

VA TBIMS/IMAP NEWSLETTER

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VETERANS AFFAIRS
TBIMS



One of the many goals of the Veterans Affairs Traumatic Brain Injury Model Systems (VA TBIMS) study is to understand both the short and long-term impact of TBI. The collaboration between the 5 Polytrauma Rehabilitation Centers and 16 academic medical centers has been vital in producing high quality TBI research. Over the years, TBIMS research included topics related to sleep, chronic pain, community reintegration, caregiving, and more. There is still far more we hope to achieve. However, the primary driving force behind the VA TBIMS study has always remained the same: to improve the lives of Veterans and Service Members (V/SMs) living with a TBI. In this latest issue of the newsletter you can learn more about our clinical staff, new studies happening, and recent research findings.

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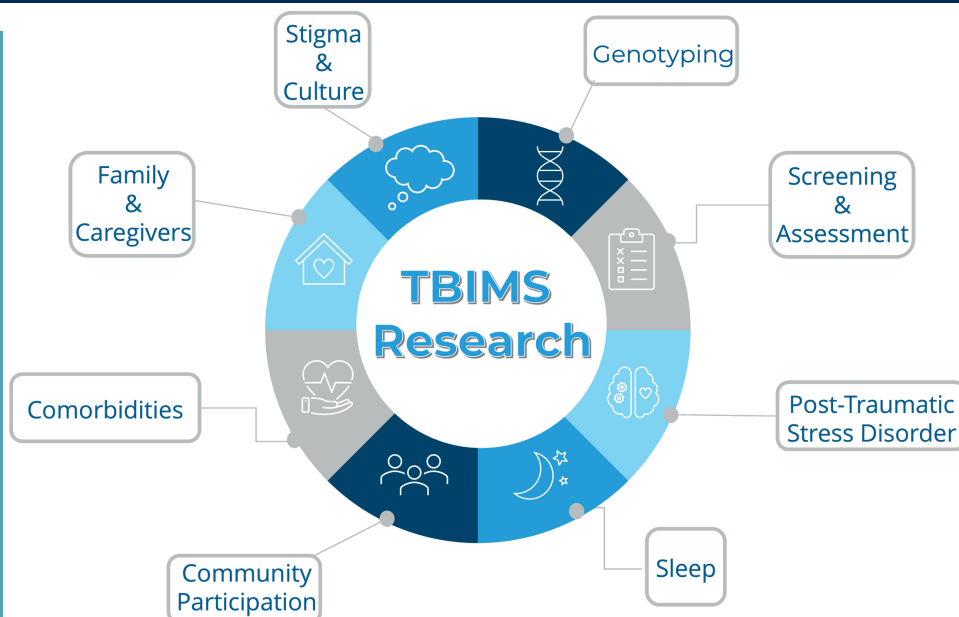
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Meet George Rocek, MA

Research Assistant for the VA TBIMS Study



When did you join the TBI Model Systems Study?

I joined the TBI Model Systems Study back in June of 2021.

What inspired you to pursue a career in Research?

After completing my Master's in Experimental Research in Psychology, I always had a passion for research. Including all aspects- from design, methods, analytical approaches, and interpretation of findings. Understanding the psychological mechanisms for how we, as people, interpret our world has always fascinated me.

What do you like most about working on this study?

Being able to connect directly with Veterans and Active Service Members who have incurred a TBI has been very fulfilling. I've also enjoyed being able to directly apply the skillsets I've acquired through my education and personal experience as both a researcher and Service Member.

You served in the Army National Guard. How long have you been in the military?

My first enlistment in the Florida Army National Guard began in 2005, I enlisted while still in High School. I served 6 years in a traditional status as an 88M (Motor Vehicle Operator) but also during that time I worked in a full-time capacity for a year as an assistant supply non-commissioned officer (NCO). After completing my first enlistment, I sought new prospects in life working in the logistics field before committing to completing my Bachelors and Masters programs. After completing my graduate studies, I decided to re-enlist back into my old unit as an 88M to continue mentoring junior enlisted soldiers.

I imagine your military experience is an asset to your work with Veterans. In what ways has your military service helped you in your role as a Research Assistant on the TBIMS Study?

My experience in the military has helped me connect with Veterans on a more personal level of understanding. Moreover, understanding how the military works and jargon used among Service Members. I've been able to identify and clarify some questions and verbiage that some Service Members have found confusing.

