

TBI Model System Updates

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Issue 1

Happy Spring!

We are excited to let you know that the University of Washington TBI Model System grant was refunded for the next 5 year cycle that goes to 2027. The funding will allow us to continue to enroll and follow participants in the TBIMS study, all of whom received care for a TBI as inpatients on the rehabilitation unit care at Harborview or UWMC. The data we collect for the TBIMS contributes to the understanding of recovery and life after TBI.

In addition to funding the TBI Model Systems, the grant funds new projects for this cycle. One of those is a new study to learn more about pain and opioid use during a hospital stay and after discharge into the community, also we will lead a multi-site study looking at exercise as a treatment for depression after TBI called *InMotion*. Finally, we are participating in another multi-site study (led by Mount Sinai) to learn about how people's early life and where they live may impact recovery after TBI.

We talk about the additional studies we are leading and participating in for this new cycle inside the newsletter. We are honored to keep conducting studies that help us to improve the lives of people with TBI. Please read on!

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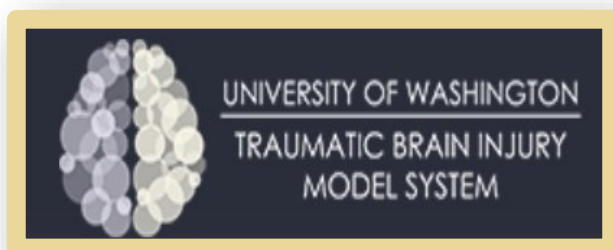
UW TBIMS - Refunded for the 2022-2027 Cycle!

UW TBI Model Systems Study

**Principal Investigator:
Jeanne Hoffman, PhD**

Since 1998, the University of Washington (UW) has been awarded the TBI Model Systems (TBIMS) grant from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR) six times in a row. The main goal of the TBIMS is to do research to improve the health of people who have had traumatic brain injuries.

The UW is one of 16 funded medical centers in the United States. The TBIMS enrolls patients that were hospitalized with a TBI and follows them at 1, 2, 5, 10 and every 5 years thereafter. To be eligible, patients have to be treated and hospitalized in our acute care system within 72 hours of their injury, and then admitted to one of our inpatient rehab units.



Pain Trajectory after TBI: Development of and Treatment for Pain from Initial Injury to 5-Years Post Injury

**Principal Investigator:
Amy Starosta, PhD**

After a traumatic brain injury (TBI), many people may have long-lasting pain. This pain can make it harder to recover, sleep, and stay involved in their community. Even though this kind of pain is common, we still don't know much about how it happens over time.

To help prevent and treat pain after TBI, we need to learn more about what causes it. That's what this project is all about: finding out what leads to pain and opioid use after a TBI.



The study will combine data from previous studies we have done to learn how pain develops after a TBI. A better understanding of this pain and opioid use will help with the development of alternative approaches that start early and may be more effective.

2022-2027 Projects

InMotion - Telehealth Delivered Exercise Promotion to Treat Depression after TBI

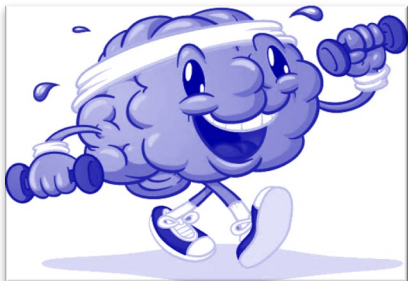
Principal Investigator: Chuck Bombardier, PhD

Lead Site: UW with 5 other TBIMS collaborating sites.

After a TBI, many people experience depression or changes in mood and in turn may cause challenges like poor sleep, trouble focusing, and feeling bad about oneself. These issues can make living with TBI even harder.

Therapy and antidepressants are first line recommendations. However, these treatments don't work for everyone. That's why we're exploring other ways to help.

We know exercise can improve mood and quality of life for people without a TBI. The *InMotion* study aims to explore exercise as a treatment for mood changes in people who have had a TBI. We hope to find for new ways to help people with TBI live life to the fullest.



LifeCourse - Associations of Early Life Adversity Neighborhood Environments and TBI Outcomes



Lead Site: Mount Sinai with 7 other collaborating sites.

Researchers hope to better understand how challenges faced during childhood (such as financial stress or trauma) and neighborhoods, such as having access to parks and resources, may influence recovery after TBI. Participants who enroll in the TBIMS study will be asked a few questions about their early childhood and the environment in which they grew up.



Participate in Research

The Late Effects of TBI Studies

The purpose of the Late Effects of TBI (LE-TBI), and LE-TBI in Military Veterans studies, is to learn more about how health and cognitive functioning (thinking skills, such as memory or attention) change before and after brain injury. Participants are enrolled at least a year after their injury to allow for a period of recovery. Assessments, done every two to three years, include cognitive and behavioral testing, questions about symptoms, an MRI, and a blood draw analysis.

The LE-TBI study is enrolling anyone who has had a TBI who meets our enrollment criteria.

