**Treatment Algorithm: Urinary Tract Infection in Children >2 Months Old**

**Concern for UTI**

- Symptoms of one or more of the following?
  - Fever
  - Strong-smelling urine
  - Dysuria
  - Frequency
  - Urgency

**YES**

- Perform urinalysis and culture*
  - Urinalysis with one of the following?
    - Pyuria (≥5 WBC/hpf)
    - LE (trace or more)
    - Bacteria
    - Nitrites

**NO**

- Consider alternative diagnoses

**YES**

- Prescribe antibiotics
  - Non-toilet trained: 10 days
  - Toilet trained: 7 days
  - Teen with cystitis: 3 days

**NO**

- Defer antibiotics (see Table 1)

**YES**

- Allergic to cephalexin?

**NO**

- Await urine culture (goal >100K cfu on clean catch)
  - Adjust antibiotics based on sensitivities as needed

**YES**

- Cephalexin (first line)
  - 25 mg/kg/dose PO Q8 hours
  - Max 500 mg Q8 hours

- Alternatives:
  - TMP/SMX
  - Amoxicillin/clavulanate

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**TABLE 1 Sensitivity and Specificity of Components of Urinalysis, Alone and in Combination**

<table>
<thead>
<tr>
<th>Test</th>
<th>Sensitivity (Range), %</th>
<th>Specificity (Range), %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leukocyte esterase test</td>
<td>83 (67–94)</td>
<td>78 (64–92)</td>
</tr>
<tr>
<td>Nitrite test</td>
<td>53 (15–82)</td>
<td>98 (90–100)</td>
</tr>
<tr>
<td>Leukocyte esterase or nitrite test positive</td>
<td>93 (90–100)</td>
<td>72 (58–91)</td>
</tr>
<tr>
<td>Microscopy, WBs</td>
<td>73 (52–100)</td>
<td>81 (45–90)</td>
</tr>
<tr>
<td>Microscopy, bacteria</td>
<td>81 (16–90)</td>
<td>83 (11–100)</td>
</tr>
<tr>
<td>Leukocyte esterase test, nitrite test, or microscopy positive</td>
<td>90.8 (80–99)</td>
<td>70 (60–92)</td>
</tr>
</tbody>
</table>

*Note: For non-toilet-trained patients, may use bag UA to rule out UTI. If UA suggests UTI, repeat a catheter specimen for UA and culture.