GUIDELINE

Protracted Bacterial Bronchitis, Chronic Suppurative Lung Disease and Bronchiectasis – Paediatric Empiric Guideline

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

Child Safe Organisation Statement of Commitment

The Child and Adolescent Health Service (CAHS) commits to being a child safe organisation by meeting the National Child Safe Principles and National Child Safe Standards. This is a commitment to a strong culture supported by robust policies and procedures to ensure the safety and wellbeing of children at CAHS.

This document should be read in conjunction with this DISCLAIMER

- These are paediatric empiric guidelines.
- Treatment in this group of patients is also guided by previous microbiology results and previous response to treatment.
- When not using the empiric guidelines due to either known microbiology or previous treatment response, please indicate this on the medication chart with reason.
- All patients should receive the annual influenza vaccine
- Please contact the Infectious Diseases Department or a Clinical Microbiologist to discuss treatment at any stage.
# Protracted Bacterial Bronchitis, Chronic Suppurative Lung Disease and Bronchiectasis

<table>
<thead>
<tr>
<th><strong>CLINICAL SCENARIO</strong></th>
<th><strong>Usual duration</strong></th>
<th><strong>DRUGS/DOSES</strong></th>
<th><strong>Monitoring</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mild bronchiectasis and its precursors (initial presentation)</strong></td>
<td>2-6 weeks</td>
<td><strong>Patient NOT colonised with <em>Pseudomonas aeruginosa</em></strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oral <strong>amoxicillin/clavulanic acid</strong> 25mg/kg/dose (based on amoxicillin component - to a maximum of 875mg amoxicillin) given 12 hourly <strong>OR</strong> Oral <strong>cefuroxime</strong>: ≥ 3 months: 15mg/kg/dose (to a maximum of 500mg) <strong>OR</strong> For children ≥ 8 years old: Oral <strong>doxycycline</strong> 4mg/kg/dose (to a maximum of 200mg) for the first dose, then 2mg/kg/dose (to a maximum of 100mg) once daily thereafter.</td>
<td>For children on courses of oral antibiotics beyond 2 weeks of therapy including either a beta lactam or fluoroquinolone antibiotic, recommend Full Blood Count (FBC), Electrolytes, Urea and Creatinine (EUC), and Liver Function Tests (LFTs) be done monthly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Patient colonised with <em>Pseudomonas aeruginosa</em></strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inhaled <strong>tobramycin</strong>: Children &lt;6 years old 80mg twice daily via nebuliser for 2-4 weeks Children ≥6 years old: 300mg inhaled twice daily for 2-4 weeks <strong>OR</strong> Oral <strong>ciprofloxacin</strong> 15-20mg/kg/dose (to a maximum of 750mg) 12 hourly rounded down to the nearest portion of a tablet.</td>
<td></td>
</tr>
<tr>
<td><strong>Moderate to severe exacerbation of Non-Cystic Fibrosis (CF)</strong></td>
<td>Up to 14 days</td>
<td>For further information on the management of bronchiectasis, refer to Thoracic Society of Australia and New Zealand Guidelines: <strong>Chronic Suppurative Lung Disease and Bronchiectasis in children and adults in Australia and New Zealand</strong></td>
<td></td>
</tr>
</tbody>
</table>
## Protracted Bacterial Bronchitis, Chronic Suppurative Lung Disease and Bronchiectasis

