UNC Children’s Hospital Clinical Algorithm for Children with First Urinary Tract Infection (UTI)

Begin

**Inclusion Criteria**
- 2 months – 2 years
- First episode of UTI

**Exclusion Criteria**
- Conditions in which immunity may be compromised (transplant recipient or chronic renal insufficiency/kidney disease)
- Known major genitourinary anomalies
- PICU admission

**History and physical indicative of UTI and meets inclusion criteria**

**Obtain specimen for analysis (dipstick or urinalysis), urine gram stain, and urine culture by urethral catheterization**

**UA+ for LE or nitrites OR ≥ 5 WBCs on microscopy**

**Initiate empiric antimicrobial therapy**
(IV/PO routes equally effective if tolerating PO and not a failure of outpatient PO antibiotics)

**Well-appearing and tolerating oral fluids**

**IF seen in the ED or clinic, consider discharge on oral antibiotics if appropriate.**

**Urine Culture +**
(≥ 50,000 CFUs of single pathogen)

**RUS (may be done as outpatient if not admitted; PCP to follow up results)**

**RUS abnormal**

**Schedule VCUG (may be done as outpatient)**

**PCP to follow-up VCUG results**

**OFF Algorithm**
Search for alternate source of infection

**Note: Discontinue antibiotics if urine culture negative and child has NOT been treated with antibiotics prior to culture.**

**Consider admission**
- Continue antimicrobial therapy
- Follow culture and adjust therapy based on antimicrobial susceptibility results to choose the most appropriate, narrow spectrum agent

**Note: Discontinue antibiotics if urine culture negative and child has NOT been treated with antibiotics prior to culture.**

**Discharge home on appropriate antibiotics for total 7-14 day course**
Schedule appropriate follow up
Note: No need for prophylactic antibiotics after treatment course unless instructed otherwise by consultants.

**Abbreviations**
- UA – urinalysis
- LE – leukocyte esterase
- IV – intravenous
- RUS – renal ultrasound
- VCUG – voiding cystourethrogram

**Discharge Criteria**
- Tolerating oral intake
- If admitted, decreasing trend in daily maximal temperatures combined with physician discretion

**OFF Algorithm**
Consider additional antibiotics and search for alternate source of infection

**Meets discharge criteria**

**3/17/2016: Laura Cannon, Eric Zwemer**