

Migraine

Headaches are a common presentation to emergency departments (EDs), with migraine accounting for 30% of pediatric headache visits. The average age of onset is 7 years in boys, and 9 years in girls, with migraine becoming more common in girls by adolescence. Despite their prevalence, evidence for managing acute migraine attacks in children is limited, resulting in significant practice variation.

DIAGNOSIS

International Classification of Headache Disorders (ICHD, 3rd edition) diagnostic criteria:

- A. At least 5 attacks fulfilling criteria B-D
- B. Headache attacks lasting 2 to 72 hours (untreated or unsuccessfully treated)
- C. Headache has at least 2 of the following 4 characteristics:
 - unilateral or bilateral frontotemporal location (bilateral more common in children)
 - pulsating quality
 - moderate or severe pain intensity
 - aggravated by or causing avoidance of routine activity (e.g. walking, climbing stairs)
- D. During headache, at least 1 of the following:
 - nausea and/or vomiting
 - photophobia and phonophobia
- E. Not better accounted for by another ICHD-3 diagnosis

Because the ICHD-3 criteria require at least five attacks for diagnosis, they may have reduced sensitivity in the ED, where children may present with first episode of moderate to severe headache. In this case, diagnosis involves ruling out dangerous secondary causes

RED FLAG FINDINGS

- Altered level of consciousness or confusion
- Fever or meningeal signs
- Abnormal neurological exam or signs of increased ICP (papilledema, ataxia)

MANAGEMENT

- Place patient in a dark, quiet room with a stretcher if possible. Avoid screens
- Consider urine pregnancy test for assigned females (post-menarchal)
- Vital signs and pain scale q1h. Continuous cardiorespiratory monitoring for IV meds
- Discuss goals of treatment with the patient and family. The goal of treatment is to improve pain to a tolerable level as opposed to eliminating the pain entirely
- Initial management of acute migraine includes:
 - Ibuprofen 10mg/kg/dose PO (maximum 600 mg/dose) x 1 (preferred)
 - Acetaminophen 15mg/kg/dose PO (maximum 1000 mg/dose) x 1
 - Triptans if age 6 years or more (more effective when given early):
 - Less than 40 kg: Rizatriptan 5mg ODT x 1
 - Greater than 40kg: Rizatriptan 10 mg ODT x 1
 - Age greater than 12 years: Sumatriptan 20 mg INTRANASAL x 1 (preferred)

Migraine

- Ondansetron ODT if nausea or vomiting
 - 15 - 30 kg: 4 mg PO x 1
 - More than 30 kg: 8 mg PO x 1
- Ketorolac IV 0.5mg/kg/dose (maximum 10mg/dose) can be given if patient is vomiting and unable to tolerate Ibuprofen PO
- If ineffective after 45-60 minutes:
 - Metoclopramide 0.15 mg/kg/dose IV (maximum 10 mg/dose) x 1
 - There is no evidence to support diphenhydramine for *prevention of* acute dystonias. *Treat* dystonias with diphenhydramine 1 mg/kg/dose IV (maximum 50 mg/dose)

EVIDENCE

- Opioids are NOT recommended for treatment of acute headaches in children and adolescents. Opioids may increase length of stay, readmissions and ED re-visits
- Administration of IV fluids should be based on *hydration status*. Administer 0.9% NaCl 10-20 mL/kg/dose IV (maximum 1 L) x 1 for patients with signs of dehydration
- Intranasal lidocaine has shown promise in adults and preliminary studies in children are suggestive of benefit. Use lidocaine 2% (20 mg = 1 mL) or 4% (20 mg = 0.5 mL) topical solution. Split dose and give ½ in each nostril. Administer using nasal mucosal atomizer device
- Greater occipital nerve blocks may be considered for refractory migraine. Use should be based on clinical expertise. Multiple regimens have been studied:
 - 2 mL lidocaine 2% or bupivacaine 0.5% (+/- methylprednisolone 40 mg)
- There is no data to support the routine use of dexamethasone for preventing rebound headache in children. Consider naproxen 7 mg/kg/dose (maximum 500 mg/dose) PO BID for up to 72 hours

DISCHARGE

- The patient can be discharged home if the treatment has provided improvement in pain and the patient/caregiver feel they can manage symptoms at home
- Provide discharge instructions about treatment at home and reasons to return to ED
 - Advise families to treat any future migraines as early as possible
- GP follow up or referral to a pediatrician may be appropriate for ongoing management and consideration of preventative treatments
- Recommend using a migraine diary app and provide a [Migraine Action Plan](#)

ADMISSION

- Consult local Pediatrician or Pediatric Neurology if:
 - Patient presents with acute migraine and any red flag signs or symptoms
 - Ongoing symptoms despite treatment and significant functional limitation
- Consider transfer to tertiary facility if subspecialty intervention required or child requiring escalation of care beyond the comfort of the local healthcare facility

TREKK Video for Healthcare Providers



Migraines

Canadian Pediatric Society



Pharmacological Management of Acute Migraines

IWK Pediatric Grand Rounds

Every Wednesday 0900-1000

Meeting ID: 224 420 620 592 202

Passcode: HV62uT7K

CPS National Grand Rounds

Resister HERE. Recordings available for members.

