GUIDELINE

Surgical Prophylaxis: Gastrointestinal and Abdominal

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)
- 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 toxicity 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]
Gastrointestinal / Abdominal	All gastrointestinal surgery (<1 month of age)	IV cefazolin 30mg/kg (to a maximum of 2 grams) as a single dose. **AND** IV metronidazole 15mg/kg as a single dose. For prolonged surgeries, repeat the dose of each antibiotic every 8 hours intraoperatively	As per standard protocol		clindamycin[c] **AND** gentamicin[d] dosing as per neonatal guidelines
	Upper gastrointestinal tract or biliary surgery (≥1 month of age)	IV cefazolin 30mg/kg (to a maximum of 2 grams) as a single dose. For prolonged surgeries, repeat	As per standard protocol		clindamycin[c] **AND** gentamicin[d]

CLINICAL SCENARIO		DRUGS/DOSES			
		Standard Protocol	**Known or Suspected MRSA[a]**	**Low Risk Penicillin allergy[b]**	**High Risk Penicillin allergy[b]**
		the dose every 3 hours intraoperatively			
Gastrointestinal / Abdominal	PEG tube placement, revision or conversion	IV cefazolin 30mg/kg (to a maximum of 2 grams) as a single dose.	**ADD** vancomycin[e] to standard protocol	As per standard protocol	clindamycin[c] **AND** gentamicin[d]
	Endoscopic procedures (≥1 month): - gastroduodenal, - oesophageal - small intestine - colorectal surgery	No antibiotic surgical prophylaxis indicated			
	Nonendoscopic Elective colorectal surgery (≥1 month)	IV cefazolin 30mg/kg (to a maximum of 2 grams) as a single dose. (For prolonged surgeries, repeat the dose every 3 hours intraoperatively) **AND** IV metronidazole 12.5mg/kg (to a maximum of 500mg) as a single dose.	As per standard protocol		metronidazole **AND** gentamicin[d]
	Appendicectomy or Intra-abdominal surgery with peritonitis or a perforated viscus	If the patient is already receiving antibiotic therapy with IV amoxicillin/clavulanic acid, an additional dose is required if more than 3 hours have passed since the last dose.			
		IV amoxicillin/clavulanic acid[f] as a single dose For prolonged surgeries, repeat the dose every 3 hours intraoperatively	As per standard protocol	ceftriaxone[g] **AND** metronidazole[h]	metronidazole[h] **AND** gentamicin[d]
		See Intra-abdominal Sepsis treatment guideline for the recommended post-operative antibiotic therapy.			

CLINICAL SCENARIO	DRUGS/DOSES			
	Standard Protocol	**Known or Suspected MRSA[a]**	**Low Risk Penicillin allergy[b]**	**High Risk Penicillin allergy[b]**
Hernia repair	IV cefazolin 30mg/kg (to a maximum of 2 grams) as a single dose. IF entry into the bowel lumen is expected **ADD** IV metronidazole 12.5mg/kg (to a maximum of 500mg) as a single dose	**ADD** vancomycin[e]	As per standard protocol	vancomycin[e] **OR** **If entry to the bowel is expected give** metronidazole[h] **AND** gentamicin[d]

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 clindamycin **15mg/kg** (to a maximum of 600mg) as a single dose. For prolonged surgeries, repeat the dose every 6 hours intraoperatively.

d. IV gentamicin **2mg/kg** as a single dose only. For children ≥1month to <10 years, maximum dose of 320mg, for those ≥10 years, maximum dose of 560mg. If the surgery is expected to last 6 hours or longer, consider using a single 5mg/kg dose.

e. IV vancomycin **15mg/kg** (to a maximum of 750mg) given via slow infusion. For prolonged surgeries in patients with normal renal function, repeat the dose every 6 hours intraoperatively (repeat dose not required in the setting of abnormal renal function). 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 toxicity to be recognised before induction of anaesthesia. The infusion can be completed after surgical incision

f. IV amoxicillin/clavulanic acid (doses based on amoxicillin component)

Birth (term) to <40kg: IV 25mg/kg (to a maximum of 1 gram) as a single dose.

>40kg: IV 1 gram as a single dose.

g. IV ceftriaxone **50mg/kg** (to a maximum of 2 grams) as a single dose only.

h. IV metronidazole **12.5mg/kg** (to a maximum of 500mg) as a single dose only. For prolonged surgeries, repeat the dose every 12 hours intraoperatively.

Related CAHS internal policies, procedures and guidelines *(if required)*
List and hyperlink the titles of related CAHS/PCH/CAMHS/Community Health/Neonatology policy documents – use full titles in alphabetic order, one document per line

References and related external legislation, policies, and guidelines *(if required)*
External Legislation, Standards and Policy (list and hyperlink)
The Vancouver style referencing is as per CAHS Library and Information Service.

Useful resources (including related forms) *(if required)*
List and hyperlink the titles of useful resources, do not hyperlink MR forms

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

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