CIPROFLOXACIN

Read in conjunction with Disclaimer

Formulary: Highly Restricted Requires microbiologist approval **before** commencing.	
Presentation	**IV infusion:** 200 mg/100 mL = **2 mg/mL** **Oral suspension:** 50 mg/mL (prepared in pharmacy)
Classification	Quinolone antibacterial
Indication	Treatment of susceptible organisms, including *Pseudomonas aeruginosa.*
Special Considerations	• Ensure adequate hydration and avoid alkaline urine (increased risk of crystalluria). • Risk of haemolytic anaemia in babies with **G6PD deficiency**.
Monitoring	Full blood count, hepatic markers and renal function, particularly in prolonged therapy.
Compatibility	**Fluids:** Glucose 5%, glucose 10%, sodium Chloride 0.9%. Refer to KEMH Neonatal Medication Guideline: Y-Site IV Compatibility in Neonates
Interactions	• Ciprofloxacin inhibits the metabolism of **caffeine** with potential increase in caffeine effects. • Ciprofloxacin may decrease **phenytoin** concentration and its therapeutic effect. • Ciprofloxacin may increase **sildenafil** concentration, increasing the risk of adverse effects. • Ciprofloxacin may interfere with absorption of **levothyroxine**, resulting in hypothyroidism; separate drug administration times by 6 hours, particularly during a long ciprofloxacin course. • **Oral:** Iron, calcium, zinc and dairy products bind to ciprofloxacin in the GIT and can reduce its absorption, separate doses by at least 2 hours.
Adverse Effects	**Common:** Rash diarrhoea, abdominal pain, vomiting. **Infrequent/rare:** Hypo- or hyperglycaemia, pain or thrombophlebitis at IV infusion site, blood dyscrasias, seizures, photosensitivity, itch, anaphylaxis, *Clostridioides difficile* colitis, raised liver enzymes, prolonged QT interval (use with caution with other medications that prolong QT), arthralgia, arthritis, myalgia, tendonitis and tendon rupture (prolonged use).
Storage & Stability	**IV infusion:** Store at room temperature, below 25°C. Protect from light. **Oral suspension:** Refrigerate between 2 to 8°C, do not freeze.

ORAL

Presentation (for oral use)	**Oral suspension:** 50 mg/mL (prepared in pharmacy)
Dosage	**Treatment of susceptible organisms:** 10 to 15 mg/kg/dose every 12 hours.
	Note: Doses up to 20 mg/kg/dose have been used to treat *Pseudomonas aeruginosa.* Consult paediatric ID/microbiology.
Dose Adjustment	Consider dosage adjustment in renal impairment.
Preparation	**Use suspension made by pharmacy** *If suspension not available – prepare the following solution using **ciprofloxacin 500 mg tablet**:* • Crush HALF of a ciprofloxacin tablet (250 mg) and disperse in 10 mL of water • Tablets do not disperse easily. Shake until an even dispersion is formed and then measure the dose immediately. • Concentration is **25 mg/mL** • Discard any unused solution.
Administration	• Shake well before use. • Draw prescribed dose into oral/enteral syringe. • Oral ciprofloxacin is very unpalatable. • Best absorbed on an empty stomach, should be given 1 hour before or 2 hours after feeds. • Iron, calcium, zinc and dairy products bind to ciprofloxacin in the GIT and can reduce its absorption, separate doses by at least 2 hours.

INTRAVENOUS

Presentation (for IV use)	**IV infusion:** 200 mg/100 mL = **2 mg/mL** ***Available from CIVAS (KEMH) and PCS (PCH):*** *2 mg/mL*
Dosage	**Treatment of susceptible organisms:** 10 mg/kg/dose every 12 hours.
	Note: Doses up to 20 mg/kg/dose have been used to treat *Pseudomonas aeruginosa.* Consult paediatric ID/microbiology.
Dose Adjustment	Consider dosage adjustment in renal impairment.
Preparation	**IV infusion**: 2 mg/mL *Use undiluted.*
	For infants with renal impairment consider a concentration reduction. **Dilution:** • Draw up 1 mL (2 mg) and make up to 4 mL total volume with compatible fluid. *Concentration now equal to* **0.5 mg/mL**

	Administration	**IV infusion:** • Infuse via syringe driver pump over 60 minutes. • The solution is clear and colourless to slightly yellow. • May cause burning, pain, redness and swelling at the infusion site especially if the infusion is given over less than 60 minutes.	

Related Policies, Procedures, and Guidelines

Pharmaceutical and Medicines Management Guidelines:

CAHS Neonatology – Medication Administration Guideline

WNHS Cold Chain Management for Medications and Vaccines

CAHS Medication Refrigerators and Freezers

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	Std 4: Medication Safety				
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