**GUIDELINE**

**Urinary Tract Infections – Paediatric Empiric Guidelines**

**Scope (Staff):** Clinical Staff – Medical, Nursing, Pharmacy  
**Scope (Area):** Perth Children’s Hospital (PCH)

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**This document should be read in conjunction with this DISCLAIMER**

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<table>
<thead>
<tr>
<th>CLINICAL SCENARIO</th>
<th>Usual duration</th>
<th>DRUGS/DOSES</th>
<th>Known or Suspected MRSA</th>
<th>Penicillin allergy&lt;sup&gt;b&lt;/sup&gt; Delayed</th>
<th>Penicillin allergy&lt;sup&gt;b&lt;/sup&gt; Immediate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Urinary Tract Infection &lt; 1 month</strong></td>
<td></td>
<td>IV amoxicillin <strong>AND</strong> IV gentamicin (doses as per neonatal guidelines).</td>
<td>As per standard protocol</td>
<td>cefotaxime&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Discuss with ID or Microbiology service</td>
</tr>
<tr>
<td><strong>Urinary Tract Infection (≥ 3 months old and systemically well)</strong></td>
<td>3-5 days</td>
<td>Oral cefalexin 12.5mg/kg/dose (to a maximum of 500mg) 6 hourly. <strong>OR</strong> Oral cotrimoxazole 4mg/kg (to a maximum of 160mg trimethoprim component) 12 hourly. <strong>OR</strong> Oral amoxicillin/clavulanic acid 25mg/kg/dose (to a maximum 875mg amoxicillin component) 12 hourly.</td>
<td>As per standard protocol.</td>
<td>cefalexin&lt;sup&gt;d&lt;/sup&gt;</td>
<td>cotrimoxazole&lt;sup&gt;e&lt;/sup&gt;</td>
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| **Urinary Tract Infection**  
| i) All children ≥1 month and < 3 months,  
| ii) Children ≥ 3 months and systemically unwell | 7-10 days (IV and oral) | IV amoxicillin 50mg/kg/dose (to a maximum of 1 gram) 6 hourly. **AND** IV gentamicin′ | As per standard protocol. | ceftriaxone<sup>g</sup> | Discuss with ID or Microbiology service. |
| **Urinary Tract Infection prophylaxis children ≥ 1 month** | N/A | Oral cotrimoxazole 2mg/kg (to a maximum of 80mg trimethoprim component) 24 hourly at night. **OR** Oral cefalexin 12.5mg/kg (to a maximum of 250mg) at night. | As per standard protocol. | cefalexin<sup>h</sup> | cotrimoxazole<sup>i</sup> |

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<td>Epididymo-orchitis (If urinalysis negative)</td>
<td>0 days</td>
<td>Standard Protocol</td>
<td>Antibiotic therapy is not required- treat symptomatically.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epididymo-orchitis (If urinalysis positive)</td>
<td>14 days (IV and oral)</td>
<td></td>
<td>Treat as for Urinary Tract Infection in children ≥ 3 months and systemically unwell. For adolescent patients, consider sexually acquired infection and alter therapy accordingly.&lt;sup&gt;j&lt;/sup&gt;</td>
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a. Children known or suspected to be colonised with MRSA may need to have their therapy/prophylaxis modified. Children suspected of having MRSA include:

(i) Children previously colonised with MRSA
(ii) Household contacts of MRSA colonised individuals
(iii) In children who reside in regions with higher MRSA rates (e.g. Kimberley and the Pilbara) a lower threshold for suspected MRSA should be given
(iv) Children with recurrent skin infections or those unresponsive to ≥ 48h of beta-lactam therapy. For further advice, discuss with Microbiology or ID service

b. An immediate (IgE mediated) reaction is characterised by the development of urticaria, angioedema, bronchospasm or anaphylaxis within 1 to 2 hours of drug administration. Delayed reactions including maculopapular or morbilliform rashes, drug fever and cytopenias and are more in keeping with other forms of immunological reactivity. Isolated diarrhoea is not usually immune-mediated and does NOT contraindicate the future use of an antibiotic.

c. Use doses as per neonatal guidelines for patients less than 1 month of age.

d. Oral **cefalexin 12.5mg/kg/dose** (to a maximum of 500mg) 6 hourly.

e. Oral **cotrimoxazole 4mg/kg/dose** (equivalent to 0.5mL/kg/dose of mixture), trimethoprim component, to a maximum of 160mg, 12 hourly.

f. IV/IM **gentamicin** Children ≥ 1 month old to 10 years old: 7.5mg/kg ONCE daily to a maximum of 320mg. Children >10 years to 18 years: 6-7mg/kg ONCE daily to a maximum of 560mg. Therapeutic drug monitoring required.

g. IV **ceftriaxone 50mg/kg/dose** to a maximum of 2g, once daily.

h. Oral **cefalexin 12.5mg/kg/dose** (to a maximum of 250mg) given at once daily at night.

i. Oral **cotrimoxazole 2mg/kg/dose** (equivalent to 0.25mL/kg/dose of mixture), trimethoprim component, to a maximum of 160mg, given once daily at night.

j. For prepubertal boys with epididymo-orchitis, perform urinalysis; more than 80% of cases in these patients are not bacterial and do not require antibiotic therapy. If urinalysis is negative for leucocyte esterase and nitrite, treat the child symptomatically (paracetamol or nonsteroidal anti-inflammatory drugs). If the urinalysis is positive for leucocyte esterase or nitrite, take a midstream urine sample for culture and treat as for a urinary tract infection for 14 days.
## Related internal policies, procedures and guidelines

- **Antimicrobial Stewardship Policy**
- **ChAMP Empiric Guidelines**
- **KEMH Neonatal Medication Protocols**

## References


This document can be made available in alternative formats on request for a person with a disability.