<table>
<thead>
<tr>
<th>CLINICAL SCENARIO</th>
<th>Usual duration</th>
<th>DRUGS/DOSES</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate to severe exacerbation of chronic suppurative lung disease <strong>OR</strong></td>
<td></td>
<td></td>
<td>Weekly FBC, EUC and LFTs. If no port is available or peripherally inserted central catheter (PICC) line does not bleed back – contact treating team.</td>
</tr>
<tr>
<td>Mild to moderate exacerbation of non-CF bronchiectasis with failure to respond to oral therapy. <strong>OR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Patient NOT colonised with <em>Pseudomonas aeruginosa</em></strong></td>
<td><strong>IV ceftiraxone 50mg/kg/dose</strong> (to a maximum of 2 grams) once daily <strong>OR</strong> <strong>Child &gt;3 months old:</strong> <strong>IV amoxicillin/clavulanic acid 25mg/kg/dose</strong> (based on amoxicillin component - to a maximum of 1000mg amoxicillin) given 8 hourly</td>
<td><strong>IV piperacillin/tazobactam 100mg/kg/dose</strong> (to a maximum of 4 grams piperacillin component) 8 hourly</td>
<td></td>
</tr>
<tr>
<td><strong>Patient colonised with <em>Pseudomonas aeruginosa</em></strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course can be completed earlier than 14 days if a number of patient focused outcomes are met, including: 1) Improved cough character (wet to dry or cessation of cough) 2) Sputum volume and purulence return to baseline 3) General well-being and quality of life, return to baseline 4) Reduction in markers of systemic inflammation (e.g. C Reactive Protein (CRP))</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### CLINICAL SCENARIO

**Usual duration**

| Frequent exacerbations (≥3 exacerbations or ≥2 hospitalisations in the preceding 12 months) | Up to 12 months |

### DRUGS/DOSES

#### Patient NOT colonised with *Pseudomonas aeruginosa*

**CONSIDER**

Oral azithromycin as an anti-inflammatory agent:
- Child ≥1 – 6 years: 10mg/kg/dose three times a week
- Child ≥ 6 years: 25-40kg: 250mg three times a week
- Child ≥ 6 years: ≥ 40kg: 500mg three times a week

**OR**

Children ≥1 year: 30mg/kg/dose (to a maximum of 1.5 gram) once a week

Exclude non-tuberculosis mycobacterial infection prior to initiation.

| Patient colonised with *Pseudomonas aeruginosa* |

### Monitoring

- Clinical review to confirm benefit of azithromycin use e.g. lung function testing.
- FBC, EUC and LFTs after 2 – 4 weeks and if normal, no further monitoring unless clinically indicated.

---

**Related internal policies, procedures and guidelines**

- **Antimicrobial Stewardship Policy** (PCH Website)
- **ChAMP Empiric Guidelines**
Protracted Bacterial Bronchitis, Chronic Suppurative Lung Disease and Bronchiectasis

References


# Protracted Bacterial Bronchitis, Chronic Suppurative Lung Disease and Bronchiectasis

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

<table>
<thead>
<tr>
<th>File Path:</th>
<th>W:\Safety &amp; Quality\CAHS\CLOVERS MEDICAL Pharmacy\Procedures Protocols and Guidelines\ChAMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document Owner:</td>
<td>Head of Department Infectious Diseases</td>
</tr>
<tr>
<td>Reviewer / Team:</td>
<td>Children’s Antimicrobial Management Program Pharmacist</td>
</tr>
<tr>
<td>Date First Issued:</td>
<td>March 2014</td>
</tr>
<tr>
<td>Last Reviewed:</td>
<td>July 2022</td>
</tr>
<tr>
<td>Amendment Dates:</td>
<td>April 2017, December 2020, July 2022</td>
</tr>
<tr>
<td>Next Review Date:</td>
<td>July 2025</td>
</tr>
<tr>
<td>Approved by:</td>
<td>Drugs &amp; Therapeutics Committee</td>
</tr>
<tr>
<td>Date:</td>
<td>July 2022</td>
</tr>
<tr>
<td>Endorsed by:</td>
<td>Chair, Drugs &amp; Therapeutics Committee</td>
</tr>
<tr>
<td>Date:</td>
<td>July 2022</td>
</tr>
<tr>
<td>Standards Applicable:</td>
<td>NSQHS Standards: 🔗, Child Safe Standards: N/A</td>
</tr>
<tr>
<td></td>
<td>Child Safe Standards: N/A</td>
</tr>
</tbody>
</table>

Printed or personally saved electronic copies of this document are considered uncontrolled.