The LE-TBI Military study is similar except it is funded by the DoD and dedicated to recruitment of Veterans.

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.

Participants are asked, regardless of age or health condition, to make their wishes known about brain donation at the end of their life.

late effects of
**traumatic
brain injury**
project



If you or a loved one has sustained a traumatic brain injury, you might be eligible to participate.

Eligibility:

- 18 years of age or older
- Mild-complicated to Severe TBI
- 1 year post TBI injury
- At least 1 year post military service (for LE-TBI-MIL)

Participation Involves:

- An interview and a cognitive assessment
- An MRI scan and blood draw
- Making wishes known about brain tissue donation at end of life
- Participants are compensated \$50 for each visit and receive a \$15 lunch voucher

Interested? Contact the LE-TBI study coordinator Laurie at 206-744-3607 or email LETBI@uw.edu



Brain Bytes

Seared Salmon and Spiced Sweet Potatoes

Rich in anti-inflammatory omega-3 fatty acids

32 grams of protein and 389 calories

Ingredients

- 2 lb. sweet potatoes, cut into 2-in pieces
- 3 tbsp. olive oil, divided
- 1 tbsp. coriander seeds, crushed (can use already jarred coriander, use 1/2 tsp. more)
- 1 red chili, thinly sliced
- Salt and pepper
- 2 tbsp. orange juice
- 1 tsp. honey
- 1 tsp. grated peeled fresh ginger
- 1 tsp. white wine vinegar (can use apple cider vinegar)
- 1 1/4 lb. skinless salmon fillet, cut into 4 portions



Directions: Heat oven to 425 degrees. On a rimmed baking sheet, toss the sweet potatoes with 1 tbsp. oil, then add the coriander, chili and 1/2 tsp. of salt and pepper. Roast until golden brown and tender (20-25 min.) Meanwhile, in a bowl, whisk together orange juice, honey, ginger vinegar and 1 tbsp oil

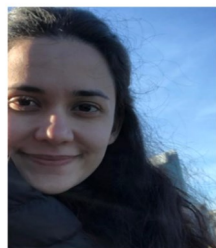
Heat remaining tbsp oil in a large skilled on medium-high heat. Season the salmon with 1/2 tsp. of salt and pepper and cook until golden brown and just beginning to be opaque or less translucent(5-6 min. per side) Serve with sweet potatoes, drizzle with vinaigrette and sprinkle with cilantro if desired.



Adler Giersch Fund Awardees: Nassim Matin, MD and Kristopher Hendershot, MD

The Richard H. Adler Attorney at Law & Adler Giersch Law Firm Endowed Fund aims to help improve the way we evaluate and treat people who have traumatic brain injuries. This is important because these injuries can cause long-term problems with thinking, behavior, and physical abilities. The fund wants to find better ways to help people recover from these injuries.

Congratulations to Nassim Matin, MPH, MD whose proposal “*Correlation of Brain Tissue Oxygenation with Markers of*



Dr. Nassim Matin

Resuscitation in Traumatic Brain Injury” was selected to receive a 1-year award of \$7,500. Dr. Matin is a neurologist in the UW Department of Neurology and Neuro-Critical Fellow. She completed both her MPH and MD at the Tehran University of Medical Sciences. Her study is looking at how different ways to monitor what is happening in the brain right after a TBI might help us improve patient care. Her research may guide providers with possible strategies, including medication, that could improve outcomes.

Congratulations to Kristopher Hendershot, MD whose proposal “*Care Trajectory for Older Patients with Severe Traumatic Brain*



Dr. Hendershot

Injury” was selected to receive a 2-year award of \$10,000 (total \$20,000).

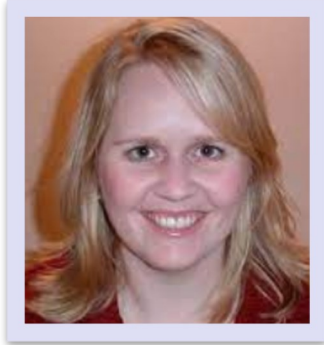
Dr. Hendershot’s project aims to better understand the care and treatment decisions for people over 60 years old who had a severe TBI. The question he is trying to answer is what about an older adult influences the quality of their care, including how they are included in important decisions about the end of life.

Dr. Hendershot will first review information about those admitted to the HMC Neuro ICU, were above 60 years old and had a severe TBI. Then, they will interview patients and/or their family members, neuro-ICU clinicians, and palliative care providers about the details of the injury and the resulting medical treatment decisions.

We look forward to learning more as both Dr. Matin and Dr. Hendershot dive into their important research!

Who's Who at UW TBIMS?

Dr. Kathleen (Kati) Pagulayan is a clinical neuropsychologist and Associate Professor in the UW Department of Rehabilitation Medicine.



