

# Children’s Hospital Of Wisconsin

## Co-Management Guidelines

To support collaborative care, we have developed guidelines for our community providers to utilize when referring to, and managing patients with, the pediatric specialists at Children’s Hospital of Wisconsin. These guidelines provide protocols for jointly managing patient cases between community providers and our pediatric specialists.

## Headache

Diagnosis/symptom	Referring provider’s initial evaluation and management:	When to initiate referral/ consider refer to Pain Clinic:	What information can referring provider send to Pain Clinic?	Specialist’s workup will likely include:
<p><b>Symptoms and Diagnosis</b></p> <ul style="list-style-type: none"> <li>• Pediatric Migraine: ICHD – II               <ol style="list-style-type: none"> <li>A. At least five attacks fulfilling criteria B – D</li> <li>B. Headache attacks last 2 – 72 hours (untreated or unsuccessfully treated)</li> <li>C. Headache has at least two of the following four characteristics:                   <ol style="list-style-type: none"> <li>a. Unilateral location (often bilateral in pediatrics)</li> <li>b. Pulsating, throbbing, pain</li> <li>c. Moderate to severe pain intensity</li> </ol> </li> </ol> </li> </ul>	<p><b>Treatment</b></p> <ul style="list-style-type: none"> <li>• <b>Life Style Modifications</b> <ul style="list-style-type: none"> <li>○ Drink 64 – 100 oz of water a day. Avoid caffeine and artificial sweeteners.</li> <li>○ Eat 3 meals a day plus snacks; do not skip meals. Make sure to have a protein-rich breakfast (e.g., eggs, cottage cheese, Greek yogurt, peanut butter, etc.).</li> <li>○ Get 8 – 10 hours of sleep a night. Avoid daytime naps, which disrupt the sleep cycle.</li> <li>○ Keep consistent bedtimes and wake times (no more than 1 – 2 hours variation).</li> <li>○ Avoid electronics/screens in bed.</li> <li>○ Exercise 30 – 60 minutes a day for 3 – 4 days a week.</li> </ul> </li> <li>• <b>Psychosocial Intervention</b></li> </ul>	<ul style="list-style-type: none"> <li>• When headaches are unable to be managed with medications</li> <li>• Headaches get worse</li> <li>• New symptoms develop</li> <li>• Child or family preference</li> <li>• Frequently missing school due to headaches</li> <li>• The child or adolescent appears to have difficulty managing stress, worry, or pain</li> </ul>	<p><b>1. Using Epic</b></p> <ul style="list-style-type: none"> <li>• Please complete the external referral order</li> </ul> <p><b>In order to help triage our patients and maximize the visit, the following information would be helpful include with your referral order:</b></p> <ul style="list-style-type: none"> <li>• Urgency of the referral</li> <li>• What is the key question you would like answered?</li> </ul> <p>Note: Our office will call to schedule the appointment with the patient.</p> <p><b>2. Not using Epic external referral order:</b></p>	<p>After referral to Headache Clinic:</p> <ul style="list-style-type: none"> <li>• Evaluation by a physician or nurse practitioner with possible further work up.</li> <li>• Please note we do not image all patients referred to our clinic.</li> <li>• Brief psychosocial assessment of the child or adolescent’s school, home, social, and emotional functioning. We may recommend more targeted mental health services within our clinic or the community.</li> <li>• Recommendations for lifestyle modifications.</li> <li>• Recommendations for medication management</li> </ul>

