ADULT Medication Monograph

VANCOMYCIN

This document should be read in conjunction with this **DISCLAIMER**

Antimicrobial Restriction – Monitored

HIGH RISK Medication

Presentation	Vial: 500mg Oral: 125mg, 250mg capsules
Dose	**Severe infections caused by organisms resistant to penicillins/cephalosporins** **Loading dose** **IV infusion:** 25mg/kg actual body weight to a maximum of 1.5g twice daily **Maintenance dose** **IV infusion:** 15mg/kg actual body weight, twice daily (1 – 1.5g, twice daily) Round doses to closest 250mg Doses above 1.5g are to be prescribed at the direction of a clinical microbiologist or infectious diseases physician **Surgical prophylaxis** **IV infusion:**

Weight (kg)	Dose
≤ 50	15mg/kg
50-75	1g
≥ 75kg	1.5g

Renal impairment

Less frequent dosing is required to achieve target trough concentrations; seek microbiology advice. Both dose and dose interval may need adjustment

	Clostridium Difficile Infection **Oral:** 125mg every 6 hours for 10 days
Administration	**IV infusion** ***Step 1 Reconstitution:*** Add 10mL Water for Injection to vial. Concentration is 50mg/mL. ***Step 2 Dilution***: Further dilute to 5mg/mL with glucose 5% or sodium chloride 0.9%. ***Step 3 Administration***: Refer to the table below for recommended infusion volumes and rates. *Administration should not exceed 10mg/minute to avoid "red man syndrome"*

Dose	Volume	Rate Infusion
500mg	≥ 100mL	≥ 60 mins
750mg	≥ 100mL	≥ 75 mins
1g	≥ 250mL	≥ 100 mins
1.25g	≥ 250mL	≥ 125 mins
1.5g	≥ 250mL	≥ 150 mins

If necessary, a maximum of 1g may be infused over 1 hour. For doses over 1g, increase the infusion time by 30 minutes for each additional 500mg

Fluid restricted patients

May be administered using a concentration NOT exceeding 10mg/mL via a central line or PICC and at a rate NOT exceeding 10mg/minute

Surgical prophylaxis

Complete administration prior to induction of anaesthesia

Continuous infusion

Can be given as continuous infusion – seek microbiology advice regarding dosing and monitoring

Oral:

Oral capsules: May be given at any time regarding food.

If oral capsules are not available, use vial for oral administration:

Withdraw the contents of 1 vial (500mg) and dilute with 10mL of water. Concentration is 50mg/mL. Give patient 2.5mL (125mg) to drink.

Pregnancy	**1st Trimester:** Considered safe to use **2nd Trimester:** Considered safe to use **3rd Trimester:** Considered safe to use
Breastfeeding	Safe to use
Monitoring	➢ **Sampling time:** Trough - immediately before fourth dose Monitor every 3 days thereafter For continuous infusions check level at 36-48h ➢ **Target trough concentrations:** 15 -20 mg/L for 12 hourly dosing 20- 25 mg/L for continuous infusion ➢ **Monitoring:** Patients with impaired renal function may require less frequent dosing to achieve target trough concentrations Contact a clinical microbiologist if levels fall outside the recommended therapeutic range for advice re dose adjustments Possible **adverse effects** via IV infusion include local pain, thrombophlebitis May increase risk of ototoxicity and nephrotoxicity
Clinical guidelines and policies	WNHS Policy Manual: Antimicrobial Stewardship (AMS) policy WNHS Policy Manual: Infection Prevention and Management: Micro Alerts and Multi-Resistant Organisms KEMH Clinical Guideline: O&G: Infections: Antibiotic Prophylaxis for Caesarean Section KEMH Clinical Guideline: O&G: Group B Streptococcal Disease KEMH Clinical Guideline: O&G: Group A Streptococcus (GAS) KEMH Clinical Guideline: O&G: Cardiac Disease
References	Australian Medicines Handbook. Vancomycin. In: Australian Medicines Handbook [Internet]. Adelaide (South Australia): Australian Medicines Handbook; 2017 [cited 2017 Dec 13]. Available from: https://amhonline.amh.net.au/ MIMS Australia. DBL Vancomycin Hydrochloride for Intravenous Infusion. In: MIMS Online [Internet]. St Leonards (New South Wales): MIMS Australia; 2019 [cited 2019 Aug 05]. Available from: https://www.mimsonline.com.au Society of Hospital Pharmacists of Australia. Vancomycin . In: Australian Injectable Drugs Handbook [Internet]. [St Leonards, New South Wales]: Health Communication Network; 2017 [cited 2017 Dec 13]. Available from: http://aidh.hcn.com.au

	The Royal Women's Hospital. Vancomycin. In: Pregnancy and Breastfeeding Medicines Guide [Internet]. Parkville (Victoria): The Royal Women's Hospital; 2016 [cited 2017 Dec 13]. Available from: https://thewomenspbmg.org.au/ Therapeutic Guidelines. Acute infectious diarrhoea: *Clostridium difficile* infection. In: eTG complete [Internet]. West Melbourne (Victoria): Therapeutic Guidelines; 2019 [cited 2019 Aug 05]. Available from: https://tgldcdp.tg.org.au Therapeutic Guidelines. Principles of vancomycin use. In: eTG complete [Internet]. West Melbourne (Victoria): Therapeutic Guidelines; 2017 [cited 2017 Dec 13]. Available from: https://tgldcdp.tg.org.au

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Standards Applicable:	NSQHS Standards: 1 Governance, 3 Infection Control, 4 Medication Safety		

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