VA Mid-Atlantic Health Care Network

VISN 6 Mid-Atlantic MIRECC
Post Deployment Mental Health

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Introduction to the Research Cores:
Neuroimaging

Rajendra A. Morey, MD

There is growing evidence from neuroimaging that many mental health disorders have measurable effects upon brain structure and function. We are primarily focused on the study of post-deployment mental health issues such as combat-related post traumatic stress disorder (PTSD) and traumatic brain injury (TBI).

Neuroimaging may reveal differences that have developed as a result of environmental exposures, such as combat. Genetic variations are also likely to be important for many conditions. Structural imaging is used to quantify size and/or shape of brain areas. Functional imaging may reveal differences in brain activity while performing a task.

PTSD affects about 25% of military personnel exposed to the trauma of combat. Thus it is clear that individuals can respond quite differently to similar trauma exposure. This diversity in response to environmental factors may be due, in part, to genetic differences. We are combining imaging with genetic studies to clarify the relationship between genetic variations and development of PTSD.

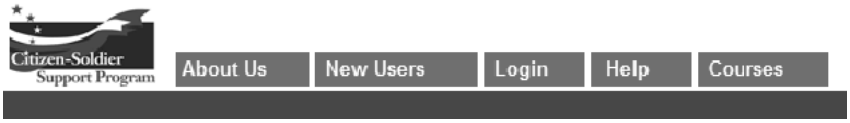
Recently Approved Grants

Morey R *Imaging Genetics of PTSD in OEF/OIF Veterans*
VA Merit Review

Clinical Component - Outreach to Providers

"What Primary Care Providers Need to Know About Mental Health Issues Facing Returning Service Members and Their Families"

www.ahecconnect.com/citizensoldier



Click on **New Users** to register. Then you will see the available web courses listed:

Treating the Invisible Wounds of War

ICARE: *What Primary Care Providers Need to Know About Mental Health Issues Facing Returning Service Members and Their Families*

National Service

Dr. William Schlenger (Associate Director, Research) is a member of the Institute of Medicine's newly formed panel "Committee on Readjustment Needs of Military Personnel, Veterans, and Their Families." The committee's charge specifies two phases: (1) review what's currently known about readjustment needs of military service members who have been deployed to the conflicts in Iraq or Afghanistan and their families, and (2) design and implement a comprehensive study of their needs.

Presentations from our MIRECC:

International Neuropsychological Society

Yoash-Gantz RE, McCormick CL, Lumpkin R, Pickett TC, Tupler L. *Relationship of Neurobehavioral Symptoms, PTSD and TBI in Returning Combat Veterans.* Presented at the International Neuropsychological Society 37th Annual Meeting, Atlanta GA, February 11-13, 2009.

American Neuropsychiatric Association

Taber KH, Hurley RA. *Endocannabinoids: Stress, Anxiety and Fear.* Presented at the American Neuropsychiatric Association 20th Annual Meeting, San Antonio TX, February 19 - 22, 2009.

Publications

Beckham JC, Flood AM, Dennis MF, Calhoun PS. *Ambulatory Cardiovascular Activity and Hostility Ratings in Women with Chronic Posttraumatic Stress Disorder.* Biological Psychiatry. 2009 Feb 1;65(3):268-72

Belanger HG, Kretzmer T, Yoash-Gantz R, Pickett T, Tupler LA. *Cognitive sequelae of blast-related versus other mechanisms of brain trauma.* Journal of the International Neuropsychological Society 2009;15:1-8

Calhoun PS, Elter JR, Jones ER, Kudler H, Straits-Tröster K. *Hazardous Alcohol Use and Receipt of VA Risk-Reduction Counseling among U.S. Veterans of the Wars in Iraq and Afghanistan.* Journal of Clinical Psychiatry. 2008 Nov;69(11):1686-93.

Kang-Park MH, Kieffer BL, Roberts AJ, Roberto M, Madamba SG, Siggins GR, Moore SD. *Mu-opioid receptors selectively regulate basal inhibitory transmission in the central amygdala: lack of ethanol interactions*. Journal of Pharmacology and Experimental Therapeutics. 2009 Jan;328(1):284-93.

McDonald SD, Beckham JC, Morey RA, Calhoun PS. *The validity and diagnostic efficiency of the Davidson Trauma Scale in military veterans who have served since September 11th, 2001*. Journal of Anxiety Disorders 2009; 23:247-255.

Morey RA, Mitchell TV, Inan S, Lieberman JA, Belger A. *Neural correlates of automatic and controlled auditory processing in schizophrenia.* Journal of Neuropsychiatry and Clinical Neuroscience. 2008 Fall;20(4):419-30.

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In the News!

