



## Director's Update

In the last newsletter, I began highlighting some of the cutting-edge research projects in our foundational areas (PTSD, TBI, and Substance Use), as well as emerging areas of post-deployment mental health (suicide, violence, pain, and

special subpopulation needs of women Veterans, families, and the First Personal Gulf War). Last time, I highlighted our work in substance use. For this issue, I'd like to focus on our work examining brain changes in Veterans with PTSD and/or TBI.

Dr. Rajendra Morey is using neuroimaging to evaluate brain response to different PTSD symptoms to better understand the connection between symptoms and brain changes. He is also investigating how genetics may affect brain structure where childhood trauma is a major risk factor in PTSD and how that may affect treatment. Finally, he is also using neuroimaging to look at how white matter in the brain might be different for people who have experienced subconcussive blast exposure.

Drs. Katherine Taber, Robin Hurley and Jared Rowland are further investigating these white matter changes in Veterans exposed only to primary blast with or without symptoms of mild TBI compared to Veterans with deployment acquired mild TBI due to other or mixed mechanisms. They are using a variety of techniques including multimodal structural and functional neuroimaging and cognitive testing.

Dr. Jared Rowland is utilizing this dataset to compare Veterans with deployment acquired mild TBI who did and did not go on to develop PTSD to identify aspects of events and/or individuals that are important circumstances through which deployment acquired TBI increases risk of developing PTSD. His goal is to improve functional outcomes by identifying targets for development of interventions and to inform tailoring of PTSD treatment approaches to address the unique neurobiological changes that may be present when PTSD develops following deployment acquired TBI.

***John A. Fairbank, Ph.D.***

Director, Mid-Atlantic (VISN 6) MIRECC

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## Education Update

### MIRECC Fellowship Program Helps Train New Neuropsychologists

The MIRECC fellowship program at our Salisbury site has a unique training focus. They are helping to address the VA's identified critical need for more neuropsychologists. The training program for their MIRECC Fellows includes two bi-weekly 90-minute seminars. Dr. Taber (MIRECC Education Assistant Director) leads the functional neuroanatomy series. Drs. Miskey and Shura (MIRECC Psychology Fellowship Co-Directors, Salisbury site) lead the advanced neuropsychology seminars. This two-year series is based on the Houston Conference Guidelines for advanced neuropsychology training. The program more generally is designed to prepare postdoctoral trainees for specialty certification in clinical neuropsychology (ABPP-CN).

Two of the five clinical psychologists who have completed this MIRECC fellowship became board-certified in 2017. Our congratulations to Drs. Saule Kulubekova and Robert Shura!



**Saule Kulubekova, PhD, ABPP-CN**  
Salisbury MIRECC Fellow 2011 - 2013  
Durham VA staff 2013 - present



**Robert Shura, PsyD, ABPP-CN**  
Salisbury MIRECC Fellow 2013 - 2015  
Salisbury VA staff 2015 - present

Trainees from many different specialties (clinical psychology, pharmacology, neurology, and psychiatry) also attend. These seminars have become very popular. In response to requests, VTEL was added late last year so that trainees across the country could attend. VAMCs in Denver, Salem, Columbia, Lebanon and Battle Creek now participate each week. This growth has led the Salisbury site to be nationally known, and reflects the MIRECC's goal of providing advanced clinical education.

For more information, email Dr. Shura: [robert.shura2@va.gov](mailto:robert.shura2@va.gov)

## National Service

**Dr. Robin A. Hurley** (MIRECC Associate Director, Education) recently served on a Department of Defense Congressionally Directed Medical Research Programs (CDMRP) grant review panel in November.

## New Leadership Activities

**Dr. Holly Miskey** (MIRECC Faculty & Fellowship Co-Director, Salisbury site) was elevated to Chair of the *Science Task Force Committee* of the International Neuropsychological Society (INS) in August and in November accepted an invitation to serve on INS's *Program Committee*.

## Invited Lectures

**Drs. Mira Brancu** (MIRECC Deputy Director), Megan Shepherd-Banigan and John Williams co-presented "*Evidence-based Synthesis: Interventions to Support Caregivers or Families of Patients with TBI, PTSD, or Polytrauma*" as part of the HSR&D cyberseminar series on December 13, with an estimated 165 attendees!

**Dr. Jennifer Strauss** (MIRECC faculty, Durham site) co-presented "*Women's Primary Care Mental Health Integration (PC-MHI)*" with Drs. Oishi, Mariano, Jain and Miller as part of the Women's Mental Health Monthly Clinical Training Teleconference on December 14.

