

# The Messenger

News and Information from the Mayo Clinic Traumatic Brain Injury Model System Center | January 2019

<http://www.mayo.edu/research/centers-programs/traumatic-brain-injury-program/overview>



*Brad and Joliene Mattison with three of their grandchildren*

## THE ROAD TO REHAB: LIFE AFTER A TRAUMATIC BRAIN INJURY

*Nearly a decade after a Rochester man was in a motorcycle accident, going less than 20 mph, he battles a traumatic brain injury. The ten year anniversary was this past July 4th. It was then, Brad Mattison's life changed.*

*Posted: June 25, 2018, by Katie Lange, KIMT3 News*

*Reprinted with permission*

ROCHESTER, Minn. - It's the busiest time of the year for motorcyclists on area roadways.

In 2015, 60 motorcyclists died in Iowa and 52 in Minnesota. Those numbers are courtesy of the National Highway Traffic Safety Administration, which reported more than 5,200 people died in motorcycle accidents in 2016, in the United States. The organization estimates that helmets

saved nearly 1,800 riders' lives in 2015, and around 740 more could have been saved if everyone had worn them.

Nearly a decade after a Rochester man was in a motorcycle accident, going less than 20 mph, he battles a traumatic brain injury. The ten year anniversary will be this July 4th. It was then, Brad Mattison's life changed. "I clunked my head and lights out... No helmet," explained Mattison.

Mattison would spend more than two months in the hospital with his family by his side. He was in a coma for a month. "When I finally went home I went home in a wheelchair, I was paralyzed on the right side," said Mattison. Ten years later and

## The Road to Rehab: Life After a Traumatic Brain Injury *continued*

Mattison is still going to rehab once a week, to work on his strength, endurance, and stability.

At the time of his accident Mattison owned four motorcycles. "I sold all four of them. I hated to do it; I love motorcycles and I love riding. I've been doing it since I was 12, I loved it, but I would never put my family through that again," stated Mattison. He is now an advocate for safety. He told KIMT he will stop and talk to bikers at the gas pump when he is filling up with fuel, if he notices they aren't wearing their helmets. "Sometimes they don't want to listen and I say listen up, give me 30 seconds. So many people go, 'Ya know that's not a bad idea, I'm going to start wearing my helmet,'" said Mattison. He told KIMT he never wore a helmet when riding his motorcycle. "People would say, 'You really should wear a helmet, leather and boots, you should have all that stuff' and I just blew them off. I thought if you fall off a motorcycle, break an arm or a leg, no big deal, it will heal. I didn't realize how fragile your brain is," recalled Mattison.

Since the accident, Mattison spends a lot of time at the blood center, even though he didn't receive blood during his time at the hospital. "I'm donating blood because they took such great care of me and it was so fulfilling to get back on my feet again - that one of the few things I can do is give blood," said Mattison.

Mariela Rivera is a Trauma Surgeon at Mayo Clinic and told KIMT you can't argue the data that proves helmets can greatly decrease a brain injury. Symptoms of a brain injury can range from mild, such as a headache and nausea, to re-learning how to walk and talk; it could even result in death. "When you're having an injury to your head and you are wearing a helmet it is a protection. There is no question about it and

that can affect the impact that you are going to get into your brain and the consequences of that which, we will call traumatic brain injury, which can be completely different," said Rivera.

Since Mattison is such an advocate for donating blood we wanted to remind you that blood centers are always in need of donation. In fact, the need spikes during the summer months with more motorcycle and car accidents, which can lead to a national shortage. Mayo Clinic's Blood Donor spokesperson told KIMT that blood has an expiration date just like milk and supplies can quickly dwindle.

While all blood type donors are needed the one that is most universal is Group "O".

Mayo Clinic has two blood donor centers in Rochester, MN, that serve the region. Call 507-284-4475 to schedule a donation. Walk-ins are also welcome at both sites.

### **Downtown**

Mayo Clinic

200 First St. SW, Rochester, MN 55905

Hilton Building, Main Floor, Room 1-00

6 a.m. to 4:30 p.m. Monday-Friday

Open until 7 p.m. every second Thursday of the month.

Free parking and child care available.

### **Saint Marys Campus**

Mayo Clinic Hospital, Saint Marys Campus

1216 Second St. SW, Rochester, MN 55902

Joseph Building, Main Floor, Room M-86

7:30 a.m. to 3:45 p.m. Monday-Thursday

6:30 a.m. to 3:30 p.m. Friday

## Mayo Clinic TBI Regional Advisory Council – Member Spotlight



Justine Ashokar, Ph.D., a licensed psychologist, is the Director of Clinical Services at the Brain Injury Rehabilitation Center and Black Hills Works in Rapid City. She has worked for the agency for the past 15 years in various capacities.

