Pediatric Neurology
Consult and Referral Guidelines

Helen DeVos Children's Hospital
Outpatient Center
35 Michigan Street NE

Outreach locations:
Marquette
580 West College Avenue

Traverse City
550 Munson Avenue, Suite 202

About Pediatric Neurology

We see children and teenagers from birth to age 18s.

Most common referrals

- Seizures (first-time seizures, epilepsy and further evaluation of undiagnosed "spells")
- Migraine and tension headaches
- Nerve and muscle disorders such as muscular dystrophies, inherited neuropathies, myasthenia gravis, hyperCKemia.
- Movement disorders (tics, Tourette syndrome, tremors and chorea)

Notes

- Please ensure the patient has been seen in your office for the complaint in question prior to referring to neurology so that an accurate description and confirmation of the concern is available.
- We prefer to look at all EEGs ourselves during the visit. If your patient has an EEG from a non-Spectrum Health facility, we ask that the patient obtain a CD that includes all their EEGs and bring them to our office visit. If no EEG has been conducted, we can often schedule an EEG on the same day as an appointment.

Pediatric Neurology Appointment Priority Guide

Immediate	Contact HDVCH Direct at 616.391.2345 and ask to speak to the on-call neurologist and/or send to the nearest emergency department.
Urgent	Likely to receive an appointment within 7 days. Call HDVCH Direct, the practice, or use Perfect Serve to request an urgent appointment.
Routine	Some stable chronic diagnoses may have longer scheduling timelines. Send referral via Epic Care Link, fax completed referral form to 616.267.2401, or send referral through Great Lakes Health Connect.

Diagnosis/Symptom	Suggested Workup/Initial Management	When to Refer	Information Needed
Spells/Seizure	Detailed history of event EEG Consider MRI brain without contrast if developmentally delayed (preferably at HDVCH) Have parents video events	• Unprovoked seizures • Recurrent events or parental education needed	• Detailed description of event or reason for referral • Any prior work-up • Head circumference • Growth charts
Breath Holding Spells *Episodes of crying followed by color change, loss of tone/consciousness and occasionally seizure-like movements*	Consider EKG if atypical BHS CBC and ferritin	• If episodes do not follow typical sequence – 3 months to 3 years - and no antecedent crying	• Detailed history of spells • Head circumference • Growth charts
Febrile *Generalized tonic-clonic convulsion associated with fever (>101° F) in an otherwise neurologically normal child (6mo – 6yrs) with no prior afebrile seizures.*	If Simple Febrile, no focal features, <15 mins, then no additional workup required Parental reassurance Education regarding diagnosis	• Complex Febrile, focal features, recurrent, >15 mins • Developmental delay, neurological abnormalities or development of non-febrile seizures, positive family medical history for epilepsy	• All previous workup results • Head circumference • Growth charts
Tics/Tourette Spectrum *Movement is repetitive, quick, brief and typically worsens with stress, anxiety or excitement* *Vocal component is similarly repetitive and may include cough, snort, bark, sniff, throat clearing (among others)* *Tourettes: Tics are common, with motor and vocal components appearing for a year or more*	None required Parental education regarding diagnosis and reassurance ASO titer is not indicated Monitor for common co-morbidities: anxiety, OCD and depression As a general rule, stimulants may be used in epilepsy and tics and do not exacerbate these diagnoses	• Characteristics of seizure, refractory, symptoms interfere with ADLs	• Description of tics • Evaluation of psychiatric to morbidities and prior/current treatments • Head circumference • Growth charts

Diagnosis/Symptom	Suggested Workup/Initial Management	When to Refer	Information Needed
Headache	Evaluation and appropriate fundoscopic exam for papilledema. Imaging is optional, usually not necessary. However, if there are any red flags in the history or exam then MRI is the preferred study. Educate about failure of headache hygiene, see article here Avoidance of rebound headache by judicious use of preventative medicine (Tylenol or Motrin 2-3 times per week), journal of symptoms to review potential triggers, review of psychiatric comorbidities and management by appropriate personnel	• Failure of prophylactic medications. Options to try include: Periactin/cyproheptadine (if under 8-years old), Elavil/amitriptyline, Pamelor/nortriptyline, or Topamax/topiramate. • Worrisome, focal new onset are urgent or inpatient evaluation	• Description of headache(s) • Evaluation of psychiatric co-morbidities and treatments • Current and previous headache treatments • Imaging (if completed), labs • BP records • Head circumference • Growth charts
Neuro Muscular Disorders *Chronic muscular weakness, slowly progressive muscular weakness, distal limb atrophy, cramping with exercise, identification of muscle hypertrophy*	CK, repeat if abnormal Physical therapy	• Elevated CK, loss or regression of motor skills, +Gowers sign, multisystem involvement (cardiopulmonary)	• Description of progression of symptoms • All prior labs and imaging (on disk) • Muscle biopsy (if done) • EMG (if done) • +FMHx • Head circumference • Growth charts
Hypotonia/ Developmental Delay *Floppy infant*	Appropriate developmental surveillance according to AAP guidelines with early detection and monitoring of those at risk MRI brain without contrast Newborn Screen Chromosomal Microarray Refer to Early On	• Global developmental delay • Loss or regression of skills or developmental milestones • Isolated language delay, learning disorders/school difficulty or apraxia should be referred to speech pathology • *Urgent referral:* Infants with severe weakness (will try for appt. within 48 hours)	• Description of progression • All prior labs and imaging (on disk) • Muscle biopsy (if done) • +FMHx • Brief description of pre- and post-natal course • Head circumference • Growth charts

Spectrum Health Helen DeVos children's hospital

Diagnosis/Symptom	Suggested Workup/Initial Management	When to Refer	Information Needed
Numbness/Tingling	Examination focused on: reflexes strength, delineation of areas of abnormal sensation CBC, TSH, folate, lead level Consider screening for anxiety	• Areflexia or demyelination on MRI • Abnormal neurologic exam, areflexia, or focal abnormalities on exam • *If associated with hyperventilation or anxiety, consider Pediatric Behavioral Health referral.*	• Description of onset and progression • MRI/LP results (if available) • All prior labs and imaging (on disk) • Current and prior treatment • Head circumference • Growth charts
Syncope *History should include classic symptoms of light headedness, tunnel vision, nausea, feeling flushed, occurs most frequently with position change/standing*	Consider EKG and EEG if atypical Try conservative measures such as salt and fluid intake *If persistent following conservative treatment, refer to Pediatric Cardiology or Neurology based on history of symptoms*	• If classic history, refer to Pediatric Cardiology • If non-classical history, focal seizure or fall preceding spells refer to Pediatric Neurology • *Note: Post syncopal seizure is a reactive seizure, not a sign of underlying epilepsy and therefore does not require ongoing treatment.*	• Description of spell • EEG • EKG • Imaging (if completed) • Labs (CMP) • Head circumference • Growth charts

EEG Only Request Guidelines

- You can order a routine EEG to be performed at the Pediatric Neurology Clinic (35 Michigan, Suite 3003); call 616.267.2500 and ask to schedule an EEG.
- EEGs will be read by one of our pediatric neurologists. You will receive a result note within 1-2 weeks (patients and families should contact your office for EEG results).