



GUIDELINE

Surgical Prophylaxis: Genitourinary

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 reactions to be recognised before induction of anaesthesia. The infusion can be completed after surgical incision.⁽¹⁾
- Patients with prior urinary tract infection (UTI) should be tested and treated for bacteriuria prior to surgery. Results should be taken into consideration for the antibiotic choice for prophylaxis. If microorganisms grown in previous urine specimens are not susceptible to the protocol antibiotics then contact Infectious Diseases or Clinical Microbiology for advice.⁽¹⁾

CLINICAL SCENARIO (Children ≥1 month of age)	DRUGS/DOSES			
	Standard Protocol	Known or Suspected MRSA ^a	Low risk Penicillin Allergy ^b	High Risk Penicillin Allergy ^b
Pyeloplasty, Reimplantation or Hypospadias repair	IV gentamicin 2mg/kg (to a maximum of 320mg) as a single dose only AND IV cefazolin 30mg/kg (to a maximum of 2 grams) as a single dose Repeat dose if operation > 3 hours	vancomycin ^c AND gentamicin ^d	As per standard protocol	vancomycin ^c AND gentamicin ^d
	Ongoing prophylaxis with oral cefalexin 12.5mg/kg/dose (to a maximum of 250mg) given once daily at night OR trimethoprim with sulfamethoxazole (co-trimoxazole) 2mg/kg/dose of the trimethoprim component given once daily (to a maximum of 80mg) is recommended whilst stents are in situ.			
Cystoscopy +/- ureteric stent removal	CONSIDER IV gentamicin 2mg/kg (to a maximum of 320mg) as a single dose			
Bladder augmentation or Mitrofanoff appendico-vesicostomy	IV piperacillin/tazobactam ^e 100mg/kg as a single dose. Repeat dose if operation > 3 hours	ADD vancomycin ^c to standard protocol	gentamicin ^d AND cefazolin ^f AND metronidazole ^g	vancomycin ^c AND gentamicin ^d AND metronidazole ^g
Nephrectomy (Complete or Partial)	IV cefazolin 30mg/kg (to a maximum of 2 grams) as a single dose Repeat dose if operation > 3 hours	ADD vancomycin ^c to standard protocol	As per standard protocol	vancomycin ^c AND gentamicin ^d
Circumcision, orchidopexy or hydrocele repair	Prophylaxis not routinely recommended			

- a) Children known or suspected to be colonised with MRSA may need to have their therapy/prophylaxis modified. Children suspected of having MRSA include:
- Children previously colonised with MRSA
 - Household contacts of MRSA colonised individuals
 - 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
 - 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).
- c) 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. IV [vancomycin](#) 15mg/kg (to a

maximum dose of 750mg) given via slow infusion. Repeat dose if operation > 6 hours (**repeat dose not required in the setting of abnormal renal function**). Start the vancomycin infusion within 120 minutes before the 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 [gentamicin 2mg/kg](#) (to a maximum of 320mg) as a single dose only
- e) IV [piperacillin/tazobactam 100mg/kg](#) (to a maximum of 4 grams piperacillin component) as a single dose only. Repeat dose if operation >3 hours.
- f) IV [cefazolin 30mg/kg](#) (to a maximum of 2 grams) as a single dose only. Repeat dose if the operation is > 3 hours.
- g) IV [metronidazole 12.5mg/kg](#) (to a maximum of 500mg) as a single dose only.

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. eTG complete. West Melbourne: Therapeutic Guidelines Ltd; 2021. Available from: <https://tqldcdp-tg-org-au.pklibresources.health.wa.gov.au/etgAccess>.
2. Bratzler DW, et al. (2013). "Clinical practice guidelines for antimicrobial prophylaxis in surgery." *Am J Health-Syst Pharm* **70**: 195-283.
3. Alsaywid, B. S., et al. (2019). "Antibiotic prophylaxis in children with ureteric stents: Bliss or misery?" *Urology annals* **11**(4): 421-425.

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

File Path:	<u>W:\Safety & Quality\CAHS\CLOVERS MEDICAL Pharmacy\Procedures Protocols and Guidelines\ChAMP\Word\Empiric Guidelines\PCH Templated (ED Guidelines)</u>		
Document Owner:	Head of Department – Infectious Diseases		
Reviewer / Team:	Children’s Antimicrobial Management Program (ChAMP)		
Date First Issued:	August 2013	Last Reviewed:	June 2021
Amendment Dates:	April 2019, June 2021	Next Review Date:	June 2024
Approved by:	Drug and Therapeutics Committee	Date:	August 2021
Endorsed by:	Chair, Drug and Therapeutics Committee	Date:	August 2021
Standards Applicable:	NSQHS Standards:  NSMHS: N/A Child Safe Standards: N/A		

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