TEICOPLANIN

Document number	JHCH_NICU_19.16
Drug group	Antibiotic Glycopeptide
Indications for use	Serious infections due to gram positive organisms resistant to other drugs e.g. Vancomycin resistant enterococcus
Contra-indications	Previous reactions to the drug
Presentation	Lyophilised powder for injection 400 mg plus solvent
Reconstitution & dilution	The entire contents of the accompanying diluent ampoule should be added slowly down the sidewall of the vial. The vial should be rolled gently between the palms until the powder is completely dissolved, taking care to avoid foam formation. **Do not shake.** If the solution does become foamy, allow to stand for 15 minutes for the foam to subside. The reconstituted solution contains 400 mg/3.0 mL teicoplanin.
Stability	Discard unused drug.
Dosage	Loading dose 15mg/kg (range 10-20 mg/kg) Maintenance 8mg/kg single daily dose starting 24 hours after loading dose (range 6-10 mg/kg. 10mg/kg recommended for serious infections e.g. endocarditis)
Administration	IV infusion over 30 min. IM
Compatibility	Fluids & Solutions: 5% glucose, 0.9% sodium chloride Y-Site: linezolid, heparin
Incompatibility	Fluids & Solutions: Other fluids not mentioned above Y-Site: Aminoglycosides (amikacin, gentamicin, etc.), ciprofloxacin
Monitoring	Monitor urine output. Blood levels not usually required as there is no clear relationship between plasma concentration and toxicity. However levels can be measured to optimise therapy. Trough levels over 10mg/L required for efficacy, or above 20 mg/L in endocarditis.
Adverse effects	Few noted in neonates. Similar to vancomycin but less common. Too rapid infusion may cause flushing and hypotension leading to cardiac arrest (Redman syndrome) histamine release, rash and itch. Nephrotoxicity, ototoxicity (both enhanced by administration of aminoglycosides at same time), thrombophlebitis. Others: fever, asystole, neutropenia, thrombocytopenia (usually after > 3 weeks treatment.)
Other comments	Triphasic pharmacokinetics with a biphasic distribution and prolonged elimination Renal clearance ~80% of drug dose. Reduce dose in renal impairment after the 4th day. 90-95% in plasma is protein bound Half-life in adults 60 hours (30-190) Caution with other nephrotoxic and ototoxic drugs such as gentamicin, frusemide, amphotericin B Development of resistance during treatment of staphylococci has been described Cross resistance with Vancomycin has occurred in staphylococci and enterococci. Poor CSF penetration
Storage & stability	Store at room temperature and protect from light. Can be stored at 4 ^{0}C after reconstitution and discarded after 24 hours. Do not store in syringe.

Compiled	March 2013	**Review**	March 2017

References	Micromedex online 8/3/2013 MIMSOnline Full product information, March 2013 A review of teicoplanin in the treatment of serious neonatal infections. Fanos, V et al. European Journal of Pediatrics 156, 6:423 Experience with teicoplanin in the treatment of neonatal staphylococcal sepsis. Yalaz M. et al. J Int Med Res 2004, Sep-Oct;32(5):540 Use of Teicoplanin in Preterm Neonates with Staphylococcal Late=Onset Neonatal Sepsis. Depraeuwe P. et al. Biol Neonate 1998;73:287 Australian Injectable Drugs Handbook. 5th Edition
Groups consulted in development of this guideline	NICU medical staff NICU nursing staff JHCH Pharmacy staff