Pediatric Nephrology
Consult and referral guidelines

Introduction

We care for children and teens from birth to 21 years. The most common reasons patients are referred include:

- Dialysis, end stage renal disease
- Electrolyte imbalance or abnormalities
- Enuresis
- Glomerular disorders: hematuria and proteinuria
- Henoch schonlein purpura
- Hydronephrosis
- Hypertension
- Kidney stone/nephrocalcinosis
- Nephritic syndrome
- Nephrotic syndrome
- Renal transplantation
- Urinary tract infection

We want to make referrals easy, fast and efficient for primary care providers. This tool was developed to help create productive visits for you and your patient.

Each guideline includes three sections: suggested workup and initial management, when to refer and information needed. Suggested workups may not apply to all patients, but these are studies we generally consider during office visits.

Feedback regarding these guidelines is encouraged. Please contact HDVCH Direct to share feedback.

For access to all pediatric guidelines, visit **helendevoschildrens.org/guidelines**

Appointment priority guide

Immediate	Call HDVCH Direct and/or send to the closest emergency department. Contact HDVCH Direct at 616.391.2345 and ask to speak to the on-call nephrologist.
Urgent	Likely to receive an appointment within 2 days. Call HDVCH Direct and ask to speak to the on-call nephrologist regarding an urgent referral.
Routine	Likely to receive an appointment within 10 days. Send referral via Epic Care Link, fax completed referral form to 616.267.2401 or send referral through Great Lakes Health Connect.

Diagnosis/symptoms	Suggested workup/initial management	When to refer	Information needed
Dialysis		Immediately: call HDVCH Direct and ask to speak to a nephrologist	Records including growth chart
Electrolyte Imbalance or Abnormalities Isolated or as a concomitant finding in renal or non-renal conditions	Send random urine for creatinine, sodium, potassium, chloride, osmolality, phosphorus and urea nitrogen	Any abnormalities, call HDVCH Direct with questions or concerns We will be glad to provide consultations and interpretation of test and management guidance	Records including growth chart Any prior workup including renal ultrasound images if done (please send CD) and urine studies
Enuresis Primary daytime--patient is 5 years or older Primary nighttime--patient is 5 years or older and has not achieved a period of dryness Secondary--enuresis in children with urinary tract symptoms (non-psychological stressors identified)	Detailed history, UA and behavioral modifications	After 6 months of failed behavioral modifications Patients with non-psychogenic polydipsia and polyuria Immediately: any secondary without a psychosocial trigger	Any prior culture results with sensitivities, UA and the method it was collected Any prior ultrasound images–\please send CD

Diagnosis/symptoms	Suggested workup/initial management	When to refer	Information needed
Glomerular Disorders Microscopic hematuria–UA with 5RBC/HPF Isolated proteinuria–urine protein/creatinine ration > 2.0	Detailed physical exam and blood pressure measurements UA with microscopic studies–recommend updating yearly with blood pressure Detailed physical exam and blood pressure measurements First morning voids for random protein and creatinine–no need to order 24-hour urine collection	Family history of Alport syndrome Any degree of hearing loss or visual changes associated with hematuria Hypertensive Any protein and creatinine > 0.2 in a first morning void Any proteinuria with hematuria Any patient > 8 years, if proteinuria is present Any patient < 8 years, if finding is confirmed in three separate visits	Any prior workup including renal ultrasounds images if done (please send CD) and urine studies
Henoch-Schonlein Purpura	UA microscopic study, urine random protein and creatinine See co-management guidelines	Proteinuria, hematuria, hypertension and edema	Records including growth chart Any prior workup including renal ultrasounds images if done (please send CD) and urine studies
Hydronephrosis Congenital by prenatal ultrasound or found in renal ultrasound	See co-management guidelines		Any prior workup including renal ultrasounds images if done (please send CD) and urine studies

Diagnosis/symptoms	Suggested workup/initial management	When to refer	Information needed
Hypertension Pre-hypertensive without pre-existing conditions–3 consecutive blood pressure readings at an office visit between the 90th and 95th percentile Hypertension stage 1–blood pressure reading above the 95th percentile Hypertension stage 2–blood pressure above the 95th percentile, plus 5 mmHg	Pre-hypertensive–blood pressure readings on 3 separate office visits: recommend lifestyle modifications and close follow-up for a period of 6 months, if unchanged Consider referral for stage 1 and 2 Detailed history and physical exam–evaluate for symptoms of hypertension emergency See co-management guidelines	6 months, if no improvement with lifestyle modifications in obese patients See co-management guidelines for obese patients > 10 years Headaches, dizziness, heart palpitations, blurry vision Immediately: if symptomatic, call HDVCH Direct and ask to speak to a nephrologist	Any prior workup including renal ultrasounds images if done (please send CD) and urine studies
Kidney Stones and Hypercalciuria As defined by renal ultrasound Calcium to creatinine ratio of >0.2 in a patient ≥ 6	Random urine calcium and creatinine (calculate calcium/creatinine ratio), UA Strongly discourage use of CT scan as follow-up Encourage renal ultrasound if suspicious If stone is retrieved, send for strain	Immediately: if symptomatic Immediately: if older than 6 years and has had more than 1 stone, or a single stone > 5mm	Any prior workup including renal ultrasounds images if done (please send CD) and urine studies
Nephritic Syndrome Edema, hypertension and hematuria (microscopic or gross)	Detailed physical exam and blood pressure measurements Urinalysis with microscopic study, CBC, CMP, magnesium, phosphorous, C3, C4, ANA, urine protein/creatinine ratio, rapid strep and ASO	Immediately: call HDVCH Direct and ask to speak to a nephrologist	Any prior workup including renal ultrasounds images if done (please send CD) and urine studies

Diagnosis/symptoms	Suggested workup/initial management	When to refer	Information needed
Gross Hematuria	Detailed physical exam and blood pressure measurements Urinalysis with microscopic study, CBC, CMP, magnesium, phosphorous, C3, C4, ANA, urine protein/creatinine ratio, rapid strep and ASO	Immediately: call HDVCH Direct and ask to speak to a nephrologist	Any prior workup including renal ultrasounds images if done (please send CD) and urine studies
UTI Urinalysis suggestive of infection – examples include WBC ≥ 10, nitrites, leukocyte esterase, positive urine culture with ≥ 50,000 ufc	Renal ultrasound	Recurring UTI Any urinary tract abnormality Any patient < 2 years	Any prior workup including renal ultrasounds images if done (please send CD) Any prior culture results with sensitivities; urinalysis with method in which urine was obtained
Renal transplant		Immediately: call HDVCH Direct and ask to speak to a nephrologist	Records including growth chart

HDVCH Direct phone: 616.391.2345

Helen DeVos Children's Hospital developed these referral guidelines as a general reference to assist referring providers. Pediatric medical needs are complex, and these guidelines may not apply in every case. Helen DeVos Children's Hospital relies on its referring providers to exercise their own professional judgment with regard to the appropriate treatment and management of their patients. Referring providers are solely responsible for confirming accuracy, timeliness, completeness, appropriateness and helpfulness of this material and making all medical, diagnostic and prescription decisions.