GUIDELINE

Eye Infections: Paediatric Empiric Guidelines

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

Child Safe Organisation Statement of Commitment

CAHS commits to being a child safe organisation by applying the National Principles for Child Safe Organisations. This is a commitment to a strong culture supported by robust policies and procedures to reduce the likelihood of harm to children and young people.

This document should be read in conjunction with this disclaimer

	CLINICAL SCENARIO	**Usual duration**	**DRUGS/DOSES**			
			Standard Protocol	**Known or Suspected MRSA**[a]	**Low Risk Penicillin allergy**[b]	**High Risk Penicillin allergy**[b]
Periorbital Cellulitis	Periorbital cellulitis < 4 weeks	7 days	IV cefotaxime (doses as per Neonatal Guidelines)	**ADD** vancomycin (doses as per Neonatal Guidelines)	As per standard protocol	Discuss with ID or Microbiology service
			For patients < 3 months swab for Gonorrhoea and Chlamydia			
	Mild periorbital cellulitis ≥ 4 weeks	7 days	Oral flucloxacillin 12.5mg/kg/dose (to a maximum of 500mg) 6 hourly **OR** Oral cefalexin 20mg/kg/dose (to a maximum of 750mg) 8 hourly	cotrimoxazole[c]	cefalexin[d]	clindamycin[e]
			For patients < 3 months swab for Gonorrhoea and Chlamydia			
	Mild periorbital cellulitis ≥ 4 weeks **WITH** sinusitis **OR** if *Haemophilus influenza* type b (HiB) suspected	7 days	Oral amoxicillin/clavulanic acid 25mg/kg/dose (to a maximum of 875mg amoxicillin component) 12 hourly	**ADD** cotrimoxazole[c] to standard protocol	cefuroxime[f] **OR** consider amoxicillin challenge in discussion with immunology	Discuss with ID or Microbiology service

Compassion Excellence Collaboration Accountability Equity Respect

<table>
<tr><th colspan="2" rowspan="2">CLINICAL SCENARIO</th><th rowspan="2">Usual duration</th><th colspan="4">DRUGS/DOSES</th></tr>
<tr><th>Standard Protocol</th><th>Known or Suspected MRSA[a]</th><th>Low Risk Penicillin allergy[b]</th><th>High Risk Penicillin allergy[b]</th></tr>
<tr><td rowspan="7">Periorbital Cellulitis</td><td rowspan="3">Moderate Periorbital (preseptal) cellulitis ≥ 4 weeks</td><td rowspan="3">7 days (IV and oral)</td><td>IV flucloxacillin 50mg/kg/dose (to a maximum of 2 grams) 6 hourly.</td><td>ADD vancomycin[g] to standard protocol</td><td>cefazolin[h]</td><td>clindamycin[i]</td></tr>
<tr><td colspan="4">For empiric oral switch therapy, see mild peri-orbital cellulitis ≥ 1 month
For patients < 3 months swab for Gonorrhoea and Chlamydia</td></tr>
<tr><td colspan="4">Refer to HiTH Antimicrobial guidelines for suitable Hospital in the Home (HiTH) antibiotic options.</td></tr>
<tr><td rowspan="2">Moderate Periorbital (preseptal) cellulitis ≥ 4 weeks WITH sinusitis OR if Haemophilus influenza type b (HiB) suspected</td><td rowspan="2">7 days (IV and oral)</td><td>IV ceftriaxone 50mg/kg/dose (to a maximum of 2 grams) once daily.</td><td>ADD vancomycin[g] to standard protocol</td><td>ceftriaxone[j]</td><td>Discuss with ID or Microbiology service</td></tr>
<tr><td colspan="4">For empiric oral switch therapy, see mild peri-orbital cellulitis ≥ 1 month with sinusitis
For patients < 3 months swab for Gonorrhoea and Chlamydia</td></tr>
<tr><td rowspan="2">Severe periorbital (post septal) or orbital cellulitis (≥ 4 weeks)</td><td rowspan="2">Total 10-14 days (IV and oral)</td><td>IV ceftriaxone 50mg/kg/dose (to a maximum of 2 grams) once daily.
AND
IV vancomycin 15mg/kg/dose (to a maximum initial dose of 750mg) 6 hourly.</td><td colspan="2">As per standard protocol.</td><td>ciprofloxacin[k]
AND
vancomycin[g]</td></tr>
<tr><td colspan="4">Antibiotics alone are not definitive management. Immediate referral to appropriate specialist surgical services is essential.
For empiric oral switch therapy, see mild peri-orbital cellulitis ≥ 1 month with sinusitis</td></tr>
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<tr><td rowspan="4">Penetrating eye injury</td><td rowspan="4">Penetrating eye injury (including open globe rupture or laceration) and / or endopthalmitis</td><td rowspan="4">Total 7 days (IV and oral)</td><td>IV ceftazidime 50mg/kg/dose (to a maximum of 2 grams) 8 hourly.
AND
IV vancomycin 15mg/kg/dose (to a maximum initial dose of 750mg) 6 hourly.</td><td colspan="2">As per standard protocol.</td><td>ciprofloxacin[k]
AND
vancomycin[g]</td></tr>
<tr><td colspan="4">Intravitreal antibiotics may be required.</td></tr>
<tr><td colspan="3">ceftazidime 2.25mg/0.1mL via intravitreal injection
AND
vancomycin 1mg/0.1mL via intravitreal injection</td><td>Discuss with ID or microbiology service</td></tr>
<tr><td colspan="4">Antibiotics alone are not definitive management.
Immediate referral to appropriate specialist surgical services is essential.

