

# Pediatric Acupuncture Program Development

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### INTRODUCTION

Evidence suggests that acupuncture is effective for treating episodic and chronic tension-type headache (e-, c-TTH) and episodic migraine<sup>1,2</sup>. The objective of this poster is to present an overview of an outpatient acupuncture clinic at the Headache Section in the division of Neurology at Children's Mercy Hospital, Kansas City, MO (CMH) as a framework for potential and future development of pediatric acupuncture programs.

### BACKGROUND

The acupuncture clinic started in October 2015 by one medical acupuncturist, Dr. Jen Bickel, MD. Acupuncture was done primarily for headaches and migraines. It has now grown to include three medical acupuncturists, trained at the Helms Institute, who conduct one half-day clinic of acupuncture primarily for their patients within the Headache Section. Patients are shared amongst the medical acupuncturists to increase access to acupuncture. In addition, CMH marketed the acupuncture program by developing a page on their website that was launched in April 2017. The acupuncture clinic has expanded their referrals, predominantly from general neurology, pain management, rehab, gastroenterology and physical therapy. Acupuncture training privileges for battlefield acupuncture and four gates has also recently been approved by CMH credentialing committee. The acupuncture training program will target physicians in the acute care setting to learn battlefield acupuncture and four gates for pain management for approved conditions.

### METHODS

Data were extracted from a de-identified patient database (Cerner's implementation of the standard Informatics for Integrating Biology and the Bedside framework created by Partners HealthCare) for Children's Mercy patients who received acupuncture from October 2015 through November 2017. The dataset included demographics, number of patient acupuncture visits, diagnoses, and concurrent medications and procedures, including Botox and pericranial nerve blocks (supraorbital nerve, auriculotemporal nerve, or occipital nerves). Website analytics were obtained from CMH marketing division.

### RESULTS

**Patient characteristics:** 130 patients were treated with acupuncture (table 1). The average age of patients was 18 years old. White race was majority of patients treated. The majority of the patients treated were considered to have refractory headaches with the top diagnoses defined as unspecified migraine (77%) and chronic migraine (60%). Botox was used more often with acupuncture (16%) compared to nerve blocks (1%). Valproic acid (10%), gabapentin (8%), and magnesium (8%), respectively, were the most frequently used medications and nutraceuticals for patients receiving acupuncture. Botox and valproic acid are considered highly aggressive therapies, which again suggests that the patients receiving acupuncture had complex and intractable headaches.

**Acupuncture visits:** The average number of visits per patient was 4.1. The number of new and total acupuncture visits increased in relation to the addition of medical acupuncturists (figure 1). Jennifer Bickel, MD, was the sole medical acupuncturist from November 2015 to July 2017. In July 2017, Jennifer Dilts, DO, started the 2<sup>nd</sup> acupuncture clinic. Anna Esparham, MD, started the 3<sup>rd</sup> acupuncture clinic in November 2017.

**Marketing:** The acupuncture page has received nearly 200 views with low bounce rate (users clicked on headache clinic page to learn more). It currently ranks #2 for keyword phrase "acupuncture for headaches in children" (figure 2).

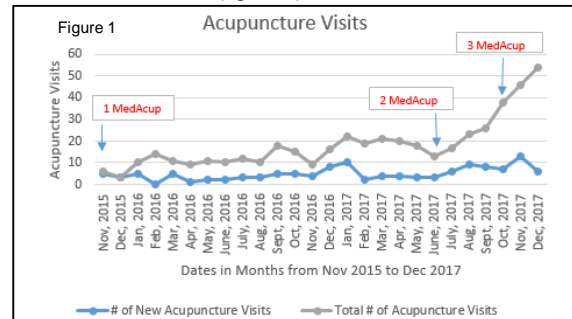


Table 1

	N	%
<b>Total Number of Acupuncture Patients</b>	130	100%
<b>Average Age of Patients</b>	18.46 (SD 6.35)	
0-9 yo	2	2%
10-17 yo	75	75%
18-34 yo	53	53%
<b>Race</b>		
White	106	82%
Black	12	9%
Hispanic	5	4%
Multiracial	4	3%
Other	3	2%
<b>Diagnoses (not mutually exclusive)</b>		
unspecified migraine	100	77%
chronic migraine	78	60%
episodic migraine	35	27%
new daily persistent headache	17	13%
status migrainosus	7	5%
episodic tension-type headache	3	2%
hemiplegic migraine	1	1%
<b>Other Procedures</b>		
Botox	21	16%
Nerve Block	1	1%
<b>Preventive Medications/Supplements</b>		
Valproic Acid	13	10%
Gabapentin	11	8%
Magnesium	10	8%

### RESULTS (CONT'D)



### CONCLUSIONS

Our acupuncture program has expanded to include three medical acupuncturists with resultant increase in number of acupuncture visits. Overall, older adolescents with chronic or refractory migraines were treated with acupuncture, suggesting that acupuncture was utilized as a third or fourth tier treatment. Marketing the acupuncture program on the CMH website has demonstrated consumer interest. Future plans include intervening earlier as a first or second tier treatment in a multidisciplinary setting, and expanding the provider pool by conducting quarterly physician training workshops that will provide CME and MOC for specific protocols (Battlefield and Four Gates).

- References:
- Linde K, Allais G, Brinkhaus B, Fei Y, Mehring M, Vertosick EA, Vickers A, White AR. Acupuncture for the prevention of episodic migraine. Cochrane Database Syst Rev. 2016 Jun 28; (6): CD001218.
  - Linde K, Allais G, Brinkhaus B, Fei Y, Mehring M, Shin BC, Vickers A, White AR. Acupuncture for the prevention of tension-type headache. Cochrane Database Syst Rev. 2016 Apr 19; (4): CD007587.