Children's Wisconsin

Co-Management Guidelines

To support collaborative care, the Jane B. Pettit Pain and Headache Center has developed guidelines for our community providers to utilize when managing and referring patients with headaches. These guidelines provide protocols to allow joint management of patient cases between community providers and our pediatric headache specialists.

Summary of International Classification of Headache Disorders (ICHD-3)		
Primary	**Secondary**	**Other**
Disorder by themselves. Caused by independent pathomechanisms and NOT by other disorders. • Migraines • Tension-type • Trigeminal autonomic cephalalgia (TACs)	Developed as a secondary symptom due to another disorder that is known to cause headaches. • Trauma / Injury • Cranial / Vascular • Pseudotumor –Idiopathic Intracranial Hypertension • Medication Over-use • Infection • Homoeostasis • Cranium/neck/eye/ears/nose/sinus/teeth/mouth • Psychiatric	Caused by a lesion or disease of the somatosensory nervous system. Characterized by pain in the distribution of a nerve or nerves. • Trigeminal neuralgia • Other

Most common in Primary Care setting for children:

Pediatric Migraine: ICHD – II

A. At least five attacks fulfilling criteria B – D

B. Headache attacks last 2 – 72 hours (untreated or unsuccessfully treated)

C. Headache has at least **two** of the following four characteristics:
- **a.** Unilateral location (often bilateral in pediatrics)
- **b.** Pulsating, throbbing, pain
- **c.** Moderate to severe pain intensity
- **d.** Aggravation by or causing avoidance of routine physical activity

D. During headache at least **one** of the following:
- **a.** Nausea and/or vomiting
- **b.** Photophobia and phonophobia

E. Not better accounted for by another diagnosis

Migraine with aura

A. Fully reversible sensory disturbances occurring up to 60 minutes before headache pain

B. 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

Tension-Type Headache: ICHD – II

A. < 15 days/month and fulfilling criteria B – D

B. Headache lasting from 30 minutes to 7 days

C. Headache has at least two of the following characteristics:
- **a.** Bilateral location
- **b.** Pressing/tightening pain (non-pulsating)
- **c.** Mild or moderate pain intensity
- **d.** Not aggravated by routine physical activity

D. Both of the following:
- **a.** No nausea or vomiting (anorexia may occur)
- b. No more than one of photophobia or phonophobia
- c. Not attributed to another disorder

Medication Overuse Headache: ICHD – VIII

A. ≥ 15 days/month and fulfilling criteria B-C

B. Regular overuse of >3 months of one or more acute/symptomatic treatment drugs
- **a.** Ergotamine, triptans, opioids, or combination analgesic medications ≥ 10 days/month on regular basis for >3 months
- **b.** Simple analgesics or any combination of ergotamine, triptans, analgesic opioids on ≥15 days/month on regular basis for >3 months without overuse of any single class alone

C. Developed or markedly worsened during medication overuse

Referring provider's initial evaluation and management:

- **S.M.A.R.T. Life Style Modifications:**

  S – Sleep
  - Get 8 – 10 hours of sleep a night.
  - Keep consistent bedtimes and wake times (no more than 1 – 2 hours variation).
  - Avoid daytime naps, which disrupt the sleep cycle.
  - Avoid electronics/screens in bed.

  M -- Meals / Drink / Caffeine
  - Eat 3 meals a day plus snacks; do not skip meals.
  - Make sure each meal is protein-rich (e.g., eggs, cottage cheese, Greek yogurt, peanut butter, etc.).
  - Drink 64 – 100 oz of water a day – an ounce for every kg of weight
  - Avoid caffeine and artificial sweeteners.

  A – Activity / exercise
  - Exercise 30 – 60 minutes a day for 3 – 4 days a week.

  R – Relaxation / CBT / Biofeedback
  - 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).
  - Find a quiet activity to try to distract from the pain
  - Rest in a quiet, dark room until pain is more manageable.
  - Put a cool washcloth or ice pack where it hurts.
  - Relaxation apps for home use: *Calm*, *MyLife*

  T – Trigger avoidance
  - Identify stress-related triggers
  - Limit medication to no more than 2 out of 7 days per week
  - Wear glasses as prescribed
  - AVOID trigger food – nitrates, hard cheese, caffeine, MSG
  - AVOID/REDUCE stress – good/bad, happy/sad, physical/emotional
  - Maintain a headache diary tracking symptoms, possible triggers, frequency, and alleviating factors

- **Basic School Accommodations**
  1. Encourage regular attendance.
  2. Eating and drinking
     - Allow use of a water bottle to stay hydrated.
     - Allow the student to use the restroom as needed.
     - Allow student to eat snacks during the day to help blood sugar.
  3. Rest to reduce stress
     - Provide a quiet resting place during pain.
     - Allow student to leave class without drawing attention.

