



Points of Excellence

The Newsletter of the VISN 17 Center of Excellence for Research on Returning War Veterans

FALL 2018

Vol. 4, Issue 3

Dr. Jonathan Caulkins from Carnegie Mellon University speaks about public policy issues regarding the use of cannabis as a pharmacotherapy

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The VA VISN 17 Center of Excellence for Research on Returning War Veterans is dedicated to conducting research that serves to improve the quality of life of our nations Veterans and foster the wellbeing of their families.

Editor: Richard Seim, PhD

Co-Editor: Laura Zambrano-Vazquez, PhD

Photography: Lisa Boynton, Richard Seim

Content Authors: Lisa Boynton, Richard Seim, Laura Zambrano-Vazquez

Webinar on Cannabis as a Pharmacotherapy

In October, the Center of Excellence was excited to host Dr. Jonathan Caulkins, a leading drug policy researcher, to present to a national audience via our webinar series on the state of the science and public policy regarding cannabis as a pharmacotherapy. Dr. Caulkins is co-author of the book, *Marijuana Legalization: What Everyone Needs to Know*, and has received numerous awards for his work in systems analysis of problems pertaining to drugs, crime, terror, violence, and prevention.



Dr. Jonathan Caulkins speaks to staff from the CoE and the Central Texas Veterans Health Care System

The legalization of cannabis has been a topic of debate for decades nationally and internationally, with numerous states recently adopting new policies on its use for medical and recreational purposes. Despite advocacy from some Veteran groups in favor of cannabis as a treatment option for PTSD, depression, anxiety, and chronic pain, research supporting its use is limited, and cannabis use remains largely illegal in most states. As such, currently the VA is not utilizing this treatment. Given the polarizing nature of the debate of cannabis legalization, it is crucial to thoroughly consider its options and implications. During his talk, Dr. Caulkins, who recently presented on this issue to the United Nations, discussed why legalization can be risky given that it is not well understood how it will interact and affect alcohol abuse, tobacco smoking, opioid overdose, or use of other drugs. Furthermore, he explained that to date there have been no controlled clinical trials on how doses upwards of 250 mg of THC per day affect behavioral, physical, or mental health. This is an important concern given that the typical estimated consumption is substantially larger than the quantities that have been tested so far.

Dr. Caulkins emphasized that legalization is not a binary choice, and there are multiple ways for allowing for legal supply of cannabis, each with distinct pros and cons. His talk warned about the dangers of legalization through large-scale for-profit commercial production, and he described multiple, more

prudent approaches to legalization that could be tried on an interim basis. Although additional research is needed to better understand the pros and cons of medical marijuana being prescribed by VA providers, Dr. Caulkins' talk provided information about the current state of the science. The webinar was attended by over 200 VA providers from around the nation.



Success in Implementing a Program to Reduce Interpersonal Violence

Thousands of Veterans return from their service suffering from different mental health disorders, such as posttraumatic stress disorder. Unfortunately, research suggests that this is associated with greater incidence of interpersonal violence (IPV) at home. To help these Veterans, Dr. Suzannah Creech, a CoE investigator, and her colleagues have developed a program known as *Strength at Home*. This program is specifically designed to reduce incidences of violence in Veterans families and teach at-risk Veterans more effective ways of dealing with conflict and managing PTSD symptoms.



Dr. Suzannah Creech

Strength at Home consists of four treatment phases: (1) psychoeducation on IPV and common reactions to trauma, (2) conflict management skills, (3) coping strategies and negative thought patterns, and (4) communication skills. Although the program was not designed as a treatment for PTSD, the program addresses deficits in social skills that are often impacted by core themes underlying trauma and may relate to use of IPV in relationships. In a recent study published in *BMC Health Services Research*, Dr. Creech, Dr. Justin Benzer, and their colleagues outline the promising results of their efforts to train VA clinicians throughout the country on how to implement this program. Data from the first year showed reductions in the number of Veterans reporting using physical and psychological IPV toward a partner as well as PTSD symptoms. Additionally, Veterans reported being highly satisfied with the quality and nature of services and materials. The findings showed that although 70% of the newly trained sites successfully implemented SAH within the first year of training, the implementation took longer than desired. Thus, researchers stated they would continue to work on reducing barriers for implementation and enhancing institutional support to decrease the time between training and the start of the program. The results of this study are particularly encouraging given that currently there are no treatments that successfully reduce IPV beyond those obtained by arrest and legal system monitoring.

Project SERVE Update



Project SERVE has begun the recruitment for the recently funded phase three, which will involve a treatment component for eligible participants. Additionally, data collection for phase two has been officially completed with a retention rate of 84%; an impressive number given the scale of this longitudinal study, one of the largest of its kind in the nation. Project SERVE Investigators have also been working on disseminating findings based on the data collected thus far, with five different presentations over the last few months at national and regional conferences. The presentations addressed predictors of functional recovery and quality of life among Veterans struggling with PTSD and TBI.