## Welcome to our new MIRECC Fellows

**Kirsten Dillon, PhD** is the new Psychology Fellow at our Durham site. Kirsten completed her PhD at Florida State University and her pre-doctoral internship at the Durham VA Medical Center.

For the past two years, she has been working at Duke University Medical Center with Dr. Patricia Resick, the developer of Cognitive Processing Therapy (CPT), on projects focused on implementing evidenced based interventions for PTSD. Dr. Dillon's research interests include the relationship between anger and PTSD and developing novel treatments to target anger in this population. She has conducted research developing a computerized intervention to reduce anger and is looking forward to expanding upon this research and developing an mHealth intervention to reduce anger in Veterans with PTSD and problematic anger.



**Erica Epstein, Psy.D.** is a new Psychology Fellow at our Salisbury site. She completed her doctorate at Albizu University and her pre-doctoral internship at the Salisbury VAMC.

Her clinical training at Salisbury focused on neuropsychology, geropsychology, and as a health psychology track intern she also rotated with home-based primary care and PCMHI. She is pursuing specialized post-doctoral training in clinical neuropsychology. Prior research has focused on traumatic brain injury (TBI), and she is currently expanding her research interests to include sex differences in TBI and post-deployment conditions. In her free time, she enjoys hiking, playing guitar, and creative writing.



# Conferences



International Society  
for Traumatic Stress Studies  
**33rd Annual Meeting**  
**Trauma and Complexity:**  
**From Self to Cells**

November 9-11, 2017  
Pre-Meeting Institutes, November 8  
Palmer Hotel - Chicago, Illinois, US



**Kurtz ED, Kelley ML, Montano HG, VA Mid-Atlantic MIRECC Workgroup.** *Adding military sexual assault to an integrated model of risk and protective factors for posttraumatic stress symptomatology in OEF/OIF/OND women veterans.* Oral presentation

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# Publications

## Journal Articles

Calhoun PS, Wilson SM, Dedert EA, Cunningham KC, Burroughs TK, Hicks TA, Beckham JC, Kudler HS, Straits-Troster K. *The association of alcohol consumption patterns with self-rated physical health and psychiatric distress among Afghanistan- and Iraq-era U.S. veterans.* Psychiatry Research. 2018; 259: 142-147.

Cunningham KC, Farmer C, LoSavio ST, Dennis PA, Clancy CP, Hertzberg MA, Collie CF, Calhoun PS, Beckham JC. *A model comparison approach to trauma-related guilt as a mediator of the relationship between PTSD symptoms and suicidal ideation among veterans.* Journal of Affective Disorders. 2017; 221: 227-231.

Logue MW, van Rooij SJH, Dennis EL, Davis SL, Hayes JP, Stevens JS, Densmore M, Haswell CC, Ipser J, Koch SBJ, Korgaonkar M, Lebois LAM, Peverill M, Baker JT, Boedhoe PSW, Frijling JL, Gruber SA, Harpaz-Rotem I, Jahanshad N, Koopowitz S, Levy I, Nawijn L, O'Connor L, Olf M, Salat DH, Sheridan MA, Spielberg JM, van Zuiden M, Winternitz SR, Wolff JD, Wolf EJ, Wang X, Wrocklage K, Abdallah CG, Bryant RA, Geuze E, Jovanovic T, Kaufman ML, King AP, Krystal JH, Lagopoulos J, Bennett M, Lanius R, Liberzon I, McGlinchey RE, McLaughlin KA, Milberg WP, Miller MW, Ressler KJ, Veltman DJ, Stein DJ, Thomaes K, Thompson PM, Morey RA. *Smaller Hippocampal Volume in Posttraumatic Stress Disorder: A Multi-Site ENIGMA-PGC Study.* Biological Psychiatry. 2018; 83(3): 244-253.

Martindale SL, Farrell-Carnahan LV, Ulmer CS, Kimbrel NA, McDonald SD, Mid-Atlantic MIRECC Registry Workgroup, Rowland JA. *Sleep quality in returning veterans: The influence of mild traumatic brain injury.* Rehabilitation Psychology. 2017; 62(4): 563 - 570.

Morey RA, Davis SL, Garrett ME, Haswell CC, Mid-Atlantic MIRECC Work Group, Marx CE, Beckham JC, McCarthy G, Hauser MA, Ashley-Koch AE. *Genome wide association study of subcortical brain volume in PTSD cases and trauma-exposed controls.* Translational Psychiatry. 2017; 7(11): 1265.