STARS AND STRIPES

Mideast edition, February 19, 2009

Excerpts from *"Coming Home: An outsider in your own life"* by Nancy Montgomery

In the beginning, it's easy. *"Beer, sex and pizza — that's the first order of business,"* when troops return home from combat, said social worker Susan Watkins. *"The first week or so is like the honeymoon. That's a normal part of coming home. But then you start noticing … so many things,"* said Watkins, who works with returning Afghanistan and Iraq veterans at the Mid-Atlantic Mental Illness Research, Education & Clinical Center, or MIRECC, at the Durham, N.C., Veterans' Affair Medical Center. *"That picture you had — it's just not the same. Everyone has some difficulty with adjustment. Coming home is harder than going."* ...

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AOL news

posted January 27, 2009

Excerpts from "How to help when smoking, alcohol complicate PTSD" By Lauran Neergaard, AP

WASHINGTON - Reaching for a cigarette to cope with a flashback is all too common among sufferers of post-traumatic stress disorder. The nicotine hit may feel good but scientists say its brain action probably makes their PTSD worse in the long run. ... Now studies are recruiting PTSD patients — from New England drug-treatment centers to veterans clinics in North Carolina and Washington — to determine what combination care works. *"It's kind of a clinical myth that you can only do one at a time or should only do one at a time,"* says Duke University PTSD specialist Dr. Jean Beckham, a psychologist at the Durham, N.C., Veterans Affairs Medical Center.

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National Service

Dr. Robin Hurley (Associate Director, Education) has accepted two additional leadership positions related to TBI. She is participating in the VA Technical Expert Panel (Planning Committee) to guide the work of the VA Evidence Synthesis Program systematic review: The Assessment and Treatment of Comorbid PTSD and TBI. This review is being led by Kathleen Carlson, PhD of the VA Center for Chronic Disease Outcomes Research (CCDOR) a VA-HSR&D Center of Excellence. She is also a member of the TBI NEUROIMAGING working group, preparing for the upcoming Workshop on Common Data Elements for Research on Psychological Health and Traumatic Brain Injury sponsored by The Defense Centers of Excellence (DCoE) for Psychological Health and Traumatic Brain Injury, the National Institute of Neurological Disorders and Stroke (NINDS), the Department of Veterans Affairs (VA), and the National Institute on Disability and Rehabilitation Research (NIDRR).

Publications

(continued from page 2)

Nelson LA, Yoash-Gantz RE, Pickett TC, Campbell TA. *On the Relationship Between Processing Speed and Executive Functioning Performance Among OEF/OIF Veterans:Implications for Post-Deployment Rehabilitation.* Journal of Head Trauma Rehabilitation 2009; 24(1):32–40

Taber KH, Hurley RA. *Mercury Exposure: Effects Across the Lifespan.* Journal of Neuropsychiatry and Clinical Neuroscience 2008 Fall;20(4):iv-389

Taber KH, Hurley RA. *PTSD and Combat Related Injuries: Functional Neuroanatomy* Journal of Neuropsychiatry and Clinical Neuroscience 2009 Winter; 21(1): iv-4

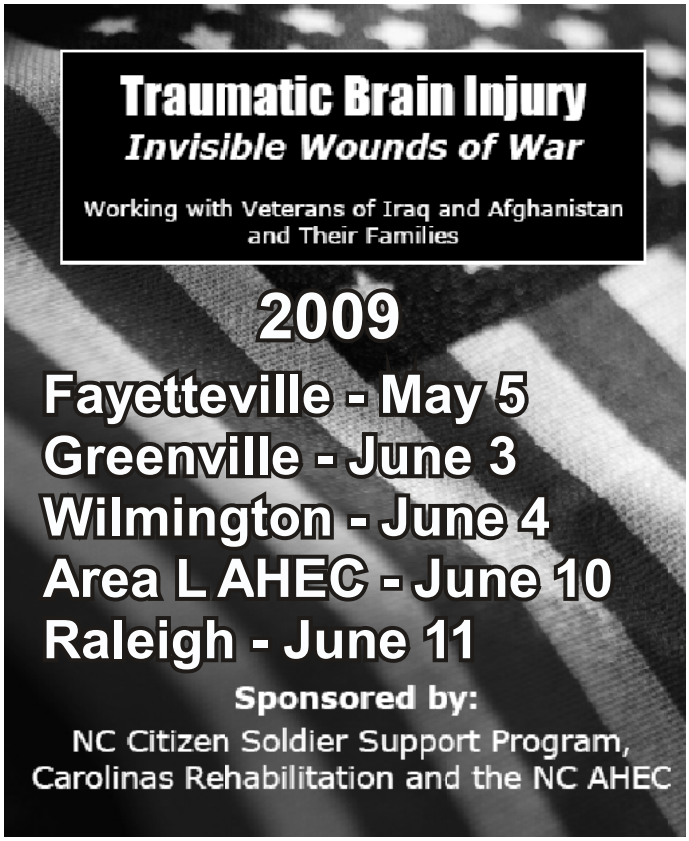
Invited Lectures

Dr. Robin Hurley (Associate Director, Education) presented *"Co-Morbidity of PTSD and TBI and how it relates to Audiology and Speech-Language Pathology"* at the VHA Office of Rehabilitation Services: Effective Practice of Audiology and Speech-language pathology for OEF and OIF Veterans. Washington DC, January 13-15, 2009.

