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NOTICE: RECOMMENDED THERAPEUTIC ALTERNATIVES FOR CLOXACILLIN INJECTION

The Paediatric Hospital Level Standard Treatment Guidelines (STGs) and Essential Medicines List (EML) currently recommends the use of cloxacillin injection for various indications (no listed indications in the Adult Hospital Level STGs and EML).

The current sole supplier of cloxacillin injection in South Africa, has indicated a short-term supply challenge with this medicine. Supply of cloxacillin injection is expected to resume in October 2023.

In the event that there is no cloxacillin injection available at your facility, the recommended therapeutic alternatives for use in paediatrics are proposed as follows:

Table with 3 columns: Indication: Paediatric Hospital Level 2023, Current recommendation in STGs and EML(2023), Therapeutic alternative to cloxacillin injection. Rows include Endocarditis, Pericardial effusion, and Staphylococcal scalded skin syndrome.

<p><b>Section 5.2.1 Erythema multiforme</b> <i>For secondary infections if the oral route cannot be used.</i></p>	<ul style="list-style-type: none"> <li>• Cloxacillin, IV, 50 mg/kg/dose 6 hourly.</li> </ul>	<ul style="list-style-type: none"> <li>• Cefazolin, IV,             <ul style="list-style-type: none"> <li>○ Infants and children: 25mg/kg/dose 8 hourly or 20mg/kg/dose 6 hourly, can go up to 50mg/kg/dose 8 hourly for severe infections (max 12g/d)</li> </ul> </li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>• Amoxicillin/clavulanic acid, IV, 30mg/kg/dose of the amoxicillin component 8 hourly.</li> </ul>
<p><b>Section 5.2.2 Stevens-johnson syndrome (SJS)/toxic epidermal necrosis (TEN)</b> <i>For secondary infections if the oral route cannot be used.</i></p>	<ul style="list-style-type: none"> <li>• Cloxacillin, IV, 50 mg/kg/dose 6 hourly.</li> </ul>	<ul style="list-style-type: none"> <li>• Cefazolin, IV,             <ul style="list-style-type: none"> <li>○ Infants and children: 25mg/kg/dose 8 hourly or 20mg/kg/dose 6 hourly, can go up to 50mg/kg/dose 8 hourly for severe infections (max 12g/d)</li> </ul> </li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>• Amoxicillin/clavulanic acid, IV, 30mg/kg/dose of the amoxicillin component 8 hourly.</li> </ul>
<p><b>Section 5.3.3 Cellulitis and erysipelas</b> <i>Severe disease.</i></p>	<p><b>Severe disease</b></p> <ul style="list-style-type: none"> <li>• Cloxacillin, IV, 50 mg/kg/dose 6 hourly for 5 days.</li> </ul>	<ul style="list-style-type: none"> <li>• Cefazolin, IV, for 5 days.             <ul style="list-style-type: none"> <li>○ Neonates 0-7d: 20mg/kg/dose 12 hourly</li> <li>○ Neonates 7-28d: 20mg/kg/dose 8 hourly</li> <li>○ Infants and children: 25mg/kg/dose 8 hourly or 20mg/kg/dose 6 hourly, can go up to 50mg/kg/dose 8 hourly for severe infections (max 12g/d).</li> </ul> </li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>• Amoxicillin/clavulanic acid, IV, 30mg/kg/dose of the amoxicillin component 8 hourly.</li> </ul>
<p><b>Section 8.27 Sepsis</b> <i>Suspected staphylococcal infection (e.g. osteomyelitis)</i></p>	<ul style="list-style-type: none"> <li>• Cloxacillin, IV, 50 mg/kg/dose 6 hourly.</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Ceftriaxone, IV, 100 mg/kg, once daily.</li> </ul>	<p><i>Sensitive staphylococcal bacteraemia:</i></p> <ul style="list-style-type: none"> <li>• Cefazolin, IV, for at least 14 days.             <ul style="list-style-type: none"> <li>○ Neonates 0-7d: 20mg/kg/dose 12 hourly</li> <li>○ Neonates 7-28d: 20mg/kg/dose 8 hourly</li> <li>○ Infants and children: 25mg/kg/dose 8 hourly or 20mg/kg/dose 6 hourly, can go up to 50mg/kg/dose 8 hourly for severe infections (max 12g/d).</li> </ul> </li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>• Amoxicillin/clavulanic acid, IV, 30mg/kg/dose of the amoxicillin component 8 hourly for at least 14 days.</li> </ul> <p><i>Sensitive staphylococcus (bone and joint)</i></p> <ul style="list-style-type: none"> <li>• Cefazolin, IV,             <ul style="list-style-type: none"> <li>○ Neonates 0-7d: 20mg/kg/dose 12 hourly</li> <li>○ Neonates 7-28d: 20mg/kg/dose 8 hourly</li> <li>○ Infants and children: 25mg/kg/dose 8 hourly or 20mg/kg/dose 6 hourly, can go up to 50mg/kg/dose 8 hourly for severe infections (max 12g/d).</li> </ul> </li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>• Amoxicillin/clavulanic acid, IV, 30mg/kg/dose of the amoxicillin component 8 hourly.</li> </ul> <p>Can transition to oral therapy once there is sustained clinical improvement, resolution of fever and CRP &lt; 30mg/L.</p> <ul style="list-style-type: none"> <li>○ Septic arthritis: 2-4 weeks of treatment</li> <li>○ Acute osteomyelitis: 4-6 weeks of treatment</li> <li>○ Infective endocarditis: see Chapter 4: Cardiovascular System, section 4.3 Endocarditis</li> </ul>
<p><b>Section 8.28 Staphylococcal septicaemia</b></p>	<p><b>Sensitive staphylococcal bacteraemia:</b></p> <ul style="list-style-type: none"> <li>• Cloxacillin, IV, 50 mg/kg/dose 6 hourly for at least 14 days; longer courses often required.</li> </ul> <p><b>Sensitive staphylococcus (bone and joint):</b></p> <ul style="list-style-type: none"> <li>• Cloxacillin, IV, 50 mg/kg/dose 6 hourly. Can transition to oral therapy once there is sustained clinical improvement, resolution of fever and CRP &lt; 30 mg/L.             <ul style="list-style-type: none"> <li>○ Septic arthritis: 2-4 weeks of treatment.</li> <li>○ Acute osteomyelitis: 4-6 weeks of treatment.</li> </ul> </li> </ul>	<p><i>Sensitive staphylococcal bacteraemia:</i></p> <ul style="list-style-type: none"> <li>• Cefazolin, IV, for at least 14 days.             <ul style="list-style-type: none"> <li>○ Neonates 0-7d: 20mg/kg/dose 12 hourly</li> <li>○ Neonates 7-28d: 20mg/kg/dose 8 hourly</li> <li>○ Infants and children: 25mg/kg/dose 8 hourly or 20mg/kg/dose 6 hourly, can go up to 50mg/kg/dose 8 hourly for severe infections (max 12g/d).</li> </ul> </li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>• Amoxicillin/clavulanic acid, IV, 30mg/kg/dose of the amoxicillin component 8 hourly for at least 14 days..</li> </ul> <p><i>Sensitive staphylococcus (bone and joint)</i></p> <ul style="list-style-type: none"> <li>• Cefazolin, IV.</li> </ul>