<ul style="list-style-type: none"> <li>d. Aggravation by or causing avoidance of routine physical activity</li> <li>D. During headache at least one of the following: <ul style="list-style-type: none"> <li>a. Nausea and/or vomiting</li> <li>b. Photophobia and phonophobia</li> </ul> </li> <li>E. Not better accounted for by another diagnosis</li> <li>• Migraine with aura <ul style="list-style-type: none"> <li>○ Fully reversible sensory disturbances occurring up to 60 minutes before headache pain</li> <li>○ Includes visual (e.g., wavy lines, blind spots, flashes of light), auditory (ringing in the ears), motor weakness, paresthesias of the hand, face, lips, tongue, difficulty speaking</li> </ul> </li> <li>• Tension-Type Headache: ICHD – II <ul style="list-style-type: none"> <li>A. &lt; 15 days/month and fulfilling criteria B – D</li> <li>B. Headache lasting from 30 minutes to 7 days</li> <li>C. Headache has at least two of the following characteristics: <ul style="list-style-type: none"> <li>a. Bilateral location</li> <li>b. Pressing/tightening pain (non-pulsating)</li> <li>c. Mild or moderate pain intensity</li> <li>d. Not aggravated by</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ Identify stress-related triggers</li> <li>○ Use good stress management: identify parts of stressful circumstances you can control and make changes, make time for activities you enjoy (exercise, hobbies, etc.), talk with others, journal, and/or engage in relaxing activities (listening to soothing music, yoga, massage, meditation).</li> <li>○ Find a quiet activity to try to distract from the pain</li> <li>○ Put a cool washcloth or ice pack where it hurts.</li> <li>○ Rest in a quiet, dark room until pain is more manageable.</li> <li>○ Have patient maintain a headache diary tracking symptoms, possible triggers, frequency, and alleviating factors</li> <li>• <b>Basic School Accommodations</b> <ul style="list-style-type: none"> <li>○ Encourage regular attendance.</li> <li>○ Make sure breakthrough medications are available at school. School staff should be made aware that the student should be excused to take medication as soon as headache onset occurs.</li> <li>○ Allow the student to rest in the health office for 15 – 20 minutes until pain is more tolerable.</li> </ul> </li> <li>• <b>Screening Tools</b> <ul style="list-style-type: none"> <li>○ Labs: CBC, TSH, Free T4, Vit D level</li> <li>○ <b>When to Image</b> <ul style="list-style-type: none"> <li>○ New onset, severe headache</li> <li>○ “Worst headache ever”</li> <li>○ Child is &lt;6 years old</li> <li>○ Occipital headache</li> <li>○ Abnormal neurological exam</li> <li>○ Headache with systemic disease or</li> </ul> </li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>• In order to help triage our patients maximize the visit time, please <b>fax</b> the above information to <b>(414-607-5288)</b></li> <li>• It would also be helpful to include: <ul style="list-style-type: none"> <li>• Chief complaint, onset, frequency</li> <li>• Recent progress notes</li> <li>• Labs and imaging results</li> <li>• Other Diagnoses</li> <li>• Office notes with medications tried/failed in the past and any lab work that may have been obtained regarding this patient’s problems.</li> </ul> </li> </ul>	
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<p>routine physical activity</p> <p>D. Both of the following:</p> <p>a. No nausea or vomiting (anorexia may occur)</p> <p>b. No more than one of photophobia or phonophobia</p> <p>E. Not attributed to another disorder</p>	<p>symptoms, neurological signs or symptoms, worsening acutely/progressive symptoms, nocturnal awakening, early morning vomiting, history of trauma, papilledema or diplopia, and/or exertional or positional aspects</p>			
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**Medication**

• **Medication – Please see table below**

- Avoid medication overuse. Do not use breakthrough medications more than 2 times a week.
- Use breakthrough medication at first sign of pain.
- NO opioids, except low dose tramadol, if refractory migraines.
- Preventive medications may be introduced when the child or adolescent is experiencing more than two headaches weekly. The goal of a preventive medication is to reduce the frequency, intensity, and/or duration of a headache by 50%, improve the child’s response to breakthrough medications, and/or eliminate medication overuse headaches. Preventive medications typically take 4 – 6 weeks at the correct dose before they provide benefit.