Anything else about yourself you want to share? Any hobbies or interests?

I have two children, an 8 year old boy and 2 year old girl, and in my spare time I spend most of it with them. My hobbies include playing guitar, fishing, and reading urban fantasy novels.

RESEARCH SPOTLIGHT



The Impact of Comorbidities on TBI Recovery

By: Kumar RG, Ketchum JM, Hammond FM, Novack TA, O'Neil-Pirozzi TM, Silva MA, Dams O'Connor K. Health and cognition among adults with and without TBI: A matched case control study. *Brain Inj.* 2022;36(3):415-423. doi: 10.1080/02699052.2022.2034190

Many individuals with TBI also have other health conditions. Two or more health conditions at one time is called a comorbidity. TBI researchers are learning how comorbidities impact recovery. Dr. Raj Kumar and colleagues examined comorbidities among two groups: TBI Model Systems participants and healthy volunteers. They looked at 18 physical and mental health conditions. In addition, they also focused on how self-rated overall health impacted cognition. The results were published in *Brain Injury*.

High blood pressure, arthritis, and backache were common in both groups. Notably, persons with TBI were more likely to report headache, sleep problems, anxiety, depression and stroke. In both groups poorer self-rated health was linked to worse cognition. However, poorer health impacted cognition more in persons with TBI. This study highlights the need to identify comorbidities in persons with TBI. Future research should focus on treatment strategies that improve cognition after TBI.



By: Dr. Tracy Kretzmer PhD, ABPP - Neuropsychologist

Brain injuries sometimes lead to cognitive impairment. How does cognitive functioning change post-TBI?

Following moderate to severe TBI, many experience a decline in cognition. Areas of cognitive change following TBI often shift throughout the recovery process. Research has demonstrated that the most common long-term cognitive changes following TBI include changes in processing speed, executive functioning, and memory. Factors such as injury severity, age at injury, comorbidities, premorbid functioning, time since injury, and more can complicate the degree, pattern, and recovery of cognitive functioning following a TBI.

What are some ways that impaired cognition after TBI can impact someone's health and ability to stay healthy?

Problems in memory, organizing, initiating, and communicating can all hurt their ability to engage in healthy activities. For example, if one's cognition is impaired, they may have trouble planning their day and predicting their needs. Cognitive changes after TBI can lead to decreased independence, limiting things such as driving or navigating public transportation. This in turn makes it more of a challenge to go to doctor's appointments, exercise, and grocery shop, which are all activities that support healthy behaviors.

What are some things that persons with TBI can do to improve their cognitive functioning (or, prevent any worsening of cognition) to maintain or improve their health?

By maintaining a healthy lifestyle through routine- which can lead to forming healthy habits in sleeping, eating, and exercising. It's also important to make time for doctor's appointments, socializing, and doing enjoyable activities. Additionally, not using tobacco, alcohol, or illicit substances is crucial. These substances have been associated with increased risk of additional neurological insult, cognitive decline, and injury. In short, the healthier those with TBI can stay medically, physically, and emotionally, the better for their long-term care.

What are some ways families can support their loved ones with TBI who have cognitive difficulties?

The first recommendation I would give is to keep yourself healthy. If you personally engage in healthy behaviors, then loved ones are more likely to also. It is important to make sure you're taking care of yourself through means of self-care, caregiver support groups, and/or individual support. Seeking support from friends, family, and/or community participants to help with caregiving demands will be important resources.

Military & Veteran Crisis Hot Line

Call **1.800.273.8255**, Press 1 to Connect or Text **838255**

NEW RESEARCH INVESTIGATION

Comparing Treatment Approaches to Promote Inpatient Rehabilitation Effectiveness for Traumatic Brain Injury (CARE-4-TBI)

Persons with moderate to severe TBI may have cognitive and physical limitations due to their injury. These limitations impact their ability to function independently. However, a range of rehabilitation strategies can improve their functioning after TBI. It can be challenging for doctors to know which treatments are best for their patients. Dr. Jennifer Bogner shared that "While we know that rehabilitation improves recovery of function after TBI, for more than two decades we have struggled with identifying which rehabilitation approaches are the most effective for our patients."