Welcome Our New Staff



Tabitha Alverio, M.A. is a Psychology Technician working on the MINER study. After graduating from the University of North Carolina, Ms. Alverio joined the Naval Hospital Camp Lejeune, Intrepid Spirit Concussion Recovery Center that provides brain injury recovery medical care to operational forces. Her goal is to continue providing mental healthcare to our Nation's active-duty service members and Veterans.



Morgan Bennett, B.S. is a Psychology Technician working on the SHE Study. She graduated from the University of California in 2013 with a Food Science degree. Ms. Bennett worked for Arizona State University as a Cell-Culture Technician in the Biosignatures Discovery Automation research center prior to joining the CoE.



Jack Kelley, B.A. is a Psychology Technician working on the Strength at Home project. Prior to joining the CoE, he was a Research Assistant with Strong Star, assisting with their Intensive Outpatient Program Prolonged Exposure study. Mr. Kelley hopes to find innovative solutions that alleviate the struggles military personnel and Veterans face at home when they experience daily PTSD symptoms.



Crystal Lantrip, Ph.D. is an Investigator working in the Neuroimaging Core where she is collaborating on several projects analyzing TMS and MRI data. After completing a postdoctoral fellowship at Dartmouth, Dr. Lantrip worked as a Clinical Neuropsychologist at the Baylor Scott & White Trauma Center performing neuropsychological and cognitive testing on patients in the Intensive Care Unit.



Jeremy Saenz, Ph.D. is a Graduate Psychologist working on the Strength at Home project. He recently received his degree in Counseling Psychology from Texas A&M University in College Station. Dr. Saenz chose to join the VA because he enjoys developing future psychology practices while using the evidenced-based practices established by those before him.



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Welcome Our New VA-CERP Interns

The CoE continues its tradition of competitively selecting bright and talented undergraduates from Baylor University and Tarleton State University through its VA Center of Excellence Research Program (VA-CERP). This year, we welcomed 14 new interns majoring in Psychology, Neuroscience, Communication Sciences, and Biology. In addition, we were excited to welcome back two of our interns from last year, who will be completing post-baccalaureate projects with us. Finally, we are pleased to announce that two of our former students have joined our staff.



Drs. Zambrano-Vazquez and Seim with the 2018-2019 Class of VA-CERP

CoE Hosts Neuroscience Conference



In September, the Center of Excellence hosted a summit of some of the state's leading neuroscientists. The 'Dallas & Austin Area Memory Meeting' featured talks from several laboratory groups from Dallas, Austin, and Waco who study how

processes in the brain are involved in learning, memory, emotions, sleep, and communication. The meeting provided an opportunity to showcase the promising research conducted by CoE investigators, Drs. Evan Gordon and Geoffrey May, on novel brain-based treatments for PTSD and traumatic brain injuries that affect thousands of military Veterans.

This is the first time that Waco has been invited to host this annual meeting bringing together over fifty neuroscientists. Dr. Steven Nelson, Core Chief of the Neuroimaging Core, stated that this meeting represents an important milestone in the CoE's continued development as a high-profile neuroscience research institution. "It is a great opportunity for us to welcome some of the best neuroscience labs in the country, who happen to be just up the road," he said, "We are all continually impressed by the work coming out of these labs, and excited about the connections we are able to build that ultimately lead to more innovative science. This meeting is a big part of that." The work featured in this conference was well received, which along with the CoE's recent collaborations with Baylor University's Department of Psychology & Neuroscience, highlights the ways in which the City of Waco is growing in prominence as a hub of brain-research in Texas.

Adapting Treatment to Primary Care Setting Can Improve Outcomes



Dr. Joseph Mignogna

Upon their return from service, Veterans face not only physical wounds and medical difficulties, but also diverse psychological injuries. Up to 30 percent of Veterans receiving care through primary care clinics in the VA also have a diagnosed mental health disorder. Dr. Joe Mignogna, a CoE investigator, and his colleagues have recognized the importance successfully integrating mental health services in a primary care clinic in order to fully address Veterans' needs. In their recent study published in *Implementation Science*, Dr. Mignogna and colleagues sought to understand the unique set of challenges that frontline providers in these clinics must overcome to implement evidence-based psychotherapies (EBPs) which have been shown to successfully reduce symptoms of depression and anxiety. Research suggests that although brief EBPs have been developed to overcome some of these barriers and fit the primary care setting, providers could compromise the effectiveness of these treatments by picking and choosing elements from them and delivering pieces rather than an integrated whole.

Their study explored providers' perspectives on and challenges to maintaining fidelity to a manualized brief cognitive behavioral therapy (CBT) delivered in primary care clinics, focusing on how they adapted nonessential intervention components. Results showed that providers recognized the need to remain flexible in order to meet the needs of the Veterans in this particular setting. Adaptions in treatment were driven by the therapeutic relationship, individual patient factors, and system-level factors to improve the "fit" into clinical practice yet the adaptions were predominantly considered to maintain fidelity to treatment. The findings of this study suggest that clinicians can adhere to a manualized treatment approach while still remaining flexible to the individual preferences and needs of the Veteran with whom they are working. Furthermore, these adaptions may be crucial to successful implementation efforts in the primary care setting.