Ratanatharathorn A, Boks MP, Maihofer AX, Aiello AE, Amstadter AB, Ashley-Koch AE, Baker DG, Beckham JC, Bromet E, Dennis M, Garrett ME, Geuze E, Guffanti G, Hauser MA, Kilaru V, Kimbrel NA, Koenen KC, Kuan PF, Logue MW, Luft BJ, Miller MW, Mitchell C, Nugent NR, Ressler KJ, Rutten BPF, Stein MB, Vermetten E, Vinkers CH, Youssef NA; VA Mid-Atlantic MIRECC Workgroup; PGC PTSD Epigenetics Workgroup, Uddin M, Nievergelt CM, Smith AK. *Epigenome-wide association of posttraumatic stress disorder from heterogeneous cohorts with a common multi-site analysis pipeline.* American Journal of Medical Genetics Part B: Neuropsychiatric Genetics. 2017; 174(6): 619-630

Compelling evidence suggests that epigenetic mechanisms such as DNA methylation play a role in stress regulation and in the etiologic basis of stress related disorders such as Post traumatic Stress Disorder (PTSD). Here we describe the purpose and methods of an international consortium that was developed to study the role of epigenetics in PTSD. Inspired by the approach used in the Psychiatric Genomics Consortium, we brought together investigators representing seven cohorts with a collective sample size of N = 1147 that included detailed information on trauma exposure, PTSD symptoms, and genome-wide DNA methylation data. The objective of this consortium is to increase the analytical sample size by pooling data and combining expertise so that DNA methylation patterns associated with PTSD can be identified. Several quality control and analytical pipelines were evaluated for their control of genomic inflation and technical artifacts with a joint analysis procedure established to derive comparable data over the cohorts for meta-analysis. We propose methods to deal with ancestry population stratification and type I error inflation and discuss the advantages and disadvantages of applying robust error estimates. To evaluate our pipeline, we report results from an epigenome-wide association study (EWAS) of age, which is a well-characterized phenotype with known epigenetic associations. Overall, while EWAS are highly complex and subject to similar challenges as genome-wide association studies (GWAS), we demonstrate that an epigenetic meta-analysis with a relatively modest sample size can be well-powered to identify epigenetic associations. Our pipeline can be used as a framework for consortium efforts for EWAS

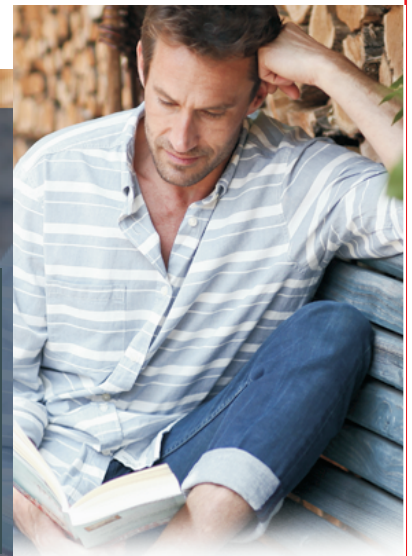
Shura RD, Denning JH, Miskey HM, Rowland JA. *Symptom and performance validity with veterans assessed for ADHD.* Psychological Assessment. 2017; 29(12):1458-1465. .

Stein MB, Ware EB, Mitchell C, Chen CY, Borja S, Cai T, Dempsey CL, Fullerton CS, Gelernter J, Heeringa SG, Jain S, Kessler RC, Naifeh JA, Nock MK, Ripke S, Sun X, Beckham JC, Kimbrel NA; VA Mid-Atlantic Mental Illness Research, Education, and Clinical Center (MIRECC) Workgroup, Ursano RJ, Smoller JW. *Genomewide association studies of suicide attempts in U.S. soldiers.* American Journal of Medical Genetics Part B: Neuropsychiatric Genetics. 2017; 174(8): 786-797.

[http://www.mentalhealth.va.gov/self\\_help.asp](http://www.mentalhealth.va.gov/self_help.asp)

## Resources to Empower Veterans Mental Health

Self-help materials can provide valuable education and support for Veterans who may be facing mental health challenges, their friends, and family members. There are a wide variety of self-help materials available and it can sometimes be difficult to select the most useful. VA has assembled a list of reviewer-recommended materials that may be helpful in finding the right option for you. For help in finding these materials, please click the "How to Use" tab.



