

Fall 2018

Baylor Scott & White Institute for Rehabilitation UT Southwestern Medical Center John Peter Smith Hospital

Hello from the North Texas Traumatic Brain Injury Model System (NT-TBIMS) Research and Clinical Team! As your partners in recovery and health, we wanted to keep in touch and give you an update of what we're up to.

### TBI MODEL SYSTEMS

#### What is the TBIMS?

- ◆ The Traumatic Brain Injury Model System (TBIMS) program began in 1987 with a mission to improve care and outcomes for individuals with TBI. The [North Texas TBIMS](#) is a clinical and research collaborative between Baylor Scott & White Institute for Rehabilitation and University of Texas Southwestern Medical Center (UTSW).
- ◆ Our unique alliance has been in place since 2002 with grant funds from the National Institute of Disability, Independent Living and Rehabilitation Research.
- ◆ We have additional partners with Baylor Scott and White Medical Center Dallas, Parkland Health and Hospital System and John Peter Smith Hospital.



#### What do we do?

- ◆ Track the health of patients over their life-time to better understand and support their recovery.
- ◆ Conduct innovative research to improve patients outcomes through novel treatments and therapies.
- ◆ Collaborate with other leading experts at TBI Model System centers across the country.
- ◆ Serve as a resource for our patients across their lifespan.
- ◆ Develop clinical practice guidelines that help treat issues like post-traumatic seizures, spasticity, post-traumatic agitation, post-traumatic headache, and disorders of consciousness after TBI.
- ◆ Create user-friendly, web-based resources for individuals with TBI, their caregivers, and healthcare professionals.

#### Your North Texas TBIMS research team includes:

**Baylor Team:** Simon Driver, Randi Dubiel, Marie Dahdah, Cindy Dunklin, Aimee Muir, Librada Callender, Evan McShan  
**UTSW Team:** Kathleen Bell, Shannon Juengst, Valeria Silva, Caryn Harper, Candice Osbourne

### KEEPING IN TOUCH

#### Follow-up Calls

As part of the North Texas TBIMS you will chat with two very important people, Cindy Dunklin and Valeria Silva, at 1, 2 and 5 years from the date of your injury. They look forward to speaking with you!

#### Cindy Dunklin



Cindy Dunklin, BS, CCRC has supported the North Texas TBI Model Systems at Baylor Scott and White Institute for Rehabilitation for 14 years. She was hired by Baylor Rehab TBI Medical Director, Mary Carlile, M.D. in Red River, NM during a Mountain High TBI Camp in 2004!

Cindy has sustained every aspect of the project over the years. She is passionate about research and supports any activity that might improve the outcomes of TBI patients. She particularly enjoys meeting patients and families in the inpatient phase of recovery and more recently prefers to follow them over the life of the project.

#### Valeria Silva



Valeria Silva joined UT Southwestern Medical Center, in 2017 as bilingual research coordinator. She enjoys getting to know and work with patients and families of those with traumatic brain injury.

Val's background in Psychology, with a minor in Business Administration, from Texas A&M University and her continuing drive to learn more about helping individuals affected by traumatic injuries make her an invaluable asset to our North Texas TBI Model Systems team.

# HOT TOPICS IN TBI RESEARCH

## MOBILE HEALTH APPS AFTER TBI

### Why this is important?

Most people use smartphones in their daily lives. Smartphone apps could help individuals with TBI manage their symptoms and communicate with their doctors, counselors, and therapists.



### What did we do?

Our research team led several focus groups, including individuals with TBI and their family members, about use of smartphone apps. We asked if the apps could be helpful, what features individuals would like or not like, and what concerns individuals had about using apps for health management.

### What does this mean?

Focus group members wanted all-in-one apps that could be customized to each person. They liked the idea of being able to communicate with doctors, counselors, and therapists and to use apps to keep track of symptoms or appointments. They told us that apps should be simple and easy to use, with reminders and links to evidence-based resources built-in.