## Medication Table

Medication Class	Medication Name	Dosing	Dosing Range	Titration	Common Side Effects	Notes
<b>Preventives</b>						
Tricyclic Antidepressants						
	Amitriptyline (Elavil)	0.5 - 1 mg/kg	10 - 100 mg		Sedation, weight gain, dry mouth, constipation, increased suicidal ideation	Get baseline ECG to check QTc (<450 ok), helpful with insomnia, do not use with complex cardiac issues, use caution when used with SSRIs, can be fatal in overdose, use caution with overweight/obese patients, take at night 1 - 2 hours before bedtime
	Nortriptyline (Pamelor)	0.5 - 1 mg/kg	10 - 100 mg		Sedation, weight gain, dry mouth, constipation, increased suicidal ideation	Get baseline ECG to check QTc (<450 ok), helpful with insomnia, do not use with complex cardiac issues, use caution when used with SSRIs, can be fatal in overdose, use caution with overweight/obese patients, take at night 1 - 2 hours before bedtime
Beta Blockers						
	Propranolol (Inderal)	1-3 mg/kg/day given q8			Fatigue, dizziness, bradycardia, hypotension, exercise intolerance, exacerbation of asthma, depression, and/or diabetes	Helpful for decreasing anger or physical symptoms of anxiety (e.g., tachycardia, sweating), use caution in patients with asthma, depression, diabetes, and/or elite athletes
Antiepileptics						
	Topiramate (Topamax)	1-3 mg/kg/day QD or give BID divided	25 - 200 mg		Weight loss, decreased appetite, sedation, paresthesias, cognitive slowing, blurred vision, and/or eye pain	FDA-approved for migraine prevention in children 12 years and older, helpful with overweight/obese patients, avoid in patients with eating disorders, avoid in patients with significant attention/learning difficulties
	Valproic Acid (Depakote)	ER QD	125 - 1000 mg		Drowsiness, nausea, weight gain, cognitive slowing, liver toxicity, possible increase in hair growth	Not preferred first line treatment, avoid in patients of childbearing age due to associated birth defects, avoid in patients with PCOS, requires labs (platelets, AST, ALT at initiation, each increase, and at least q6 months
<b>Breakthrough</b>						
OTCs						
	Ibuprofen	10 mg/kg q6h PRN				

	Naproxen	5-10 mg/kg q8-12h PRN				
	Acetaminophen	10 - 15 mg/kg q4-6h PRN				
	Acetaminophen + Caffeine (Excedrin Tension)	500 mg-65 mg (25kg), 1 tab, 50 kg 1.5 tab, >70 kg 2 tab q6 PRN				Do not give Excedrin Migraine (contains aspirin) or Fioricet (contains butalbital)
Prescription NSAIDS						
	Diclofenac	2 - 4 mg/kg divided q8-12h PRN	Max 200 mg/day			
	Naproxen	250 mg, 375 mg, 500 mg; 125 mg/5 ml				
	Ketorolac	10 mg q6h PRN				
	Meloxicam	30 kg 3.75 mg; 60 kg 7.5 mg; ≥60 kg max 15 mg QD				
Triptans (Migraine only)						
	Rizatriptan (Maxalt)	<40 kg: give 5 mg once >40 kg: give 10 mg once			Palpitations, increased heart rate, throat or chest tightness, tingling, anxiety, drowsiness	FDA-approved for kids aged 6 years and older, must take at first sign of migraine, do not use in patients with cardiac history, cerebrovascular syndromes, peripheral vascular disease, or complex migraines
	Sumatriptan (Imitrex)	<u>Nasal:</u> <38 kgs: 10 mg, >38 kgs: 20 mg <u>Injection:</u> 3 – 6 mg <u>Tablet:</u> 25 mg, 50 mg or 100 mg, may repeat in 2h if needed			Palpitations, increased heart rate, throat or chest tightness, tingling, anxiety, drowsiness	Not FDA approved in kids (for < 12 years), must take at first sign of migraine, do not use in patients with cardiac history, cerebrovascular syndromes, peripheral vascular disease, or complex migraines