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<p><b>Section 8.29 Arthritis, septic (pyogenic)</b></p>	<p><u>Neonates:</u></p> <ul style="list-style-type: none"> <li>• Cloxacillin, IV, 50 mg/kg/dose.             <ul style="list-style-type: none"> <li>○ If 1<sup>st</sup> week of life: 12 hourly.</li> <li>○ If 2<sup>nd</sup>-4<sup>th</sup> week of life: 8 hourly.</li> <li>○ If &gt;4 weeks old: 6 hourly.</li> </ul> </li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Cefotaxime, IV.</li> </ul> <table border="1"> <thead> <tr> <th>Gestational age</th> <th>Postnatal age</th> <th>Dose</th> </tr> </thead> <tbody> <tr> <td rowspan="2">&lt; 32 weeks</td> <td>&lt; 14 days</td> <td>50 mg/kg/dose every 12 hours</td> </tr> <tr> <td>14 – 28 days</td> <td>50 mg/kg/dose every 8 hours</td> </tr> <tr> <td rowspan="2">≥ 32 weeks</td> <td>≤ 7 days</td> <td>50 mg/kg/dose every 12 hours</td> </tr> <tr> <td>8 – 28 days</td> <td>50 mg/kg/dose every 8 hours</td> </tr> </tbody> </table> <p><u>1 month to &lt; 3 months</u></p> <ul style="list-style-type: none"> <li>• Cloxacillin, IV, 50 mg/kg/dose 6 hourly.</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Ceftriaxone, IV, 100 mg/kg/dose once daily</li> </ul> <p><u>Infants &gt; 3 months and children:</u></p> <ul style="list-style-type: none"> <li>• Cloxacillin, IV, 50 mg/kg/dose 6 hourly.</li> </ul> <p>If gram-negative organisms are seen on Gram stain, or when clinically suspected, e.g. sickle cell disease:</p> <p><b>ADD</b></p> <ul style="list-style-type: none"> <li>• Ceftriaxone, IV, 100 mg/kg, once daily.</li> </ul>	Gestational age	Postnatal age	Dose	< 32 weeks	< 14 days	50 mg/kg/dose every 12 hours	14 – 28 days	50 mg/kg/dose every 8 hours	≥ 32 weeks	≤ 7 days	50 mg/kg/dose every 12 hours	8 – 28 days	50 mg/kg/dose every 8 hours	<p><u>Neonates:</u></p> <ul style="list-style-type: none"> <li>• Amoxicillin/clavulanic acid, IV, 30mg/kg/dose of the amoxicillin component 8 hourly.</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Cefotaxime, IV.</li> </ul> <table border="1"> <thead> <tr> <th>Gestational age</th> <th>Postnatal age</th> <th>Dose</th> </tr> </thead> <tbody> <tr> <td rowspan="2">&lt; 32 weeks</td> <td>&lt; 14 days</td> <td>50 mg/kg/dose every 12 hours</td> </tr> <tr> <td>14 – 28 days</td> <td>50 mg/kg/dose every 8 hours</td> </tr> <tr> <td rowspan="2">≥ 32 weeks</td> <td>≤ 7 days</td> <td>50 mg/kg/dose every 12 hours</td> </tr> <tr> <td>8 – 28 days</td> <td>50 mg/kg/dose every 8 hours</td> </tr> </tbody> </table> <p><u>1 month to &lt; 3 months</u></p> <ul style="list-style-type: none"> <li>• Amoxicillin/clavulanic acid, IV, 30mg/kg/dose of the amoxicillin component 8 hourly.</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Ceftriaxone, IV, 80 mg/kg/dose 12 hourly.</li> </ul> <p><u>Infants &gt; 3 months and children:</u></p> <ul style="list-style-type: none"> <li>• Amoxicillin/clavulanic acid, IV, 30mg/kg/dose of the amoxicillin component 8 hourly.