TBI Model System Updates

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Hello! As we roll into the new year, we would like to thank everyone who supports and participates in the UW TBI Model System. We want to give a special shout out to our TBI Model System Advisory Board members, made up of people who have experienced brain injury, caregivers and experts in the field. They give us ideas and review the newsletter to ensure it is accessible and interesting for all.

In this edition we share information about the ON-TRACC intervention and pilot study by UW clinical neuropsychologist Dr. Kati Pagulayan. We also say farewell to Dr. Peter Esselman as Chair of the Rehab Medicine Department and we welcome Dr. Janna Friedly as our new Chair. We include a general story about how you can find and participate in research studies and a call for participants in the Late Effects of TBI (LETBI) study.

Finally, we include an important discussion about sports and concussions with Dr. Nicole Mazwi (physiatrist) and Dr. Chuck Bombardier (psychologist). They address questions about concussion (also known as mild-traumatic brain injury) and finding a balance between being active in sports and taking care of your head!

We hope you enjoy this edition of the UW TBI Model System newsletter. We welcome your feedback. Have a safe and happy beginning to 2024!

Inside This Issue

Story Begins On:

Research - UPDATES

The OnTRACC Intervention: Dr. Kati Pagulayan

On-TRACC, short for "Tools for Recovery and Clinical Care," is a 5-session treatement for people with memory, attention, and other cognitive challenges after experiencing a mild traumatic brain injury (mTBI). On-TRACC was developed by Dr. Kati Pagulayan and her research team (including Dr. Jeanne Hoffman) with support from a Department of Defense grant. This treatment uses insights from Veterans with a history of mTBI, as well as Veteran Administration (VA) clinicians.

On-TRACC takes a new approach to treating cognitive difficulties after mTBI. It has three areas of focus: (1) education about health conditions that can contribute to memory, attention, and other thinking difficulties, (2) teaching skills to manage attention, memory, and stress, (3) developing goals for treatment based on personal values. At the end of treatment, each patient has a plan that was created just for them to address their memory, attention, and other thinking difficulties.

Key Components of On-TRACC:

- **Learning about things you can change to improve your thinking abilities.**
- **Using strategies to help with cognitive (thinking) abilities.**
- **Setting healthcare goals that match your personal values.**
- **Creating a detailed and personalized plan for your treatment.**

A pilot study of 28 participants with a history of mTBI and ongoing cognitive concerns was completed with support from the UW Garvey Institute for Brain Health Solutions. This study showed that On-TRACC is a promising treatment. Participants reported increased understanding of the health conditions that were affecting their memory, attention, and other thinking skills. They also reported improved quality of life after finishing the On-TRACC treatment.

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Announcements

Dr. Peter Esselman's Retirement as Chair of Rehabilitation

Last July, the Department of Rehabilitation Medicine celebrated Dr. Peter Esselman, who served as Chair for 17 years. Under his leadership, faculty grew from 80 to 150 by 2023 and he initiated strategic planning for research and clinical services during his tenure as Chair.

Although he is retiring from his role as Chair, Dr. Esselman will be staying on in his clinical role as an attending physician. He was a co-investigator on the UW TBIMS for many years.

Of the UW TBI Model System, Dr. Esselman said: *"The TBIMS has been a cornerstone of the research program of the Department of Rehabilitation Medicine for more than 20 years. I had the opportunity to work as part of the research team early in my career and provided my strong support during my time as Chair. The TBIMS has made important contributions to the scientific literature and our understanding of TBI. This work has advanced treatments of individuals with TBI. I look forward to the continued success of the Model System."*

Thank you Dr. Esselman for your support over the years!

UW Medicine
DEPARTMENT OF REHABILITATION MEDICINE

Dr. Janna Friedly Appointed Chair of Rehabilitation Medicine

We welcomed Dr. Janna Friedly, MD, MPH as our new Department Chair in August 2023. Dr. Friedly has an undergraduate degree from Stanford (1994) and medical degree from Oregon Health Sciences University (2001). She also earned a master's in public health from George Washington University in 2020.

