

TREATING PEDIATRIC HEADACHES:

TAKING A SPECIALIZED APPROACH TO TREATING A COMMON HEALTH ISSUE

An estimated 10 percent of all school-age children in the U.S. experience migraines¹, which cause more disability than any other neurological condition. They are one of the most common reasons kids miss school and other activities.

Finding relief from acute symptoms and long-term treatment for chronic headaches can be challenging. Many patients end up in the emergency department during a migraine episode. But the ED is not optimal, with its bright lights and noise. Traditional care models for long-term headache management often include narcotics, and do not address underlying causes. Finally, workforce shortages, including a lack of pediatric neurologists, make it difficult to provide the right treatment at the right time.



Children's Mercy has created a new, first-of-its-kind model for acute headache treatment.

To address these challenges, Jennifer Bickel, MD, FAAN, triple board-certified as a neurologist, headache specialist and medical acupuncturist and Headache Section Chief at Children's Mercy Kansas City, expanded existing services and created a new model for

acute headache treatment, a first-of-its-kind in the U.S. The headache program at Children's Mercy now offers a unique, tiered approach to holistic care for pediatric patients.

TRIAGING HEADACHES FOR THE RIGHT CARE IN THE RIGHT SETTING

The headache-trained team triages and treats patients in a headache-friendly environment, responding to each patient's perceived urgency. Providers are specially trained in treating headache pain and offer evidence-based treatments.

TIER ONE: HEADACHE TREATMENT CENTER

The Headache Treatment Center offers immediate relief of acute symptoms. No referral is needed and appointments are offered the same day or within 72 hours. Patients are given a quiet, private room when they arrive. Care providers include headache-trained nurse practitioners and pediatricians, with neurologist oversight.

TIER TWO: HEADACHE RELIEF CLINIC

Those who need longer-term care for frequent or persistent headaches can visit the Headache Relief Clinic. No referral is needed, and new patients can get appointments within 10 days. The goal is a well-rounded headache treatment plan, with continued follow-up appointments. The headache team includes nurse practitioners, nurses, doctors and social workers with focused headache backgrounds.

TIER THREE: COMPREHENSIVE HEADACHE CLINIC

The Comprehensive Headache Clinic helps patients deal with the most challenging headaches, such as those that have caused four or more missed days of school a month. After a referral from the Headache Relief Clinic, these patients are scheduled for a three-hour appointment. The care team, which consists of a certified headache specialist, a pain psychologist and a social worker, works with the patient and family to address the pain and create a new solution.

INTEGRATED, EVIDENCE-BASED TREATMENT PLANS

The Headache team takes a 360-degree look at patients in creating treatment plans. Although medication can play a role in treating or preventing headaches, the program is much broader. Team members work with patients on their nutrition, sleep habits and hydration. They offer education on lifestyle and stress management, supported

by behavioral and cognitive therapy. In addition, three doctors have credentials in medical acupuncture, which has been shown to help prevent migraines² and is highly sought after by patients.

Because most pain literature shows that

functioning is key to recovery, patients also learn about the importance of attending school. Care team members recommend the necessary school accommodations as part of the treatment plan, and students are encouraged to attend school every day.

For more on the team's work, see their most recent publication in *Children*, "Pediatric Headache Clinic Model: Implementation of Integrative Therapies in Practice."³



The Headache team takes a 360-degree approach to patient care, including aromatherapy patches.

EARLY OUTCOMES SHOW SUCCESS

90% of patients reported decreased pain within the first two months of the Headache Treatment Center launch in April 2018.

100% of the 6,000 headache patients were treated without the use of narcotics.

CONCLUSION

By segmenting patients according to acuity, Children's Mercy has been able to optimize its staff and ensure patients are seen at the right time in the right setting. **In fiscal year 2018, the headache division had nearly 6,000 visits, which represents 33 percent of total neurology visits. On average, 20-25 patients receive headache-specific care at the Headache Treatment Center each week.**

Plans are underway to expand the Headache Treatment Center at Children's Mercy due to the overwhelming success and patient requests.

MIGRAINE REGISTRY SUPPORTS RESEARCH

Dr. Bickel and her team have built a migraine registry called PREP (Potential Research Eligible Patients). All Headache Services patients are automatically enrolled, and the registry already contains more than 2,500 patients in its first 10 months. It captures demographic information, plus details on diagnosis, medication and treatment. The registry will be used to recruit study participants and respond to feasibility questionnaires for upcoming studies.

SOURCES

¹ <https://migraineresearchfoundation.org/about-migraine/migraine-facts/>.

² Acupuncture for the prevention of episodic migraine. Linde K, Allais G, Brinkhaus B, Fei Y, Mehring M, Vertosick E, Vickers A and White A. *Cochrane Database Syst Rev*. Author manuscript; available in PMC 2017 June 28. CD001218. Published online 2016 Jun 28. doi: 10.1002/14651858.CD001218.pub3. PMID: 27351677.

³ Pediatric Headache Clinic Model: Implementation of Integrative Therapies in Practice. Esparham A, Herbert A, Pierzchalski E, Tran C, Dilis J, Boorigie M, Winger T, Connelly M, Bickel J. *Children* (2018), 5, 74. <https://doi.org/10.3390/children5060074>. This special issue belongs to the section "Implementing Pediatric Integrative Medicine in Practice."



LEARN MORE ABOUT THE HEADACHE PROGRAM OR CONSULT ABOUT CREATING A SIMILAR PROGRAM.

Jennifer Bickel, MD, FAAN, Headache Section Chief
jbickel@cmh.edu • (816) 302-3331
transformpeds.childrensmercy.org



For consults, admissions or transport call: 1 (800) GO MERCY / 1 (800) 466-3729.