Happy Retirement

The Center of Excellence celebrated the retirement of David Steeley and Nick Chevalier who have dedicated decades of their lives to the service of our country and have been an integral part of the CoE's work. Mr. Steeley, our Administrative Officer, retired after 27 years of Federal service, the last four of which were here with us at the CoE. He was an invaluable member of our team and helped Dr. Russell triple the size of our staff. He also coordinated the move into our new building. Mr. Chevalier, our MRI technician for the past nine years, retired after over 35 years of federal service. He played an instrumental role in our Neuroimaging Core.

The CoE thanks Mr. Steeley and Mr. Chevalier for their service and wishes them a happy retirement!



Dr. Russell with David Steeley (above) and Nick Chevalier (below)



Factors in Improving Quality of Life in Veterans with PTSD



Dr. Eric Meyer

The debilitating nature of PTSD symptoms can lead to difficulties in relationships, employment, and daily activities in Veterans' lives. However, a recent study led by CoE investigators, Drs. Meyer, Frankfurt and DeBeer, found that quality of

life can be predicted by factors that are specifically targeted in mindfulness-based interventions over and above PTSD symptoms alone.

Veterans with PTSD often have high levels of experiential avoidance, a tendency to avoid thoughts, emotions, and sensations related to a traumatic event. Unfortunately, this form of avoidance can actually increase these events, contributing to even greater disengagement from meaningful activities. Mindfulness, on the other hand, is defined as the practice of maintaining a nonjudgmental state of complete awareness in the present moment, and it can help our ability to be kind to ourselves (self-compassion) and engage in behaviors consistent with our values despite our pain, a concept known as psychological flexibility.

In their study, Dr. Meyer and colleagues found that the severity of PTSD symptoms alone does not fully explain the level of disability some Veterans experience. Instead they found that mindfulness, self-compassion, and psychological flexibility are three overlapping modifiable traits that work together as a single underlying factor to predict the quality of life in Veterans with PTSD. Moreover, the study found that PTSD symptoms continued to be a significant predictor

of disability but not quality of life. These findings can provide hope to those struggling with PTSD as they suggest that Veterans can experience a substantial improvement in their well-being and quality of life even if some PTSD symptoms remain. In order to continue reducing the devastating impact of PTSD, more research is needed that, like this study, identifies factors that can be modified to promote quality of life and ameliorate suffering in Veterans.

Kudos

- Graduate practicum student, **Joshua Camins**, won an award for Best Student Paper in Forensic Psychology from the Texas Psychological Association.
- **Bryann DeBeer** completed the recording of four clinical training videos with a focus on cultural diversity as part of an American Psychology Association grant.
- **Evan Gordon** has been awarded a Career Development Award (CDA-2) to fund his research seeking to identify neurobiologically-informed subtypes of traumatic brain injury.
- CoE postdoctoral fellows, **Adam McGuire** and **Yvette Szabo**, passed the Examination for Professional Practice in Psychology (EPPP), one of the last requirements to become Licensed Psychologists.

Recent CoE Publications

Here is a sample of some of the recent articles published by our researchers:

Gerber, M., **Frankfurt, S.**, Contractor, A., Oudshoorn, K., Dranger, P., & Brown, L. (in press). Influence of multiple traumatic events on mental health outcomes: Does count matter? *Journal of Psychopathology and Behavioral Assessment*.

Gordon, E. M., Lynch, C. J., Gratton, C., Laumann, T. O., Gilmore, A. W., Greene, D. J., Ortega, M., Nguyen, A., Schlaggar, B. L., Petersen, S. E., Dosenbach, N. U. F., & **Nelson, S. M.** (in press). Three distinct sets of connector hubs integrate human brain function. *Cell Reports*.

Poole, G., **Creech, S. K.**, Macdonald, A., & Taft, C. T. (in press). Predictors of Session Attendance in Intimate Partner Violence Treatment for Trauma-Exposed Veterans. *Partner Abuse*.

Russell, M. L. (in press). The VA Disability Process. In E. L. Weiss & C. A. Castro (Eds.), *American Military Life in the 21st Century Social, Cultural, and Economic Issues and Trends*. Santa Barbara, CA: ABC-CLIO.

Soley-Bori, M., Stephos, T., Burgess, J.F., & **Benzer, J.K.** (in press). Relational Climate and Healthcare Costs: Evidence from Diabetes Care. *Medical Care Research and Review*.

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Doris Miller Dept. of Veterans Affairs Medical Center
4800 Memorial Drive (151C)
Waco, TX 76711

Visit us at online at
www.mirecc.va.gov/visn17/