## SLEEP TROUBLES AFTER TBI

### Why is this important?

Sleep is often disturbed after a TBI. A number of problems can occur – some people have problems in falling asleep (insomnia), some have blocked breathing which lowers oxygen (sleep apnea) and some lose the ability to sleep during normal hours (circadian rhythm). Sleep is necessary for brain healing and overall good physical and mental health.



### What did we do?

We are working with a national group of researchers to find out how frequent sleep apnea is occurring and how best to diagnose it. Also, we completed a study using light boxes that mimic natural outdoor light in the morning to help sleep efficiency.

### What does this mean?

Sleep apnea is more common after TBI than we thought – the next step is finding out how breathing during sleep changes as recovery occurs from the TBI. We did not find that the light box in the morning improved sleep efficiency for those persons who tried it. However, we are checking whether sleep rhythm was improved.

## GROWTH HORMONE TREATMENT AFTER TBI

### Why is this important?

TBI is major cause of physical disability and can change the way your brain works. There are currently no therapies proven to repair the brain during rehabilitation. We know that 20% of people with TBI have less Growth Hormone (GH) than people without TBI. GH produces a protein in your blood called IGF-1. Both GH and IGF-1 are important because they are involved with brain and muscle recovery.



### What did we do?

We performed a clinical research trial of GH treatment starting at discharge from rehab over six months. 63 patients were randomly put into two groups: 31 were put in the GH treatment group and 32 were put in the 'no treatment' group. We followed up at six months and twelve months to test brain and physical results.

### What did we find?

We found that the GH treatment group didn't have better brain or physical results than the 'no treatment' group. However, patients didn't have any problems with taking GH, and GH increased production of IGF-1. Our sample size for this trial was small, and future studies should look at longer treatment times on more people.

## RESEARCH OPPORTUNITY— INTERESTED IN LOSING WEIGHT?

### Losing weight after TBI— Why this is important?

Weight gain after TBI is common and puts people at risk of other health problems like high blood pressure, diabetes, and heart disease. But weight loss is difficult after a TBI due to changes caused by the injury to people's memory, emotions, movement, and medications. Helpful ways to lose weight after TBI are lacking, but interventions that improve physical activity and healthy eating are found to help.



The **Group Lifestyle Balance (GLB)** program is a 12-month weight loss program proven to work in the general population, but has not been fully studied in people with TBI. We will conduct a randomized controlled trial to examine the usefulness of the Group Lifestyle Balance intervention for weight loss. Additionally, we are developing a mobile app to help support participants with TBI over the course of the study. Our goal is to find if a program tailored for people with TBI can support weight-loss.

### Want to participate?

Contact **Evan Rainey** at [EvanElizabeth.Rainey@BSWHealth.org](mailto:EvanElizabeth.Rainey@BSWHealth.org) or call **214.818.2993**

## LEARN MORE— INTERESTED IN GETTING INVOLVED WITH RESEARCH?

See what else we're doing in research at [Baylor Scott & White Rehab MORE](#) and [UT Southwestern MORE](#).

## ASK A SPECIALIST: QUESTION AND ANSWER

### Have a question?

Ask as Specialist at [BSWRehab@BSWHealth.org](mailto:BSWRehab@BSWHealth.org) or [Rehabilitation.Studies@UTSouthwestern.edu](mailto:Rehabilitation.Studies@UTSouthwestern.edu)



## RESOURCES & SUPPORT



### Brain Injury Association of America (BIAA)

(BIAA) is a nonprofit, national advocacy organization that works to increase public awareness of brain injury, provide education and information about TBI and promote linkage to support groups and local resources through a toll-free **Family Help Line** 800-444-6443.



### Model Systems Knowledge Translation Center (MSKTC)

The (MSKTC) summarizes research, identifies health information needs and develops information materials for individuals living with TBI and the people who support them. At their website, you can find evidence-based materials in a variety of platforms including consumer factsheets and slideshows on topics related to living with a TBI. Contact the MSKTC at 202-403-5600.



## SPONSORS