IV treatment around the time of injury and for one to two (1-2) days. Consider changing to oral moxifloxacin 10mg/kg/dose
(to a maximum of 400mg) once daily for five (5) to seven (7) days once surgically stable.

Tetanus immunisation history needs to be reviewed depending on the nature of the wound. Consider the need for tetanus prophylaxis as per Tetanus prone wounds</td></tr>
<tr><td rowspan="3"></td><td>Conjunctivitis</td><td>Up to 7 days</td><td colspan="4">Topical chloramphenicol 0.5% eye drops; instil one to two (1-2) drops into the affected eye(s) every two (2) hours on day one (1), then reduce to four (4) times daily until discharge resolves.</td></tr>
<tr><td>Microbial keratitis</td><td>varies</td><td colspan="4">Topical ofloxacin 0.3% eye drops – prescribe in conjunction with ophthalmology as dose varies depending on severity of infection and response.</td></tr>
<tr><td>Dacryocystitis</td><td>7 days</td><td>Oral cefalexin 20mg/kg/dose (to a maximum of 750mg) 8 hourly.</td><td>cotrimoxazole[c]</td><td>As per standard protocol</td><td>cotrimoxazole[c]</td></tr>
</table>

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, Pilbara and Goldfields) a lower threshold for suspected MRSA should be given
   iv. Children with recurrent skin infections or those unresponsive to ≥ 48 of beta-lactam therapy. For further advice, discuss with Microbiology or ID service

b. Refer to the ChAMP Beta-lactam Allergy Guideline:

   - **Low risk allergy:** a delayed rash (>1hr after initial exposure) without mucosal or systemic involvement (without respiratory distress and/or cardiovascular compromise).
   - **High risk allergy:** an immediate rash (<1hr after exposure); anaphylaxis; severe cutaneous adverse reaction {e.g. Drug Rash with Eosinophilia and Systemic Symptoms

(DRESS) and Stevens – Johnson syndrome (SJS) / Toxic Epidermal Necrolysis (TEN)} or other severe systemic reaction.

c. Oral cotrimoxazole 4mg/kg/dose (to a maximum of 160mg trimethoprim component) 12 hourly; equivalent to 0.5mL/kg/dose of oral suspension

d. Oral cefalexin 20mg/kg/dose (to a maximum of 750mg) 8 hourly.

e. Oral clindamycin 10mg/kg/dose (to a maximum of 450mg) 8 hourly

f. Oral cefuroxime: Child ≥ 3 months: 15mg/kg/dose (to a maximum of 500mg) twice daily

g. IV vancomycin 15mg/kg/dose (to a maximum initial dose of 750mg) 6 hourly. Therapeutic drug monitoring is required.

h. IV cefazolin 50mg/kg/dose (to a maximum of 2 grams) 8 hourly.

i. IV clindamycin 15mg/kg/dose (to a maximum of 600mg) 8 hourly.

j. IV ceftriaxone 50mg/kg/dose (to a maximum of 2 grams) once daily.

k. IV ciprofloxacin 10-15mg/kg/dose (to a maximum of 400mg) 12 hourly. ChAMP approval required.