A new study is addressing this gap. The study is titled "Comparing Treatment Approaches to Promote Inpatient Rehabilitation Effectiveness for Traumatic Brain Injury (CARE-4-TBI)." Drs. Jennifer Bogner, Cynthia Beaulieu, and Erinn Hade are co-leading this study.



By using electronic medical records (EMR) technology and approximately 1600 participants from the TBIMS sites; Investigators will be able to better understand specific rehabilitation treatments and recovery. This study will also explore several key outcomes such as the ability to care for themselves and their performance at home, work/school, and in the community. The information learned from this study will help inform rehabilitation care and which treatment strategies translate into the best patient outcomes for V/SMs with TBI.

*Project is supported by the National Institute of Neurological Disorders and Stroke of the National Institutes of Health under Award Number UG3NS117844.

Education and Resources

Learn More About Sleep Disturbances post-TBI **HERE:**

produced by the
Traumatic Brain Injury Center of Excellence

This factsheet provides information on:

- Identifying Sleep Disorders
- Diagnosing and Managing Sleep Disorders post-TBI
- Resources, Tools and Guidance



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Follow this Link:

<https://health.mil/Reference-Center/Publications/2020/07/31/Management-of-Sleep-Disturbances-Following-ConcussionmTBI-Clinical-Recommendation>

OR

Learn More about Treating Insomnia **HERE:**

produced by the
VA/DoD Clinical Practice Guidelines

This clinical practice guideline provides information on:

- Chronic Insomnia Disorder
- Cognitive Behavioral Therapy- Insomnia (CBT-I) vs Brief Behavioral Therapy- Insomnia (BBT-I)
- Techniques for Insomnia



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Follow this link:

<https://www.healthquality.va.gov/guidelines/CD/insomnia/TreatingInsomniaPatients9172020508.pdf>

OR

Listen about Social Skills post-TBI **HERE:**

produced by the
Model Systems Knowledge Translation Center

This podcast provides information on:

- The Importance of Social Skills
- How TBI Impacts Social Skills
- Tips on Improving your Social Skills



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Follow this Link:

<https://msktc.org/tbi/podcast/social-skills-after-traumatic-brain-injury-audio-factsheet>

OR

THE RELATIONSHIP BETWEEN TBI & SPEECH

By: Kathryn Kieffer, MS, CCC-SLP - Speech Pathologist

Q: Persons with TBI sometimes have cognitive problems that impact communication. What are some signs that someone with TBI is experiencing these types of problems?

A: Communication difficulties are common after a TBI and can vary depending on severity and area of the brain injury. Some signs of communication difficulties may include difficulty verbally expressing their thoughts, thinking of words in conversation, speaking clearly, or understanding what's said by others. Difficulties with how one socially interacts can pose new challenges and lead to less socialization. For instance, they may talk too much or too little.

Q: How do speech, language, and other types of cognitive difficulties after TBI impair their day-to-day life? What type of obstacles do they face?

A: Cognitive and communication difficulties can be frustrating for all parties involved. If the person has problems with attention and memory, they could have trouble concentrating during conversations and miss information, repeating themselves often. This can negatively impact their ability to maintain previous relationships, as well as making new friends. This can be significant barriers to how well someone succeeds in their everyday life activities in their home, community, and work/school.

Q: I hear a lot about cognitive rehabilitation. What is cognitive rehab? What types of cognitive problems does cognitive rehab address? Who is a good candidate for cognitive rehab?

A: The overall goal of cognitive rehabilitation is to improve their functional independence and success with returning home/community. The cognitive areas we address include difficulties with attention, memory, problem solving, planning, organization, and awareness into their injury. It includes a variety of treatments and ideally is part of a team of different rehab specialists who can work together to address the persons challenges. Every brain injury is unique, and I've seen cognitive rehab be beneficial for a wide range of persons with very severe to very mild impairments.

Q: What are some ways persons w/ TBI can improve their cognitive functioning at home and on their own?

A: I recommend starting with some fundamental things: getting good sleep, eating healthy foods, exercising, and managing stress levels. This may sound like old news, but by optimizing one's overall health it can improve their whole well-being. Using compensatory strategies such as their smartphones, timers, and writing things down helps with their memory. Keeping their phone, wallet, medications in the same place can help with staying organized. Lastly, scheduling time to complete any home exercise programs given from their therapists, even if it's only for short intervals.

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