Comfort Corner



Putting the Pieces Together November 2 to 6, 2026

Pain Canada is hosting a free virtual conference for and by people with pain. They are offering a variety of sessions throughout National Pain Awareness week.

This year's agenda will cover the pain community's priorities, from equity, diversity and inclusion, to pediatric pain and connected care, pain and mental health, art-based storytelling, peer support groups, trades workers and pain, and how AI is shaping the future of pain care, alongside practical sessions on wellbeing and building plans for pain flares.

Please contact painchampions@iwk.nshealth.ca if you are interested in being added to the waitlist for our in-person Maritime Pain Champion Event being held on November 2nd at Brigadoon Village, in Aylesford, NS.



References

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- Oskoui M, et al. *Headache*. 2019;59(8):1158-1173.
- Szperka CL, de Prado BM, Hsu J, Gelfand AA. *Neurology*. 2024;102(17_supplement_1):5487.

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Need to Know

National TREKK-PERC Collaborative Education Session, "Pediatric Emergency Knowledge to Care: Gastroenteritis Care" presented by Dr. Stephen Freedman

A NATIONAL TREKK-PERC COLLABORATIVE EDUCATION SESSION

Pediatric Emergency Knowledge to Care:

Gastroenteritis Care

Tuesday, November 3, 2026

12-1 PM CST

Healthcare providers are invited to join Alberta Children's Hospital pediatric emergency medicine physician Dr. Stephen Freedman to explore the latest evidence changing the management of pediatric acute gastroenteritis.



Dr. Stephen Freedman



Register Here



trekk PERC
TRANSITION FROM PEDIATRIC TO ADULT CARE KNOWLEDGE FOR YOUTH
PEDIATRIC EMERGENCY KNOWLEDGE TO CARE
Contact trekk@chrim.ca for more information



Our colleagues on the Transitions of Care Team are recruiting for the Transition of Care Committee and have some upcoming events you may be interested in! Check out their save the date poster below

Transition from Pediatric to Adult Care Initiative
Fall 2026

Let's Talk Teens: Webinar
A webinar for caregivers of youth with health conditions. Youth welcome too!

- We'll explore what self-management means, why it matters, and how you and your youth can begin building these skills together.
- Register [online](#) or by scanning the QR code



You're in Charge
A peer-led [virtual](#) self-management workshop for youth with health conditions (13 years+) & their caregivers

- Youth & families have said YIC is a great way to start the conversation about transition
- Register [online](#) or by scanning the QR code



IWK Pediatric Ground Rounds
Beyond the Clinic: Taking Charge at Camp – *How You're in Charge and Brigadoon Village are reimagining transition education*

- Join us for a conversation with Brigadoon Village Staff and You're in Charge team members to learn about how their partnership supports youth and families

IWK Pediatric Grand Rounds
Sticking the Landing: Transfer Age & Predictors of Secure Attachment to Primary & Specialist Care for Youth with Chronic Conditions

- We will look at health care use data before & after transfer to adult care
- Continue the conversation after Grand Rounds at the **Transition Community of Practice** to help shape key messages, recommendations and next steps for the data! Register on [Pulse](#) or [online](#).

Please note, all dates & topics subject to change

 Program for Youth & Families in the Maritimes  Program for Healthcare Providers & Community Partners in the Maritimes

For more information, please contact:

- ✓ Jackie Pidduck, Transition Coordinator, at IWKTransition@iwk.nshealth.ca or
- ✓ Amanda Higgins, You're in Charge Program Facilitator, at youreincharge@iwk.nshealth.ca

For more Transition Resources, check out [Pulse](#) or the [IWK website](#)

Transition of Care Committee Recruitment

We're Recruiting! The [Transition of Care Committee](#) brings together *patients, caregivers, health care providers and community partners* to improve the transition to adult care.

- We create resources for families,
- support staff learning and
- advocate for improved transitions through research as we work to embed our [Transition Framework](#) into practice.

We would love your help recruiting patients and caregivers from across the Maritimes, especially pre-transfer youth from outside Halifax (of course Haligonians are welcome too!). Our goal is to create a **space where people feel valued and where a diversity of experiences from across the Maritimes helps us to make transition better for everyone.**

Youth and caregivers have said that being on the committee has helped their own transition—so it can also be a space for those who are maybe struggling a bit in transition to adult care.

Patients and Caregivers can apply now at iwkhealth.ca!

Reach out to IWKTransition@iwk.nshealth.ca or youreincharge@iwk.nshealth.ca if you have any questions or would like more information