        - Give student short breaks of 10 to 20 minutes, then expect them to return to class.
    4. Medicine
        - Allow the student quick access to medicines to help control pain.
        - Follow dosing as written by medical staff.
        - Keep extra doses at school.
    5. Academic help and support
        - Headaches can make concentration and learning hard. Some students may need:
        - Extra school support or other accommodations.
        - A Health Plan or 504 Plan to address a health concern.
        - Individual Education Plan (IEP) to address learning difficulties.

- Screening Tools
    1. Labs:
        - Baseline -- CBC, Ferritin, TSH reflex Free T4, Vitamin D
        - Additional –
            - B12, Folate – if concerns not eating red meats &/or green leafy vegetables
            - PT, PTT – if concerns of easy bruising, females with heavy menstrual cycles >> in turn can effect iron
    2. Image IF:
        - New onset, severe headache
        - "Worst headache ever"
        - Child is <6 years old
        - Occipital headache
        - Abnormal neurological exam
        - Headache with systemic disease or 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

When to initiate referral/consider refer to Pain & Headache Center:

- When headaches are unable to be managed with break-through medications
- When considering daily preventative medication for headache management
- Headaches get worse
- New symptoms develop
- Child or family preference
- Frequently missing school due to headaches
- The child or adolescent appears to have difficulty managing stress, worry, or pain

What information to send to Pain & Headache Center?

1. Using Epic referral form , please complete:
   - Urgency of the referral
   - What is the patient's chief complaint
   - Describe details
   - Pertinent past medical history
   - Abnormal lab or imaging findings
   - What is the key question you want addressed
   - Does patient have psychosocial stressors or mental health concerns
2. In addition, please include the following in your note when you recommend an appointment to our clinic
   - List of failed headache medications
   - Whether or not the patient has had a recent eye exam
   - Whether or the patient has a therapist
   - Number of school absences due to headache

3. Not using Epic referral form -- please fax (414- 266- 1761) the above information and include:
   - Chief complaint, onset, frequency
   - Recent progress notes
   - Labs and imaging results
   - Other Diagnoses

Specialist's workup will likely include:

After referral to Headache Clinic:

- Evaluation by a physician or nurse practitioner, and possibly a psychologist
  - 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.
- Recommendations for lifestyle modifications.
- Possible further work-up which MAY include labs, imaging (if indicated), referrals
  - Please note we do not image all patients referred to our clinic.
- Recommendations for medication management
- Anticipated follow up with medical provider and/or psychologist

Medication

- Medication – Please see table below
  1. Avoid medication overuse. Do not use breakthrough medications more than TWO TREATMENT days/week
  2. Use breakthrough medication at first sign of pain.
  3. NO opioids, except low dose tramadol, if refractory migraines.
  4. Preventive medications may be introduced when the child or adolescent is experiencing more than two headaches weekly IF:
     5. Maintaining all expected life style changes (as noted above)
     6. No causes found for headaches during work up process
     7. Not overusing break-through medications (per guidelines listed above)
  8. 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 6-8 weeks at the correct dose before they provide benefit.