</li> </ul> <p>If gram-negative organisms are seen on Gram stain, or when clinically suspected, e.g. sickle cell disease:</p> <p><b>ADD</b></p> <ul style="list-style-type: none"> <li>• Ceftriaxone, IV, 100 mg/kg, once daily.</li> </ul>	Gestational age	Postnatal age	Dose	< 32 weeks	< 14 days	50 mg/kg/dose every 12 hours	14 – 28 days	50 mg/kg/dose every 8 hours	≥ 32 weeks	≤ 7 days	50 mg/kg/dose every 12 hours	8 – 28 days	50 mg/kg/dose every 8 hours
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<p><b>Section 8.31 Osteitis/osteomyelitis, acute</b></p>	<p><u>Neonates:</u></p> <ul style="list-style-type: none"> <li>• Cloxacillin, IV, 50 mg/kg/dose.             <ul style="list-style-type: none"> <li>○ If 1<sup>st</sup> week of life: 12 hourly.</li> <li>○ If 2<sup>nd</sup>-4<sup>th</sup> week of life: 8 hourly.</li> <li>○ If &gt;4 weeks old: 6 hourly.</li> </ul> </li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Cefotaxime, IV.</li> </ul> <table border="1"> <thead> <tr> <th>Gestational age</th> <th>Postnatal age</th> <th>Dose</th> </tr> </thead> <tbody> <tr> <td rowspan="2">&lt; 32 weeks</td> <td>&lt; 14 days</td> <td>50 mg/kg/dose every 12 hours</td> </tr> <tr> <td>14 – 28 days</td> <td>50 mg/kg/dose every 8 hours</td> </tr> </tbody> </table>	Gestational age	Postnatal age	Dose	< 32 weeks	< 14 days	50 mg/kg/dose every 12 hours	14 – 28 days	50 mg/kg/dose every 8 hours	<p><u>Neonates:</u></p> <ul style="list-style-type: none"> <li>• Amoxicillin/clavulanic acid, IV, 30mg/kg/dose of the amoxicillin component 8 hourly.</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Cefotaxime, IV.</li> </ul> <table border="1"> <thead> <tr> <th>Gestational age</th> <th>Postnatal age</th> <th>Dose</th> </tr> </thead> <tbody> <tr> <td rowspan="2">&lt; 32 weeks</td> <td>&lt; 14 days</td> <td>50 mg/kg/dose every 12 hours</td> </tr> <tr> <td>14 – 28 days</td> <td>50 mg/kg/dose every 8 hours</td> </tr> <tr> <td rowspan="2">≥ 32 weeks</td> <td>≤ 7 days</td> <td>50 mg/kg/dose every 12 hours</td> </tr> <tr> <td>8 – 28 days</td> <td>50 mg/kg/dose every 8 hours</td> </tr> </tbody> </table>	Gestational age	Postnatal age	Dose	< 32 weeks	< 14 days	50 mg/kg/dose every 12 hours	14 – 28 days	50 mg/kg/dose every 8 hours	≥ 32 weeks	≤ 7 days	50 mg/kg/dose every 12 hours	8 – 28 days	50 mg/kg/dose every 8 hours					
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**Note:**

» The National Department of Health will advise when the supply of cloxacillin injection is resumed.

**Circular dissemination**

Provinces and Healthcare Facilities are requested to distribute and communicate this information in consultation with the Pharmaceutical and Therapeutics Committees and all other relevant stakeholders.

Kind regards

*K. Jamaloodien*

**MS K JAMALOODIEN**  
**CHIEF DIRECTOR: SECTOR-WIDE PROCUREMENT**  
**DATE: 14/8/2023**