Dr. Pagulayan

She came to the department from the Seattle Veterans Administration, where she spent 15 years as a clinician researcher. In that role, she completed neuropsychological evaluations for Veterans in an outpatient clinic and conducted research on blast-related mild traumatic brain injury (mTBI) as a Clinical Investigator in the Mental Illness Research Education and Clinical Center (MIRECC).

She had also directed the clinical neuropsychology fellowship program there since it began. Her experience nicely represents her interests in clinically focused research and training the next generation of clinician scientists, and she is excited to continue these activities at UW!

Dr. Pagulayan has an active research program focused on improving cognitive outcomes following mTBI with a focus on understanding the cause of cognitive difficulties and the development and evaluation of novel treatments. She has

received grants from the Department of Veterans Affairs, Department of Defense, and UW Garvey Institute for Brain Health Solutions to support this work.

Currently, she has a grant that is focused on evaluating the benefits of a brief cognitive rehabilitation intervention, called On-TRACC, which focuses on Veterans who have a history of mTBI and developed chronic cognitive (thinking) difficulties. This intervention was developed by her research group to specifically address these symptoms. She is hoping to conduct a similar study for patients seen at UW in the near future.



Dr. Pagulayan and her husband have three children, a dog and a cat. They are avid soccer fans (Go Sounders and OL Reign!) In her free time, she loves to travel, work in her vegetable garden with her children, and explore local parks.

**WE ARE THRILLED TO HAVE
DR. PAGULYAN ON OUR TEAM!**

Tips for Parents who had a TBI During Indoor Days

Shared Story by Maria Dalbotten

Maria is a mental health therapist who specializes in brain trauma. In 2006 Maria was in a severe car accident and suffered from a traumatic brain injury, a fractured skull, and a broken neck and jaw. Now she helps others find their inner peace. She has furthered her understanding of the individual healing process by working as an Urban Zen Therapist at UCLA.

As a mother of a four-year old and a 20 month old, I have found that being a parent is fun and magical, but can also be hard on my body and mind. I know for me, having a TBI makes it harder. I have learned that parenting requires patience and adjusting to your children's needs. It can be challenging! I have learned it's best to focus on what you can control. With the metal plates in my skull post brain injury, the rain and cold weather can make being outside very painful and can cause headaches. I don't want my kids to be bored, so I have gotten creative. Here are some playful things we do that are stimulating for them, and not too exhausting for me. Hopefully you may find some of these to be helpful for you, too.

Keep a Routine: Children need regular meals and a good sleep schedule even on the weekends. Most folks with TBI find success by:



- **Setting phone timers** to remember meal times.

- Have **high protein snacks** ready in the fridge (hard boiled eggs, cheese, nuts, fruits and veggies). I find that when I am fatigued or overwhelmed, it is hard to make decisions about what to eat. If eating is hard for you, please know, you are not alone.

- Wake up with a healthy protein breakfast (if you cook, some fun ones are German pancakes, smoothies or toast with an egg or avocado). You can also **set out food the night before** or place it on a tray in the fridge if mornings are hard for you.



Mid-morning: (when you can't go outside because it's freezing!)

- **Baths**– Use finger paint, measuring cups, spoons, and sponges. Play music (wear your ear plugs) and give the kids a chance to play. As the TBI parent, **stretch or read a magazine while watching for safety.**



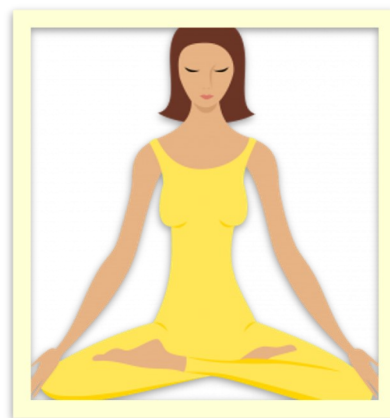
- **Have art time**– make sure younger kids are strapped into booster or high chairs and **create an “art supply bank” and then divvy out a small number of supplies** each time your kid comes to the “bank.” You can use crayons and colored paper, and they can trade them in for clay and a plastic knife for example.



- Put all the blankets in a pile in the middle of a room. Call it “**indoor camping**” then read books or have a snack or play “family.” Your kids get to be the adult and you get to **close your eyes and get covered with blankets.**
- **Ice activity**– We watched a video from the Seattle Public Library about how to put floating toys in water, freeze the water, then do a **treasure hunt** using warm water squirt bottles to get the toys out of the ice.



Afternoon/naptime: This is a great time for parents to **take a break.** This could be a shower, a meditation or body scan or 10 minutes of yoga.





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Why Participate in Research?

Life can forever change after a TBI: athletes, accident or violence survivors, our elders, veterans, and many more. By taking part in research, you give the gift of hope to individuals with TBI and their loved ones, contribute to advances in the field, and help shape a future with new and improved therapies for generations to come.



**Podcast Episode
Archive —
[LISTEN HERE](#)**

Do you have a story you would like to share?
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Email: uwtbi@uw.edu

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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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