Dr. Friedly's clinical expertise is the rehabilitation of people with disabling conditions including amputations and those facing potential limb loss. In addition to her work as a physiatrist, Dr. Friedly serves as Executive Director of UW Medicine's Post COVID Rehabilitation and Recovery Clinic, Vice Chair for Clinical Affairs for the Department and Editor-in-Chief of PM&R: the Journal of Injury, Function, and Rehabilitation, official scientific journal of the American Academy of Physical Medicine and Rehabilitation (AAPM&R).

Drs. Friedly and Esselman with beloved UW Mascot "Dubs"

Research Studies: Here's how to participate

Research Studies rely on people, just like you, who want to help by participating. Clinical research is the study of health and illness in people. There are two main types of clinical research: observational studies and clinical trials. Observational studies follow people and compare changes over time. Clinical trials are research studies that test a medical or behavioral intervention in people. But what are the best websites to learn more to see if you may be interested in participating?

Research Match

https://www.trialstoday.org/

Research Match is a free and secure site that can match volunteers to studies at institutions across the country. You are able to add your name and contact info if you are interested in participating in research. The volunteers are contacted by specific researchers about study participation, and in some cases, asked to provide their opinion or experience as it relates to designing a research study.

Dept. of Rehab Medicine Registry

This site includes a list of individuals who are interested in research in the UW Rehabilitation Medicine Department. The list is used to match volunteers with research studies. You will receive invitations from researchers, and you can accept or decline to participate. You can also remove your name from the list at any time.

ITHS

https://www.iths.org/participate/

This site shows a list of research studies taking place at the University of Washington. You can search by type of study or look for a specific medical condition.

Clinical Trials

http://www.clinicaltrials.gov/

Lists all of the clinical trials registered in the US.

LE-TBI - We Need You!

late effects of traumatic brain injury project

Knowledge gained from brain donation can contribute to advancements in medical science, ultimately benefiting future generations and improving the quality of healthcare for individuals facing neurological challenges.

The Late Effects of TBI (LE-TBI), and LE-TBI in Military Veterans studies, aim to learn more about how health and thinking skills, such as memory or attention, change before and after brain injury. Eligible participants must be at least one year after brain injury. Assessments, done every two to three years, include cognitive and behavioral testing, questions about symptoms, an MRI, and a blood draw. Compensation for participation is $100, lunch, and costs for transportation are covered.

The LE-TBI Military study is funded by the DoD and dedicated to recruitment of Veterans but follows the same procedures. LE-TBI MIL participants must be at least one year from active duty, and the TBI could have occurred prior to, during, or post military service. For both studies, participants are asked, regardless of age or health condition, to make their wishes known about brain donation at the end of their life.

Enrollment for LE-TBI ends soon, but LE-TBI Military enrollment continues!

To learn more, click here to provide your contact information. You may also contact our study coordinator at 206-744-3607 or email LETBI@uw.edu.

ON-TRACC

(CONTINUED FROM PAGE 2)

Summary of Key Findings in Pilot Study

- 88% of participants who initiated treatment completed all 5 sessions.
- 100% of those who completed On-TRACC reported improved ability with managing cognitive difficulties
- 95% of participants reported improvement in daily functioning.
- 95% of participants would recommend the intervention to others.
- There was a significant *increase* in self-reported ability from pre-to-post treatment, to manage cognitive difficulties (i.e., cognitive self-efficacy).

We are looking forward to the next steps for this intervention: A study is currently underway to determine whether people who receive On-TRACC following an mTBI diagnosis at VA Puget Sound end up engaging in recommended treatments for modifiable health and behavioral factors in the year after their diagnosis (funded by the Department of Defense).

Who's Who? Dr. Jamie Ott

Jamie Ott, DO joined the UW family in 2021 as an Attending Physician in Rehabilitation Medicine at Harborview Medical Center (HMC). Her family has toured the US, from New Jersey, where she completed training at the Kessler Institute of Rehabilitation (Rutgers) to Illinois where she completed her Brain Injury Medicine fellowship (Northwestern). to Washington and have finally, and happily settled in Seattle. She spends the majority of her clinical time on the HMC inpatient trauma rehabilitation unit (4W) caring for people with traumatic brain injury, spinal cord injury and stroke. She also spends time training new physiatrists at UW and supporting research through the UW TBI Model Systems.

