

VA TBI Model Systems/IMAP Newsletter

Issue 11 : Winter 2021

TBI & Chronic Pain

Headache Centers of Excellence

The VA Headache Centers of Excellence offer veterans with chronic headaches and migraines a new treatment option. These specialized treatment centers are available at select VA hospitals across the United States.

Dr. Georgia Kane and her team started the Chronic Headache Management Program (CHAMP). These experts understand that headaches have multiple causes. They recognize that headache treatment requires an individualized approach. Professionals across health care specialties work together to provide new, scientific approaches to headache treatment. The program uses medication, behavioral treatment, and other

therapies such as Tai Chi, dance therapy, and virtual reality. The CHAMP program can be completed in just 5 weeks. Veterans meet once each week for 3 hours. Veterans who complete the program report that it is convenient, practical, and easily fits into their schedule.

Currently, the program is using a virtual platform. This allows veterans to participate right from home! The CHAMP program is not limited to only veterans with TBI. Any veterans suffering from headaches and interested in CHAMP should ask their primary care provider for a referral to the program.

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Understanding Chronic Pain Treatment

Pain becomes chronic when it lasts for half the days or more within a three-month period. Many people who have had a TBI also have chronic pain. To better understand chronic pain and TBI, a collaboration was formed between Craig Hospital, The University of Washington, and the James A. Haley Veterans' Hospital. Dr. Cindy Harrison-Felix, Dr. Jeanne Hoffman, and Dr. Risa Richardson are leading this investigation. The study explores the experience of pain by TBI survivors. In

addition, the study will explore ways of treating pain from the perspective of health care workers. The study team will develop resources such as fact sheets and infographics to educate the public about chronic pain treatment for persons with TBI. They hope that this information will increase awareness about chronic pain and improve health care access.

Source: Traumatic Brain Injury Model Systems National Data and Statistical Center. Characterization and Treatment of Chronic Pain after Moderate to Severe Traumatic Brain Injury. pain.tbindsc.org Accessed 11/06/2021.



Dr. Cindy Harrison-Felix



Dr. Jeanne Hoffman



Dr. Risa Richardson

Opioid Use and Sleep

Good sleep helps people recover from a TBI. However, poor sleep after TBI is common. Sleep apnea is one cause of poor sleep and it occurs in about 25-50% of people with TBI. People with sleep apnea have trouble breathing while sleeping. Untreated sleep apnea can result in poor attention, slower thinking speed, and worse mood. People with untreated sleep apnea are also more likely to have headaches and have worse pain in general.

Medications are often used to treat pain. For people with TBI and pain, opioid medications may be prescribed. Opioids may relieve some pain. Unfortunately, they have side effects. Opioids can sometimes interrupt breathing which can be life threatening. The impact of opioid medication on breathing in persons with TBI is not clear. Dr. Aaron Martin recognized that this needed to be studied. He examined sleep and breathing patterns in 248 individuals with TBI who were in the hospital for rehabilitation. Dr. Martin compared those who were given opioid medication and those who were not. Everyone received a sleep study which



Dr. Aaron Martin

measured their breathing over one night. Those who were given opioids on the night of the sleep study were more likely to stop breathing periodically. Also, they had lower levels of oxygen in their blood.

Overall, the results of this study suggest that opioids given to someone with a TBI might cause breathing to stop more often than if they had not taken an opioid. The impact of this on long term recovery is not yet clear.

Source: Martin AM, Almeida EJ, Starosta AJ, et al. The impact of opioid medications on sleep architecture and nocturnal respiration during acute recovery from moderate to severe traumatic brain injury: A TBI Model Systems study. *J Head Trauma Rehab.* 2021;36(5):374-387.



How Are Vets Managing Pain?



Dr. Bridget Cotner

Many veterans with TBI also have chronic pain. Opioids are a type of medication that are sometimes prescribed for chronic pain. However, opioids have serious side effects. A new study by Dr. Bridget Cotner is currently exploring chronic pain treatment in veterans with TBI. Dr. Cotner is examining the use of

opioids and other forms of treatment. She and her team want to understand what types of treatments are being used by veterans with TBI and chronic pain.

The team interviewed 55 veterans. Most were prescribed medication. However, many of them stopped or reduced their medications some time afterward. Some were concerned that these medications would halt their TBI recovery. Others said that their pain got better so they no longer needed the medication. Some veterans said that they were going to be in pain either way, so they decided that the medication was pointless. A few said they received other forms of treatment. These other treatments included exercise, acupuncture, and psychological therapy. In the next phase of her study, Dr. Cotner and her team plan to explore the obstacles veterans face to getting effective, chronic pain treatment.

Source: Cotner B, O'Connor D, Nakase-Richardson R, Scott S, Hoffman J. Facilitators and barriers to non-pharmacologic chronic pain treatment for service members and veterans with traumatic brain injury. *Arch Phys Med Rehab.* 2021;102(10): e68-e69.