Medication Table

BREAK-THROUGH				
Medication Class / Medication Name	Dosing	Dosing Forms	Common Side Effects	Notes
Acetaminophen	10 - 15 mg/kg q4-6h PRN			
Acetaminophen + Caffeine (Excedrin Tension)	25 kg 1 tab, 50 kg 1.5 tab >70 kg 2 tab q6 PRN	500 mg-65 mg per tab = 1cup coffee		**NO ASPIRIN**: 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		• GI upset • Bruising • Itching • Ringing in ears • Dark urine • Jaundice • Insomnia • Nervous/irritated	Can decrease GI side effects if taken with food
Ibuprofen	10 mg/kg q6h PRN	200 mg, 400 mg, 600 mg, 800 mg 100 mg/5 ml		
Naproxen	5-10 mg/kg q8-12h PRN	250 mg, 375 mg, 500 mg 125 mg/5 ml		
Ketorolac (Toradol)	10 mg q6h PRN			
Meloxicam	30 kg 3.75 mg 60 kg 7.5 mg ≥60 kg max 15 mg	QD prn		
Triptans - Migraine only				
Rizatriptan (Maxalt)	<40 kg: give 5 mg once >40 kg: give 10 mg once If >12yrs old, may repeat in 2h if pain continues		• Palpitations, increased heart rate • throat or chest tightness • tingling hands/feet • anxiety • drowsiness	• FDA-approved for kids aged 6 years and older • must take at first sign of migraine CAUTION: Do not use in patients with cardiac history, cerebrovascular syndromes, peripheral vascular disease, or complex migraines

Sumitriptan (Imitrex)	Tablet: 25 mg, 50 mg or 100 mg If >12yrs old, may repeat in 2h if pain continues Nasal: <38 kgs: 10 mg >38 kgs: 20 mg Injection: 3 – 6 mg		• Palpitations, increased heart rate • throat or chest tightness • tingling hands/feet • anxiety • drowsiness	**Not FDA approved in kids (for < 12 years)** • must take at first sign of migraine CAUTION: Do not use in patients with cardiac history, cerebrovascular syndromes, peripheral vascular disease, or complex migraines

Medication Class / Medication Name	Administration Dosing	Dosing Range	Titration	Common Side Effects	Notes
PREVENTATIVE					
ANTIDEPRESSANT					
SSRI					
Sertraline (Zoloft)	A: Morning D:12.5-50 mg	12.5-50 mg	Wean schedule: ½ dose daily for 7days then full dose	• Sedation • weight gain • dry mouth • constipation • increased suicidal ideation	
Tricyclic Antidepressants					
Amitriptyline (Elavil)	A: 1 - 2 hours before bedtime D: 0.5 - 1 mg/kg	10 - 100 mg		• Sedation • weight gain • dry mouth • constipation • increased suicidal ideation	• Get baseline ECG to check QTc – if <450 ok to use • Helpful with insomnia, trouble with sleep onset CAUTION: overweight/obese patients when used with SSRIs can be fatal if overdose do not use with complex cardiac issues, seizures, diabetes
Nortriptyline (Pamelor)	A: 1 - 2 hours before bedtime D: 0.5 - 1 mg/kg	10 - 100 mg		• Sedation • weight gain • dry mouth • constipation • increased suicidal ideation	• Get baseline ECG to check QTc – if <450 ok to use • Helpful with insomnia, trouble with sleep onset CAUTION: overweight/obese patients when used with SSRIs can be fatal in overdose do not use with complex cardiac issues, seizures, diabetes

BETA BLOCKERS					
Propranolol (Inderal)	A: Morning or Evening D: 1-3 mg/kg/day given q8 or as a single LA/ER dose	60-240 mg LA/ER		• Fatigue • Dizziness • Bradycardia • Hypotension • exercise intolerance • exacerbation of asthma • depression • diabetes	• Helpful for decreasing anger or physical symptoms of anxiety (e.g., tachycardia, sweating) <u>CAUTION</u>: patients with asthma, depression, diabetes, elite athletes, Raynauds
ANTIEPILEPTICS					
Topiramate (Topamax)	A: Morning & Evening 1-3 mg/kg/day QD or give BID divided	25 - 200 mg	Wean schedule: 25 mg QD x 3 days, 25 mg BID x 3 days, 25 mg qam/50 mg qpm x 3 days, 50 mg BID	• Weight loss • decreased appetite • sedation • parethesias • cognitive slowing • blurred vision • eye pain • May reduce efficacy of oral contraceptives	• FDA-approved for migraine prevention in children 12 years and older • helpful with overweight/obese patients <u>CAUTION</u>: • avoid in patients with eating disorders • avoid in patients with significant attention/learning difficulties
Divalproex (Depakote)	ER QD	125 - 1000 mg		• Drowsiness • Nausea • weight gain • cognitive slowing • liver toxicity • possible increase hair growth	• Requires labs (platelets, AST, ALT at initiation, each dose increase, and at least q6 months **Not preferred first line treatment** CAUTION: avoid in patients of childbearing age due to associated birth defects avoid in patients with PCOS, liver disease