Justine has a M.S. in Counseling, M.A. in Clinical Psychology and Ph.D. in Clinical Psychology, with an emphasis in Neuropsychology. Justine is a Certified Brain Injury Specialist and is a co-facilitator of the Brain Injury Support Group of the Black Hills. She has experience serving veterans, people with developmental disabilities, and people with brain injury. She is a board

member of the Brain Injury Alliance of South Dakota and is currently working on a bill to improve services for those with TBI in South Dakota. She teaches part time at South Dakota State University. She is the co-president of the Rapid City Chapter of the American Association of University Women.

Justine grew up in India and came to the United States in 1992. She has been married to her husband Al for 31 years. He is an engineer turned restaurateur. Her son Mitchell is completing his Ph.D. in Aerospace and Mechanical Engineering and is working in Huntsville. Justine enjoys spending time with family and friends. She also enjoys cooking and swimming.

## First Brain Injury Rehabilitation Medicine Fellow



Dmitry Esterov, DO is the first brain injury rehabilitation medicine fellow at Mayo Clinic. Dmitry finished his residency at JFK Johnson Rehabilitation Institute in New Jersey, which sparked his interest in the

field of neurorehabilitation. His various research projects there included investigating the impact of cardiovascular interval training and functional outcomes in a stroke recovery population, as well as research in autonomic dysfunction after mild brain injury. He also has an interest in integrative medicine modalities in the treatment of brain injury, including research with osteopathic manipulative therapy after concussion, and mindful meditation as well as music interventions

during rehabilitation. In medical school he helped create a music rehabilitation program working with patients with various disabling neuromuscular conditions. He is very excited to be starting his fellowship at Mayo Clinic and is feeling very fortunate to be part of such a great team. Fellowship training in brain injury is a one year program after a residency in physical medicine and rehabilitation, with monthly rotations spanning acute care consultations, inpatient rehabilitation, outpatient management, and research time. Dmitry is excited to work with the team here, improving his expertise in brain injury rehabilitation, teaching, and continuing to focus on his research interests and opportunities.

Dmitry was born in Moscow, Russia, and has lived on the East Coast in New York and New Jersey. He is an avid reader and enjoys playing guitar, songwriting, and painting.

He studied English Literature and creative writing at The College of New Jersey, and subsequently completed medical school at Rowan School of Osteopathic Medicine. His other interests include cooking and traveling, with recent trips to Brazil, Kyrgyzstan, Kazakhstan, and India. He has been

playing competitive beach volleyball for over fifteen years, and loves skiing, tai chi, as well as CrossFit to stay active and healthy.

Welcome Dr. Esterov!

## Unmasking Brain Injury



Few people understand the personal impact brain injury can have. Its effects often are subtle and difficult to express. In March of 2016, the Minnesota Brain Injury Alliance began the *Unmasking Brain Injury in Minnesota* project - a statewide community-based art project that enlisted the participation of over a thousand individuals living with the effects of brain injury. Unmasking allowed individuals affected by brain injury to design masks that communicate their unique perspectives and altered outlooks. It gave survivors and caregivers a voice to illuminate their life with a brain injury; to show others that persons living with a disability due to brain injury are deserving of respect, compassion, and the same opportunities afforded all citizens in their respective communities.

Behind each mask is a person that's been touched by brain injury as a survivor,

parent, sibling, friend, neighbor, co-worker, or professional. Individual stories of Minnesotans with brain injury were highlighted along with their masks. Over the course of the project, the Alliance hosted numerous mask-making events across the state and in their Roseville offices. Group homes, support groups and community organizations held their own events while prominent Minnesotans – like playwright and storyteller Kevin Kling and NHL Defenseman and former Minnesota Wild player, Jordan Leopold – also got onboard to make their own masks.

Local filmmaker Jed Schelgelmilch documented the project in his film *Unmasking* which took home the Merit Award at the 2016 Awareness Film Festival at Regal Cinemas La Live Stadium. Jed's film was shown at numerous

Unmasking events throughout the year. The year-long effort culminated during Brain Injury Awareness Month of 2017, with a full exhibit of over 1,000 masks at the Earle Brown Heritage Center.

Many participants in Unmasking Brain Injury in Minnesota discovered the Minnesota Brain Injury Alliance through their mask-making. They have shared the stories of several of these individuals in their Mind Matters magazine including those of Amber Rose Kordiak, Taylor Worley, and Scotti Sterling. Each participant spoke about the benefits of finally being able to express to those around them the feelings they'd been forced to keep buried deep in their hearts.

Unmasking Brain Injury in Minnesota's success can be counted in the sheer number of masks produced. But more importantly, it can be counted in the outpouring of emotion and support at each event. And in the faces of the

family members finally understanding a little bit more of their loved ones' experiences. And in the forging of a greater and more unified brain injury community.

