GUIDELINE

Surgical Prophylaxis – Craniofacial, Maxillofacial and ENT

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

- Surgical prophylaxis refers to a **single** preoperative dose given 0 to 60 minutes prior to surgical incision unless otherwise stated.(1)
- Patients receiving broad spectrum antibiotics prior to surgery may not require additional surgical antibiotic prophylaxis. For patients already receiving beta-lactam antibiotics (e.g. cefazolin, piperacillin tazobactam or amoxicillin clavulanate) an additional dose can be given just prior to surgical incision if the last dose was given >3 hours prior to surgery.
- If **vancomycin** is required for surgical prophylaxis, start the vancomycin infusion within the 120 minutes before surgical incision (ideally at least 15 minutes before incision) to ensure adequate blood and tissue concentrations at the time of incision and allow potential infusion-related reactions to be recognised before induction of anaesthesia. The infusion can be completed after surgical incision.(1)

CLINICAL SCENARIO	DRUGS/DOSES			
	Standard Protocol	Known or Suspected MRSA[a]	Low risk penicillin allergy[b]	High Risk Penicillin allergy[b]
Head and neck surgery – uncomplicated (e.g. thyroidectomy, lymph node excision, parotidectomy) ≥ 4 weeks old	Antibiotic prophylaxis is **not** recommended			
Head and neck surgery – major procedure (e.g. insertion of prosthetic material, extensive neck dissection, reconstructive surgery, incision through mucosal surface) ≥ 4 weeks old	IV cefazolin 30 mg/kg (to a maximum of 2 grams) as a single dose If surgery >3 hours, repeat dose intraoperatively at 3 hours **AND** IV metronidazole 12.5 mg/kg (to a maximum of 500 mg) as a single dose If surgery >12 hours, repeat dose intraoperatively at 12 hours	**ADD** vancomycin[c] to standard protocol	As per standard protocol	clindamycin[d] **ADD** gentamicin[e] for extensive neck dissection/ debulking or reconstructive surgery
Selected routine elective ENT procedures: (e.g. tonsillectomy adenoidectomy endoscopic sinus surgery septoplasty uncontaminated simple neck dissection) ≥ 4 weeks old	Antibiotic prophylaxis is **not** recommended for these procedures as it has not been shown to reduce postoperative infection rates. Prophylaxis against endocarditis for these procedures in patients with certain cardiac conditions is recommended – see the Medical Prophylaxis Guideline.			
Cochlear implant ≥ 4 weeks old	IV cefazolin 30 mg/kg (to a maximum of 2 grams) as a single dose If surgery >3 hours, repeat dose intraoperatively at 3 hours	**ADD** vancomycin[c] to standard protocol	As per standard protocol	vancomycin[c]

CLINICAL SCENARIO	DRUGS/DOSES			
	Standard Protocol	Known or Suspected MRSA[a]	Low risk penicillin allergy[b]	High Risk Penicillin allergy[b]
ENT surgery – major procedures (e.g. Tympanomastoid (mastoidectomy) surgery / Laryngectomy) ≥ 4 weeks old	IV cefazolin 30 mg/kg (to a maximum of 2 grams) as a single dose If surgery >3 hours, repeat dose intraoperatively at 3 hours **AND** IV metronidazole 12.5 mg/kg (to a maximum of 500 mg) as a single dose If surgery >12 hours, repeat dose intraoperatively at 12 hours	**ADD** vancomycin[c] to standard protocol	As per standard protocol	clindamycin[d] **AND** gentamicin[e]
Oral maxillofacial surgery – uncomplicated (e.g. dental implants, clean procedures) ≥ 4 weeks old	Antibiotic prophylaxis is **not** recommended			
Oral maxillofacial surgery - cleft lip and palate repair ≥ 4 weeks old	IV benzylpenicillin 30 mg/kg (to a maximum of 1.2 g) as a single dose If surgery >1 hour, repeat dose intraoperatively at one hour	As per standard protocol	cefazolin[f] **AND** metronidazole[g]	clindamycin[d]
Oral maxillofacial surgery – major procedures (e.g. Abbe flap alveolar bone graft pharyngoplasty orthognathic surgery, Mandibular / maxillary osteotomies) ≥ 4 weeks old	IV cefazolin 30 mg/kg (to a maximum of 2 grams) as a single dose If surgery >3 hours, repeat dose intraoperatively at 3 hours **AND** IV metronidazole 12.5 mg/kg (to a maximum of 500 mg) as a single dose If surgery >12 hours, repeat dose intraoperatively at 12 hours	**ADD** vancomycin[c] to standard protocol	As per standard protocol	clindamycin[d]
Contaminated non-elective surgery (e.g. complex wounds, open fractures, wound soiling)	Refer to Surgical Prophylaxis: Skin, soft tissue and Orthopaedic			
Craniofacial surgery **without** insertion of prosthetic material. ≥ 4 weeks old	Antibiotic prophylaxis is **not** recommended			

