Waikato District Health Board	Type: Drug Guideline	Document reference: 0569	Manual Classification: Waikato DHB Drug Guidelines
Title: **Amoxicillin for Neonates**			Effective date: **24 August 2020**
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BRIEF ADMINISTRATION GUIDE

For detailed information refer to The Australasian Neonatal Medicines Formulary **amoxicillin** guideline

Critical Note: there are minor variations between the ANMF and Waikato DHB best practice within this drug guideline – see yellow shaded text

Indications:
- Bacterial infections sensitive (or likely to be) to amoxicillin
- Early sepsis (≤ 2 days) empiric therapy (in combination with gentamicin)

Route: Intravenous, intramuscular, oral
- Injection supplied as amoxicillin sodium, equivalent to amoxicillin 250 mg vial
- Oral (request from Pharmacy) supplied as amoxicillin 250 mg/5mL or 125 mg/5mL suspension
- pH of amoxicillin 8 to 10

Dose:

Route	**Dose** (mg/kg/dose)	**Postnatal age** (days)	**Dosing Interval** (hours)
IV	50*	0 to 7	12
		>7	8

*Note: dose at 100 mg/kg/dose IV for severe infections e.g. meningitis

Oral dosing for non-systemic infections: 30 mg/kg (maximum 125 mg) three times daily

Preparation and administration

Intravenous
- Reconstitute 250 mg vial with **4.8 mL** of water for injection to make a concentration of 50 mg/mL (Note: 250 mg of amoxicillin displaces 0.2 mL of diluent)
- Shake vial vigorously, as soon as diluent is added, to dissolve powder and check for absence of particulate matter before proceeding
- Draw up the required volume for the dose and if necessary dilute further with sodium chloride 0.9%
- Infuse dose over **30 minutes** using Guardrails profiled syringe driver
- Flush before and after the dose with sodium chloride 0.9% (preferably) or glucose 5 or 10 %. Note: although amoxicillin is reported to be unstable with glucose (the medication degrades faster) it is deemed acceptable to flush with or administer concurrently when necessary. The flush should be administered at the same rate as the amoxicillin.

Intramuscular
- Dilute 250 mg vial with **1.3 mL** of water for injection. This produces a final concentration of 167 mg/mL (250mg/1.5mL)
- Note: IM dose volume should be kept to ≤1mL if possible to decrease pain.
- Inject dose into a large muscle e.g. buttock, thigh

Oral
- Shake suspension well then draw up appropriate volume in an oral syringe. The dose may be mixed with milk or water if required. After mixing administer immediately.

Monitoring

- Consider if specimen for culture and sensitivity testing is required before first dose
- Assess for signs of anaphylaxis and adverse reactions
- Observe infusion site for thrombophlebitis
- Monitor temperature and other parameters appropriate to the condition

- Observe for change in bowel frequency
- Monitor renal, hepatic and hematologic function periodically

Storage and Stability

- Reconstituted solution in the vial and solutions diluted further with sodium chloride 0.9% are stable for up to 6 hours.
- The reconstituted oral suspension is stable for 14 days at room temperature or refrigerated (preferred).

Competency for Administration

This procedure is carried out by, or under, the direct supervision of a registered nurse/registered midwife who holds current Waikato DHB Generic Medicine Management and IV certification plus Guardrails competency (if administering IV) as well as Neonatal specific competency NCV/NAC (if administering via CVAD).

Guardrails Information

Amoxicillin is Guardrail profiled on the CC pump for NICU. Following are the Guardrail limits:

Guardrails Drug Name	**Amoxicillin***		
Pump	**CC**		
	0.4-1kg	**1-2kg**	**2-3 & 3-5kg**
Concentration (mg/ml)			
Minimum	12.5	31	50
Maximum	100	100	100
Dose rate (mg/kg/hour)			
Default	100	100	100
Soft minimum	50	50	50
Soft maximum	200	200	200
Hard max	202	202	202

References

- Royal Prince Alfred Hospital NeoMed Consensus Group. Amoxicillin Drug Information Sheet. October 2019. Available from: https://www.slhd.nsw.gov.au/rpa/neonatal/NeoMedPaperCopy.html
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