Chronic Pain, Telehealth, and COVID-19

Telehealth was in use prior to the COVID-19 pandemic. However, most care was still delivered in-person through February 2020. This study describes how the pandemic swayed treatment for chronic pain in persons with TBI.

Telephone interviews were conducted with 63 providers representing expert therapists, doctors, nurses, and resource managers from various sites. The information from them aided in identifying what helped deliver rehabilitation care, as well as what hurt delivering care during COVID-19.

In conclusion, results suggest that switching to virtual visits, treatment stoppage, and reduced in-person visits were a result of the pandemic. COVID-19 served as a spark for the wide-spread use of virtual care. When the lockdowns and restrictions were lifted the barriers to delivering care were reduced. The impact of telehealth on patient outcomes is still unknown. Future research is needed to understand when it is best to use telehealth versus in-person treatment.

What helped delivering care during COVID-19?

- Improved communication between providers and patients
- Increased use of telehealth to provide care
- Increased patient access providers

What hurt delivering care during COVID-19?

- Reduced family involvement due to visitor restrictions
- Cancelled appointments or long wait lists to be seen
- Additional time needed to clean examination rooms and social distancing reduced the number of patients who could be seen

Source: Cotner BA, Nakase-Richardson R, Agatrap S, et al. COVID-19 impact on delivery of rehabilitation for persons with TBI. Poster presented at: American Congress for Rehabilitation Medicine; September 26-29, 2021. Virtual.



COVID-19 Effects - What We Know

COVID-19 has infected over 200 million people and caused over 5 million deaths worldwide. Millions more have experienced grief, isolation, unemployment, and financial strain. The elderly and persons with physical and mental illness are more likely to have serious complications or die from COVID-19. Although research on COVID-19 is increasing and ongoing, it may be years before we understand the long-term effects of this disease.

It is known that COVID-19 causes breathing problems. Other health consequences are unclear. To provide some clarity, Dr. Erin Bailey and her colleagues wrote a paper published in *Neuropsychology* summarizing information on this disease. Common symptoms of the disease include fever and cough. Serious breathing problems occur in some individuals, especially if they have other medical conditions. Those who are

severely ill may require mechanical ventilation (they will need to be connected to machines that help them breathe). When breathing is interrupted for too long, this can cause a drop in oxygen in the blood which can cause brain damage. Some people may experience an immune response that damages the body's internal organs.

COVID-19 enters the brain, but we do not yet know the long-term effects. However, it is expected that COVID-19 will result in cognitive decline. Also, persons with COVID-19 may experience anxiety, depression, and post-traumatic stress disorder. Because of the increasing number of medical and mental health needs of persons with COVID-19, it is crucial that health care providers become aware of, and treat, the many possible consequences of COVID-19.

Source: Bailey EK, Steward KA, VandenBussche Jantz AB, Kamper JE, Mahoney EJ, Duchnick JJ. Neuropsychology of COVID-19: Anticipated cognitive and mental health outcomes. *Neuropsychology*. 2021;35(4):335-351.

Chronic Pain Resources

Centers for Disease Control and Prevention

Guidelines for Prescribing Opioids for Pain Factsheet:

[cdc.gov/drugoverdose/pdf/prescribing/Guidelines_Factsheet-a.pdf](https://www.cdc.gov/drugoverdose/pdf/prescribing/Guidelines_Factsheet-a.pdf)

National Institute of Neurological Disorders and Stroke

Chronic pain info, research, patient organizations, and treatment options:

[ninds.nih.gov/Disorders/All-Disorders/Chronic-Pain-Information-Page](https://www.ninds.nih.gov/Disorders/All-Disorders/Chronic-Pain-Information-Page)

National Center for Complementary and Integrative Health

Approaches to chronic pain treatment by type, side effects, and research:

[nccih.nih.gov/health/chronic-pain-in-depth](https://www.nccih.nih.gov/health/chronic-pain-in-depth)

COVID-19 Resources

Centers for Disease Control and Prevention

Learn about COVID-19, Variants, Transmission, Symptoms, and Testing:

[cdc.gov/coronavirus/2019-ncov/your-health/about-covid-19/basics-covid-19.html](https://www.cdc.gov/coronavirus/2019-ncov/your-health/about-covid-19/basics-covid-19.html)

World Health Organization (WHO)

Coronavirus Prevention, Myths, and News:

[who.int/health-topics/coronavirus](https://www.who.int/health-topics/coronavirus)

U.S. Department of Veterans Affairs

Coronavirus FAQs, Testing, Policies, Claims:

[va.gov/coronavirus-veteran-frequently-asked-questions/](https://www.va.gov/coronavirus-veteran-frequently-asked-questions/)

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