CLINICAL SCENARIO	DRUGS/DOSES			
	Standard Protocol	Known or Suspected MRSA[a]	Low risk penicillin allergy[b]	High Risk Penicillin allergy[b]
Craniofacial surgery **with** insertion of prosthetic material (e.g. craniofacial surgery and spring cranioplasty) ≥ 4 weeks old	IV cefazolin 30 mg/kg (to a maximum of 2 grams) as a single dose If surgery >3 hours, repeat dose intraoperatively at 3 hours	**ADD** vancomycin[c] to standard protocol	As per standard protocol	clindamycin[d] **AND** gentamicin[e]
Traumatic wounds	Refer to traumatic wounds in Surgical Prophylaxis: Skin, soft tissue and Orthopaedic			

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, Goldfields and the Pilbara) a lower threshold for suspected MRSA should be given
   iv. Children with recurrent skin infections or those unresponsive to ≥ 48 hours 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) IV vancomycin **15 mg/kg** (to a maximum initial dose of 750 mg) given via slow infusion. If surgery >6 hours, repeat dose intraoperatively at 6 hours (**repeat dose not required in the setting of abnormal renal function)**. The vancomycin infusion should be commenced within the 120 minutes before surgical incision (ideally at least 15 minutes before incision) to ensure adequate blood and tissue concentrations at the time of incision and to allow potential infusion-related reactions to be recognised before induction of anaesthesia. The infusion can be completed after surgical incision.

d) IV clindamycin **15 mg/kg** (to a maximum of 600 mg) as a single dose. If surgery >6 hours, repeat dose intraoperatively at 6 hours.

e) IV gentamicin **2 mg/kg** (to a maximum of 180 mg) as a single dose only.

f) IV cefazolin **30 mg/kg** (to a maximum of 2 grams) as a single dose. If surgery >3 hours, repeat dose intraoperatively at 3 hours

g) IV metronidazole **12.5 mg/kg** (to a maximum of 500 mg) as a single dose. If surgery >12 hours, repeat dose intraoperatively at 12 hours.

Related CAHS internal policies, procedures and guidelines
Antimicrobial Stewardship Policy
ChAMP Empiric Guidelines and Monographs
KEMH Neonatal Medication Protocols

References and related external legislation, policies, and guidelines

1. Antibiotic Writing Group. Therapeutic Guidelines - Antibiotic. West Melbourne: Therapeutic Guidelines Ltd; 2025. Available from: http://online.tg.org.au.pklibresources.health.wa.gov.au/ip/
2. Bratzler DW, Dellinger EP, Olsen KM, Perl TM, Auwaerter PG, Bolon MK, et al. Clinical practice guidelines for antimicrobial prophylaxis in surgery. Am J Health Syst Pharm. 2013;70(3):195-283.

This document can be made available in alternative formats on request.

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