Related CAHS internal policies, procedures and guidelines
Antimicrobial Stewardship Policy
ChAMP Empiric Guidelines and Monographs

References and related external legislation, policies, and guidelines

1. Antibiotic Writing Group (2021). eTG complete. West Melbourne, Therapeutic Guidelines Ltd.
2. Open Globe Injuries: Emergencyt evaluation and initial management [Internet]. Up To Date. 2021 [cited 15/07/2022]. Available from: https://www-uptodate-com.pklibresources.health.wa.gov.au/contents/open-globe-injuries-emergency-evaluation-and-initial-management?search=open%20globe%20injury&source=search_result&selectedTitle=1~16&usage_type=default&display_rank=1
3. Peri-orbital and orbital cellulitis [Internet]. BMJ Best Practice. 2021 [cited 07/10/2021]. Available from: http://bestpractice.bmj.com.pklibresources.health.wa.gov.au/best-practice/monograph/734.html
4. Acute conjunctivitis [Internet]. BMJ Best Practice. 2021 [cited 07/140/2021]. Available from: http://bestpractice.bmj.com.pklibresources.health.wa.gov.au/best-practice/monograph/68/treatment/details.html
5. Royal Australian College of General Practitioners, Pharmaceutical Society of Australia, Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists. AMH: Children's Dosing Companion. Adelaide: Australian Medicines Handbook Pty Ltd; 2022.

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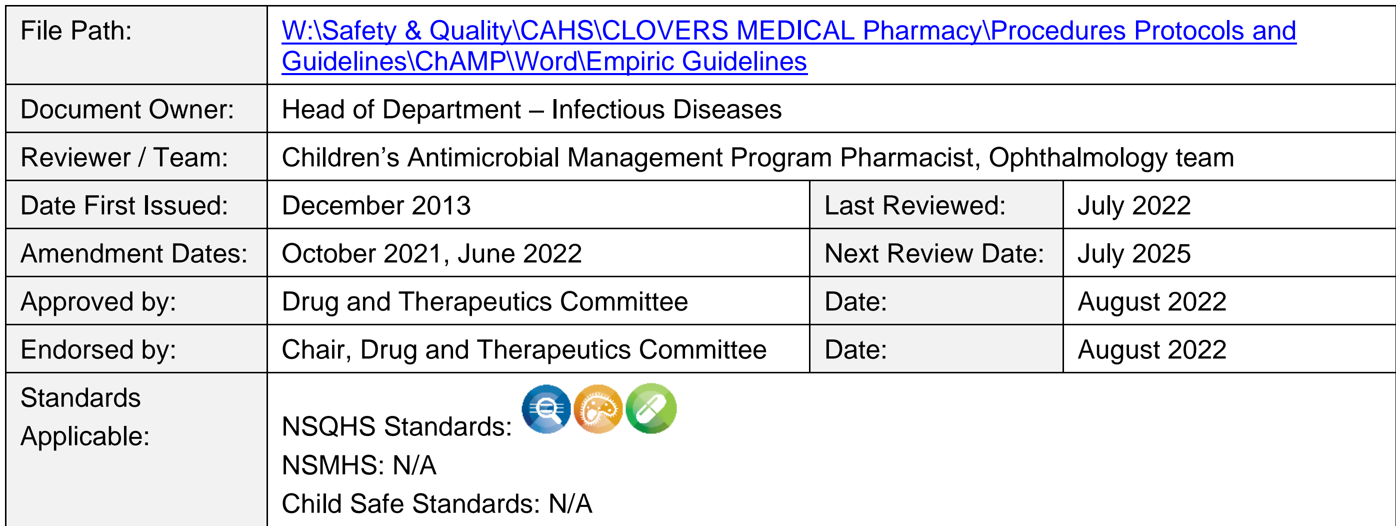

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