Dr. Katherine Taber (Assistant Director, Education) presented *"Windows to the Brain: Neurobiology of Traumatic Brain Injury"* at Mild Traumatic Brain Injury - Diagnosis and Management Symposium, War Related Illness and Injury Study Center (WRIISC), VA Palo Alto Health Care System, Palo Alto, CA, January 16, 2009

Drs. Hurley and Taber presented "The Brainstem: Anatomy, Assessment, and Clinical Syndromes" as part of Neuropsychiatry 101 Pre-meeting Workshop, American Neuropsychiatric Association, San Antonio, TX. February 19, 2009.

Outreach to Community Providers



Noon V-tel Lecture Schedule:

March 13
Dean Robinson (VISN 16 MIRECC & Shreveport VAMC)
"TeleMental Health"

April 10
Kristy Straits-Troster (VISN 6 MIRECC & Durham VAMC)
"Tobacco use Cessation Among OEF/OIF Veterans"

This series is presented by V-tel and audio conferences. We are having increasing participation from sites outside VISN 6, so our assigned numbers may change. The number that each VISN 6 site will use to dial in will be included in an email notification prior to each presentation.

If you wish to attend from a site outside of VISN 6, please contact Mary Peoples (mary.peoples1@va.gov; 704-638-9000 ext 2956) so she can make the necessary arrangements.

In the News!

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Excerpts from *"Coming Home: An outsider in your own life"* by Nancy Montgomery

There is often a feeling *"of being an outsider in your own life,"* said Harold Kudler, a Duke University psychiatrist and MIRECC chief of mental health services.

Many of these things take time to work through, experts say. ... About 80 percent of combat veterans who deal with the changes and challenges will adjust after nearly universal periods of sleeplessness and anxiety, studies show. But a significant 20 percent have continuing difficulties, with post-traumatic stress, depression and alienation.

... The timing can vary. One study at Walter Reed Army Medical Center of 88,000 soldiers who had been to Iraq found that after six months, half of those who had shown symptoms of PTSD were free of them, Kudler said. *"However, there were twice as many new cases,"* he said.

Watkins said that PTSD should be "normalized" as a routine reaction, shared by all sorts of people to traumatic events. ... Healing comes from talking things out, experts said, telling their stories, from taking self-assessments over time, from having reunions with buddies and their families. ... *"Talking to people who understand really does make it better,"* Watkins said.

Many soldiers need encouragement to seek professional help. *"Family members are usually the first to pick up on how the soldier is doing,"* said John Fairbank, MIRECC chief. *"They're also critical to getting help."*

But patience and forbearance also play their roles when soldiers return from war. Kudler likens the story of Odysseus' return to Ithaca from the Trojan War. It took a decade, with a variety of trials, including a stop in Hades, a year with an enchantress and falling prey to the lotus eaters — metaphors for the mind, infidelities and drug abuse — all while his wife, Penelope, faithfully awaited him. *"It takes Odysseus 10 years, and it wasn't that long a trip,"* Kudler said. *"It's metaphorical. It takes a long time to come home."*

Excerpts from "How to help when smoking, alcohol complicate PTSD" By Lauran Neergaard, AP

"Everybody's afraid to have their patients quit smoking because they're afraid they're going to get worse. There's not a lot of empirical data about that." And her research on how to break the nicotine-and-PTSD cycle raises a provocative question for a tobacco-prone military: Are people at higher risk of developing PTSD if they smoke before they experience the violent event or episode?

... Then there's nicotine. It temporarily enhances attention when it hits the brain — one reason that members of military tell the VA's Beckham they smoke. Although PTSD patients say a cigarette helps their mood when they're having symptoms, the extra attention may be reinforcing bad memories. *"If you think about your traumatic event and you smoke your cigarette, you can think about it even better,"* explains the VA's Beckham.

... new studies may prompt more merging of care:
_In Durham, Beckham is giving PTSD-suffering smokers either a nicotine patch or a dummy patch to wear for three weeks before they quit smoking. The theory: Steady nicotine release will blunt a cigarette's usually reinforcing hit to the brain, possibly helping both withdrawal symptoms and the intensity of PTSD symptoms.

_In some New Hampshire and Vermont substance-abuse clinics, McGovern is randomly assigning patients to standard addiction-only care or cognitive behavioral therapy traditionally used for PTSD. A pilot study found the cognitive behavioral therapy improved both PTSD symptoms and substance use.

_In Seattle, researchers at the VA Puget Sound Health Care System have PTSD therapists conducting smoking cessation therapy in the same visit. In a pilot study, those patients were five times more likely to quit cigarettes than PTSD patients sent to separate smoking programs.