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# UTI Guidelines for PCPs

Adapted from Seattle Children's 2018 Executive Summary on UTI

## Objective

Improve quality of care in patients with a first-time UTI from birth to 18 years of age with a standardized approach to the diagnosis, management and follow-up.

- Decrease unnecessary exposure to broad-spectrum antibiotics (i.e., third-generation cephalosporins).
- Decrease unnecessary radiation exposure, patient discomfort and cost by reducing voiding cystourethrograms (VCUGs) performed.
- Decrease unnecessary length of stay and readmission by appropriate antibiotic selection and timely transition to oral antibiotics.

## Recommendations

### Diagnosis

- Diagnose non-toilet-trained children via high-quality specimen (catheterized urine, not a bag).
- Document an external GU exam and test for GC/*Chlamydia* in adolescents.

### Empiric Therapy

- Start empiric therapy with PO cephalexin 50 mg/kg/day divided q8h when there is clinical suspicion of UTI in infants ≤60 days of age. Sulfamethoxazole-trimethoprim is a good alternative in case of cephalosporin allergy.
- Start empiric therapy as above when there is clinical suspicion of UTI in infants and children >60 days of age when there are clinical findings in addition to a positive urinalysis (nitrituria, leukocyturia, hematuria) or microscopy (>10 WBC/hpf).
- Target antibiotic therapy to sensitivities once available.
- For admitted children ≥31 days, use ceftriaxone IV. Use ampicillin + gentamicin IV if *Enterococcus* species is suspected.
- For infants 31 to 60 days of age not meeting admission criteria, give ceftriaxone IM or cephalexin PO.

### Treatment Route and Duration

- For infants 0 to 30 days, treat for 7 days IV followed by 7 days PO (total course is 14 days), regardless of blood culture result.
- For infants 31 to 60 days meeting admission criteria, treat IV until afebrile for 24 hours and initial blood cultures negative for 36 hours, then treat PO (total course is 14 days).

- For infants and children >60 days (not bacteremic) meeting admission criteria, treat IV and switch to PO if responding; narrow coverage after sensitivities return. Total duration of antibiotics: adolescents (7 days), toilet trained (7 to 14 days), non-toilet trained (10 to 14 days).
- For adolescents with uncomplicated cystitis, treat PO for 3 days.
- For all infants and children >30 days with documented bacteremia, treat for seven days IV followed by seven days PO. May consider early transition to PO if meeting switch criteria.

**Imaging and Follow-Up**

- For infants and non-toilet-trained children, perform renal ultrasound.
- For toilet-trained children and adolescents, perform renal ultrasound on boys diagnosed with a first-time UTI and girls with atypical UTI.
- DO NOT routinely perform a VCUG. VCUG is indicated for abnormal ultrasound findings or atypical UTI (see below).
- DO NOT routinely perform a follow-up urine culture for test of cure.
- DO NOT prescribe antibiotic prophylaxis for patients with first-time UTI diagnosed with low-grade (I to II) vesicoureteral reflux. Antibiotic prophylaxis is to be started in conjunction with discussion with Urology in grades III to V.
- Due to limited evidence, procalcitonin is not recommended to guide decisions about follow-up imaging.