## Online Life Skills Training for Veterans

There are several **free and anonymous** on-line education and life coaching programs that use interactive exercises and video demonstrations to teach skills for overcoming life challenges. <http://www.veterantraining.va.gov/>

### *Anger Management*

This online course is based on training that was developed specifically for Veterans and has been successfully used by Veterans and Service Members around the world. This course offers a wide range of practical skills and tools to manage your anger and develop self-control over your thoughts and actions

### *Moving Forward*

This online course teaches skills to help you overcome stressful problems and meet your goals. Moving Forward is designed for Veterans and Service Members who are facing challenges including:

- Managing Stress
- Balancing school & family
- Relationship problems
- Coping with physical injuries
- Financial difficulties

### *Veteran Parenting*

This course provides parents with tools that strengthen parenting skills and helps them reconnect with their children. The course:

- Helps parents deal with both everyday problems and family issues that are unique to the military lifestyle.
- Features stories from actual Veteran/military families, interactive activities, and practical parenting tips.

**NC4VETS**  
844.NC4.VETS



<http://www.nc4vets.com/blog/resource-guide>

The NC4VETS Resource Guide is produced and published by the North Carolina Department of Military and Veterans Affairs to assist and educate veterans in learning about state and federal veteran benefits. The 2017 edition is now available.

# Provider Education



## CBOC Mental Health Rounds

Each CBOC MH Rounds presentation is now offered **twice** a month:

Wednesday Jan 10 from 9-10 am ET & Thursday Jan 11 from 12-1 pm ET

*Cannabis Use & PTSD: A Review of Current Findings and Clinical Considerations*

Remember to register in TMS **in advance** to attend and receive credit.

<https://www.mirecc.va.gov/visn16/cboc-mental-health-rounds.asp>

Feb 14 & 15 *Moral Injury and Grief*  
Mar 14 & 15 *Bullying & Harassment in VA Workplace*

If you require assistance contact:

EES Program Manager - [Tim.Walsh2@va.gov](mailto:Tim.Walsh2@va.gov) or  
Education Tech - [Jessica.Denno@va.gov](mailto:Jessica.Denno@va.gov)



PACERS is pleased to announce a **new** "Dementia and Delirium" education module in our curriculum on cognitive disorders. **Each module is accredited for 1 hour of CE and is available to VA providers in the VA Talent Management System.**

### ***Dementia and Delirium***

**TMS ID 29817**

Dementia is a major public health concern, affecting over 5 million Americans, of whom over 560,000 are Veterans. The incidence of dementia increases with age, with more than 90% of those affected aged over 60 years. It is one of the most costly chronic conditions that the VA treats and its financial impact is expected to grow with the increasing number of aging Veterans. This course will describe two of the most common neurocognitive disorders that occur among elderly

### ***Dementia and Driving***

**TMS ID 28776**

One of the most challenging issues clinicians must address when working with Veterans with dementia is declines in driving skills. Approximately 30-45% of persons with dementia continue to drive, placing them at risk for becoming lost, crashing, and other adverse events. Clinicians have recognized a gap in knowledge regarding how to address diminished driving skills and decision-making for drivers with dementia. This training module will provide practical information that clinicians and health care teams can use in their work with older drivers with dementia and their families.



This workshop series was developed by MIRECC faculty in collaboration with Citizen Soldier Support Program (CSSP) and North Carolina Area Health Education Center (NC AHEC). The web-based versions of the courses are all free at: <http://www.aheconnect.com/citizensoldier>

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|---|--|
| 1 - <i>Treating the Invisible Wounds of War (TTIWW)</i><br>english & spanish editions | 5 - <i>TTIWW - Recognizing the Signs of mTBI during Routine Eye Examinations</i> |
| 2 - <i>TTIWW - A Primary Care Approach</i>  | 6 - <i>TTIWW - Understanding Military Family Issues</i>                          |
| 3 - <i>TTIWW - Employee Assistance in the Civilian Workforce</i>                      | 7 - <i>TTIWW - Taking a Military History: Four Critical Questions</i>            |
| 4 - <i>TTIWW - Issues of Women Returning from Combat</i>                              |  |



## Military Culture: Core Competencies for Healthcare Professionals

<http://deploymentpsych.org/military-culture>

Module 1: *Self-Assessment & Introduction to Military Ethos*

Module 3: *Stressors & Resources*

Module 2: *Military Organization & Roles*

Module 4: *Treatment, Resources & Tools*





[www.mirecc.va.gov/visn6](http://www.mirecc.va.gov/visn6)

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### Salisbury VAMC site

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