The original Unmasking Brain Injury began as a public awareness project of Hinds' Feet Farm, in association with the Brain Injury Association of North Carolina. Now, it's been brought to Minnesota to give it a uniquely Midwestern spin.

To learn more, contact the Minnesota Brain Injury Alliance:

<http://unmaskingbraininjury.org/>

2277 Highway 36 West, Suite 200 Roseville, MN 55113-3830

Phone: 612-378-2742

Toll Free: 1-800-669-6442

Fax: 612-378-2789

E-Mail: [info@braininjurymn.org](mailto:info@braininjurymn.org)

Hours: Monday-Friday, 8 a.m. to 4:30 p.m.

## Chair Elect of the American Congress of Rehabilitation Medicine Brain Injury Special Interest Group



**Dr. Tom Berquist**, of the Mayo Clinic TBI Model System Center, was recently named Chair Elect of the American Congress of Rehabilitation Medicine (ACRM) Brain Injury Special Interest

Group. The group promotes high standards of rehabilitation practice, education, and research among interdisciplinary professionals with common interests in brain injury. The group holds two meetings per year, a membership meeting at the ACRM mid-year meeting in the spring and a summit meeting at ACRM's annual conference in the fall. The mission of the Brain Injury Interdisciplinary Special Interest Group is to foster

collaboration among brain injury researchers, clinicians, and organizations and to provide high-quality evidence-based education and training to brain injury professionals to promote and advance the science and practice of brain injury.

Member Benefits include newsletters, the opportunity to join task forces, continuing education, a chance to help plan educational courses for the ACRM annual conference, development of position papers, and joint research opportunities. You can access more information about ACRM and its annual conference, and other opportunities at <https://acrm.org/>.

## Excellence in Research Award



**Dr. Allen Brown** received the 2018 Excellence in Research Award in the Department of Physical Medicine and Rehabilitation, Mayo Clinic. Dr. Brown is widely recognized for his patient-centered research

on TBI and stroke. He has served as either the Principal Investigator or co-Principal Investigator for the Mayo Clinic TBI Model System Center since first funded in 1998. During this time, he has conducted multiple studies, mentored numerous trainees and junior faculty, and published dozens of manuscripts. Examples of Dr. Brown's research include:

- Development of a TBI severity classification system
- Determination of clinical elements following TBI that predict disability and need for supervision
- Quantification of the impact of TBI and TBI severity on mental health, cognitive function, and long-term survival
- Identification of barriers to participation in vocational and community life for persons with TBI

Collectively, Dr. Brown's research has significantly advanced the field of rehabilitation medicine and the long-term care of individuals affected by TBI. We are honored to have him at the helm of our ship.

## The Mayo Clinic: Faith - Hope - Science, a New Documentary

Curious about Mayo Clinic's history? A Ken Burns' executive-produced and Erik Ewers and Christopher Loren Ewers directed documentary entitled "The Mayo Clinic:



Faith - Hope - Science" finished 3 years of filming and premiered Tuesday, September, 25, 2018 on PBS. The 2 hour documentary features the voices of Tom Hanks, Sam Waterston, Blythe Danner, and Josh Lucas and explores Mayo Clinic's 150-year history and the calling to put the needs of the patient first. The story of William Worrall Mayo, an English immigrant who began practicing medicine with his sons Will and Charlie in



Rochester, Minnesota, is told through the eyes of several patients including the likes of John McCain and the Dalai Lama. Sometimes referred to as the hospital in a cornfield, from its humble beginnings Mayo Clinic

now treats over a million patients every year from 50 states and 150 countries, and employs 64,000 people at campuses in Minnesota, Florida, and Arizona.

Readers can see clips of and learn how to watch or purchase the film at <https://explore.mayoclinic.org>.

# Craig Hospital Receives \$3 Million Research Grant from the National Institute on Disability, Independent Living, and Rehabilitation Research

*The grant will fund a study on chronic pain after traumatic brain injury in collaboration with the University of Washington and 8 other TBI Model System Centers including the Mayo Clinic TBI Model System Center.*

Englewood, Colo. (Oct. 30, 2018) Craig Hospital, a world-renowned rehabilitation hospital for people with spinal cord and/or brain injuries, has been awarded a \$3 million research grant from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR). The project, titled “**Characterization and Treatment of Chronic Pain after Moderate to Severe Traumatic Brain Injury,**” will leverage an existing successful research network – the Traumatic Brain Injury Model Systems (TBIMS) – to determine chronic pain classification, prevalence, location, duration, and associations with demographic, injury severity, current level of functioning and comorbidities in participants followed in 10 centers participating in the

NIDILRR and Department of Veterans Affairs TBIMS databases.