Enjoying the full journey of brain injury recovery, she consults early about patients in the intensive care unit (ICU) and has weekly outpatient clinics to support return to work, driving and goals related to quality of life for patients. Dr. Ott's patients are a constant source of learning for her. The types of brain injuries are as varied as the backgrounds of the people with them.

Dr. Ott has given several talks through the Brain Injury Alliance of Washington (BIAWA) to TBI survivors and their families. She has appreciated the personal and professional connection to this community. When he was 70-years old, Dr. Ott's grandfather's car was struck by a semi -tractor trailer leaving him in a coma for one month and living the remaining 10 years of his life with the effects of a severe traumatic brain injury. It was hard and sad to adjust to his changes in personality and cognition after TBI and to see the challenge in daily caregiving by her grandmother.

Right now, Dr. Ott is working together with Dr. Nicole Mazwi, acute care therapists, and neurosurgery and ICU physicians to create a pathway for early rehabilitation for traumatic brain injury (TBI) disorders of consciousness at HMC. The goal is to use standardized serial exams, specifically the Coma Recovery Scale, to gather recovery data. This data will be valuable for families who are facing tough decisions about the future care of their loved ones and need information to make those decisions.

On a typical Friday night, you will find Dr. Ott spending 'movie and pizza night' with her partner, a research scientist and engineer at Amazon, and their energetic 5 and 7-year old kids.
We are fortunate to have Dr. Ott at UW Medicine as well as her support for the UW TBI Model System.

"Brain Bytes"
Garlic Parmesan Biscuits

INGREDIENTS:

2 large eggs
1/4 cup sour cream
1/3 cup butter, melted
2 cups almond (or regular) flour
1/2 teaspoon baking powder
1/4 teaspoon sea salt
1 cup parmesan cheese
1 tablespoon powdered garlic
Optional: Dried oregano or basil to taste

DIRECTIONS:

Preheat the oven to 350 degrees F. Grease a muffin tin with oil or butter.

Mix dry ingredients: flour, baking powder, and sea salt together in a large bowl. Stir in whisked egg, melted butter, and sour cream. Once mixed, add parmesan cheese, garlic powder and other spices if using.

Scoop tablespoonfuls of dough into muffin tin, filling halfway.

Bake around 15 minutes until firm and golden. Makes 6-8 biscuits.

UW TBIMS Investigators Out and About

Jeanne Hoffman, PhD (third center from right) in Brazil to provide training on the "research process" using some of our TBI studies as examples.

Dr. Nicole Mazwi presented on two different topics at ACRM: 1) Long-term outcomes of people with severe acute brain injuries that required mechanical ventilation and, 2) Practicality and accuracy to use a specific tool, the CRSR-FAST, for detecting consciousness in the ICU.

Amy Starosta, PhD presenting at the ACRM conference in Atlanta on the impacts of opioid use.

Chuck Bombardier, PhD was in Scotland in the fall of 2023 presenting research on Spinal Cord Injury.

Q&A: Concussion and Sports Safety

When kids go back to school after winter break and join winter sports, it's crucial to consider the risk of concussions and how to balance that with the good things about playing sports. To help answer these important questions, we talked to two experts on brain injuries: Nicole Mazwi, MD and Chuck Bombardier, PhD. Nicole adds a unique viewpoint because she's also a parent of school-aged children.

The following is our conversation with them (edited for clarity).

First, what is a "concussion" and how is it different from a traumatic brain injury (TBI)?

Nicole: Well, a concussion *is* actually a traumatic brain injury - though it tends to be milder than what many people think when the term "brain injury" is used. Concussions result in temporary loss of normal brain function after being exposed to a mechanical force or trauma, like being hit in the head or falling down. Concussions can also happen even without the head being hit, such as in a whiplash injury or blast injuries that we see in war zones.

How common are concussions?

