development and the clinical trial option.* Psychiatry Resident Grand Rounds, Yale University, New Haven, CT.

56. **Schnurr, P. P.** (2014, February). *From the front line to the home front: American troops and the challenge of post-service reintegration.* John Sloan Dickey Center for International Understanding, Dartmouth College, Hanover, NH.


60. **Shipnerd, J.** (2014, March). *LGBT veterans.* Social Work Conference at the GV (Sonny) Montgomery VA Medical Center, Jackson, MS.


62. **Street, A. E.** (2013, December). *Researching experiences of sexual harassment and sexual assault among veterans.* Institute of Medicine of the National Academies Board of Select Health Populations, Washington, DC.


64. **Taft, C.** (2014, March). *Domestic abuse in military populations.* Department of Social Work, Boston College, Boston, MA.


70. **Watson, P.** (2014, September). *Stress First Aid for nurses.* Dartmouth-Hitchcock Medical Center Department of Nursing, Webinar.

71. **Whealin, J., Yoneda, A., & Lo, F.** (2014, March). *Overcoming stigma to facilitate mental health treatment in veterans.* Institute on Violence Abuse and Trauma, Honolulu, HI.