Results from this study will provide a more detailed picture of the problem of chronic pain after TBI by examining the types of pain that occur after TBI as well as the frequency of comorbid conditions. Identifying extreme phenotypes, such as demographic, individual and treatment factors associated with those who have chronic pain but have minimal interference compared to those who are significantly impacted by pain, will allow researchers to identify treatment targets and advance a personalized medicine approach to treatment. Researchers will produce educational materials on chronic pain and pain treatment to benefit patients, family members, clinicians, and policymakers. Data from this study will have a direct impact on clinical practice, informing future work and promoting understanding of constituent factors in extreme phenotypes.

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## Publications

Bogner JA, Whiteneck GG, MacDonald J, Juengst SB, **Brown AW**, Philippus AM, Marwitz JH, Lengenfelder J, Mellick D, Arenth P, Corrigan JD. Test-Retest Reliability of Traumatic Brain Injury Outcome Measures: A Traumatic Brain Injury Model Systems Study. *Journal of Head Trauma Rehabilitation*, 2017 Sep/Oct; 32 (5).

PMID: 28195954 DOI: 10.1097/HTR.0000000000000291

Kruse RC, Li Z, Prideaux CC, **Brown AW**. Pharmacologic Treatment for Depression at Injury Is Associated With Fewer Clinician Visits for Persistent Symptoms After Mild Traumatic Brain Injury: A Medical Record Review Study. *Physical Medicine and Rehabilitation*, 2018 Sep; 10 (9):898-902 Epub 2018 Mar 14

PMID: 29550411 DOI: 10.1016/j.pmrj.2018.03.003

Stromberg KA, Agyemang AA, Graham KM, Walker WC, Sima AP, Marwitz JH, Harrison-Felix C, Hoffman JM, **Brown AW**, Kreutzer JS, Merchant R. Using Decision Tree Methodology to Predict Employment after Moderate to Severe Traumatic Brain Injury. *Journal of Head Trauma Rehabilitation*, 2018 Sep 27 Epub 2018 Sept 27

PMID: 30234849 DOI: 10.1097/HTR.0000000000000438

## Featured Publication

### Publication Reviews TBI Model System (TBIMS) Centers 30 Years of Research

The history and research achievements of the TBI Model Systems Centers are reviewed in the November/December issue of the *Journal of Head Trauma Rehabilitation*. The article focuses on the research activities of the TBIMS Centers Program and its multifaceted knowledge translation initiatives. The article also provides examples of the many ways in which the infrastructure of the TBIMS Centers program has been leveraged in collaboration with other TBI stakeholders.

Dijkers, Marcel P., PhD; Marwitz, Jennifer H., MA; Harrison-Felix, Cynthia, PhD. Section Editor(s): Caplan, Bruce PhD, ABPP; Bogner, Jennifer PhD, ABPP; Brenner, Lisa PhD, ABPP; **Malec, James** PhD, ABPP. Thirty Years of National Institute on Disability, Independent Living, and Rehabilitation Research Traumatic Brain Injury Model Systems Center Research—An Update. *The Journal of Head Trauma Rehabilitation*, Nov/Dec 2018, (33), 6, 363–374, doi: 10.1097/HTR.0000000000000454

## OUR MISSION:

The primary mission of the Mayo Clinic TBI Model System Center is (1) to study the course of long-term recovery after traumatic brain injury (TBI), and (2) to develop, provide and evaluate innovative services to address identified needs for service coordination and community reintegration for persons with TBI.

### *Mayo Clinic Traumatic Brain Injury Model System Center*

Mayo Clinic Hospital, Saint Marys Campus  
1 Domitilla  
507-255-3116

*The Mayo Traumatic Brain Injury Model System Center has been funded by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR) since 1998.*

## MAYO CLINIC

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## Mayo TBI Model System Regional Advisory Council

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**Gregory Lamberty, PhD, LP, ABPP**, Minneapolis VA Health Care System  
**Rose Collins, PhD**, Minneapolis VA Health Care System  
**Jacob Finn, PhD**, Minneapolis VA Health Care System  
**David King, MBA**, Minnesota Brain Injury Alliance  
**Mark Kinde, MPH**, Minnesota Department of Health  
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**Brandi Jensen, BS, CBIS**, Brain Injury Alliance of Iowa  
**Michael Hall, PhD**, Iowa City VA Health Care System  
**Maggie Ferguson, MS, CRC, CBIS**, Iowa Department of Public Health  
**Toby Yak, MPH**, Iowa Department of Public Health  
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**Benjamin Siebert, MD, FAAPMR**, Neuroscience Group, Neenah, WI  
**Audrey Nelson, MS, CVE**, Survivor with brain injury  
**Thomas Tatlock, MD**, Survivor with brain injury

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**Rebecca Quinn, LCSW, MSW**, Univ. of North Dakota, School of Medicine & Health Sciences

### South Dakota

**Justine Ashokar, PhD**, Black Hills Works, Brain Injury Rehabilitation Center