Chuck: Concussion is quite common. Among adolescents about 10% of non-athletes and 20% of athletes report at least one concussion. One study of adults found that 29% reported having had at least one concussion.

How bad is it to get a concussion?

Nicole: Concussions can be very mild with symptoms that go away within minutes, or they can be more significant with symptoms that last weeks to months.

How do you know if you or your child has had one?

Nicole: I wouldn't advise parents to try to diagnose their child, but there are certain signs and symptoms that are common, so it is helpful to look for these if a child has suffered any head trauma including confusion, "dazed," clumsy, forgetful, loses consciousness or is just generally not him/herself after a head injury. Additionally, if the child complains of headache, nausea, thinking problems, low energy, balance trouble or sensitivity to light/noise, he/she should be evaluated by a health professional.

What would you do if one of your kids was struck on the head (either by a ball, a collision with another player, or an implement of play like a lacrosse stick) during a game?

Nicole: If a child experiences a head injury and there are concerning signs or symptoms, he/she should be removed from play immediately and seen by a clinician.

Chuck: Based on the WA State Law if the athlete is suspected of having a concussion or brain injury they must be removed from play until they can be evaluated by a trained health professional.

Concussion and Sports Safety

And what should people do if they think they might have had a concussion?
Nicole: Reach out to your primary care provider. Or, if symptoms are more concerning like a sustained headache, cognitive impairment, changes in speech, strength or any of your 5 senses, it's better to seek immediate medical attention.

What are possible long-term outcomes?
Chuck: 70-90% of people with concussion recover within about one month, though complete recovery may take even longer. Most people with concussion should expect to have a good recovery. But when symptoms like headaches, dizziness, poor concentration, decreased memory, anxiety, or depression persist they should seek treatment from professionals who have experience treating concussion.

What sports are the riskiest for concussion? What sports have a lower risk for concussion?
Chuck: Participation in American football, ice hockey, rugby, soccer, and basketball are some of the sports that pose the highest risk for concussion.

How can players reduce risk?
Chuck: There are many ways to reduce concussion in football, for example. Coaches can reduce the number of full-contact pre-season practice sessions and by training players to tackle properly—not leading with their head but focusing on wrapping up the opponent with their arms.

What about for winter sports?
Nicole: Wearing properly fitted helmets is one of the best ways to limit concussion risk. Learning how to fall properly can also be helpful. In hockey in particular, avoiding youth leagues that allow body checking is advised, as this type of move can increase the risk of getting a concussion fourfold.

Nicole, you have children that play sports. Is it important to you for them to play sports, and if so, why? If one of them wanted to play football or another sport with a higher risk for concussion, what factors would make you feel comfortable with letting them play?
Nicole: I do have children who are involved in sports. However, none of them are in contact sports. Playing on teams and being physically active have many benefits. But as a brain injury specialist who happens also to be married to a neurologist, I am extremely conservative when it comes to allowing activities that have a higher than usual risk of brain injury.

Concussion is not a big deal. Fact or fiction?
Nicole: Fiction. Because there are potential long term consequences to a concussion I consider it a very big deal. We should all be doing our best to minimize risks not only for our children, with their delicate and developing brains, but also for ourselves.

A concussion is a bruise on your brain. Fact or fiction?
Nicole: This is fiction. A bruise on the brain is called a 'contusion.' You do not need to have any evidence of contusion on an MRI or CT scan to be diagnosed with a concussion.

For more info, check out the TBI InfoComic, "Understanding Concussion," here.

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UW TBIMS Equity Statement

The Traumatic Brain Injury Model System team does research to improve the health of people who have had traumatic brain injuries. Structural racism, which is any policy or procedure that contributes to inequality, can make people sicker especially people who are Black, Indigenous, and other People of Color, as well as LGBTQ+ communities, people with low income and those with disabilities. We are committed to improving the lives and well-being of people who have experienced traumatic brain injuries, and that includes using our research to increase awareness of the effects of racism.

TBIMS Updates

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UW Medicine
DEPARTMENT OF REHABILITATION MEDICINE

NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
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Do you have a story you would like to share?
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Email: uwtbi@uw.edu

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