

Antibiotic Usage in Newborn Unit

Guideline Responsibilities and Authorisation

Department Responsible for Guideline	Newborn Intensive Care Unit
Document Facilitator Name	David Bouchier
Document Facilitator Title	Neonatologist
Document Owner Name	Jutta Van den Boom
Document Owner Title	Clinical Director NICU
Target Audience	Neonatal staff
<p>Disclaimer: This document has been developed by Waikato District Health Board specifically for its own use. Use of this document and any reliance on the information contained therein by any third party is at their own risk and Waikato District Health Board assumes no responsibility whatsoever.</p>	

Guideline Review History

Version	Updated by	Date Updated	Summary of Changes
3	David Bouchier	01/04/2020	Updated definitions

Antibiotic Usage in Newborn Unit

1 Overview

1.1 Purpose

To assist with evidence – based best practise antibiotic use in suspected neonatal sepsis. (use in conjunction with NICU Medical Procedure [Early Onset Neonatal Infection Prevention \(including GBS and PROM\)](#) (Ref. 4381)).

1.2 Scope

Nurses, Nurse Practitioner, Clinical Nurse Specialist, Registrar, Consultant.

1.3 Patient / client group

Neonates

1.4 Definitions

- Early onset sepsis is infection occurring the first 2 days of life.
- Late onset sepsis is infection beyond 2 days of life.

These above definitions are consistent with the ANZNN.

- Suspected Sepsis – Clinical and/or laboratory findings raise suspicion of sepsis.
- Confirmed Sepsis – A neonate with suspected sepsis where an infection agent is isolated from a normally sterile site.

2 Clinical Management

2.1 Guideline

1. Early onset signs (Day 0-2)

- Amoxicillin and gentamicin

100 % of WWH isolates were sensitive to this combination in the past 20 years

- Substitute cefotaxime for gentamicin if significant asphyxiated, renal impairment or planned Indomethacin use.

2. Late onset sepsis (>2 days)

- Amikacin and flucloxacillin

99% of WWH isolates were sensitive to this combination in the past 20 years

Antibiotic Usage in Newborn Unit

3. Consider substituting amikacin with vancomycin if a coagulase negative staphylococcus infection is responding poorly to amikacin.
4. Suspected Meningitis – include cefotaxime and /or acyclovir in the antibiotic regimen.
5. Suspected necrotizing enterocolitis - include amoxicillin- clavulanic acid.
6. Antifungal prophylaxis – nystatin suspension – 1/4ml orally 4hrly should be prescribed for the duration of the antibiotic treatment.

2.2 Potential complications

- a. Extravasation at infusion site
- b. Allergic reaction to antibiotics

3 Audit

3.1 Indicators

Antibiotics prescribed at appropriate dosage and interval.

4 Evidence base

4.1 Summary of Evidence, Review and Recommendations

The recommended antibiotics provide effective antimicrobial cover for the common neonatal pathogens in the Waikato NICU. The current prevalent early pathogens are GBS, E Coli and H. Influenza. The current late pathogens are CONS, Staph aureus and a range of gram negative bacilli.

4.2 References

- 1 AAP – Redbook on line (2020)
- 2 Sivanandan Setal, Choice and Duration of Antimicrobial Therapy for Neonatal Sepsis and Meningitis. Int. J. Paediatrician (2011), Article ID 712150
- 3 Waikato NICU – Infection Database

4.3 Associated Waikato DHB Documents

- NICU Medical Procedure [Early Onset Neonatal Infection Prevention \(including GBS and PROM\)](#) (Ref. 4381)
- NICU Drug Guidelines:
 - [Aciclovir IV for neonates](#) (Ref. 0550)
 - [Amikacin for neonates](#) (Ref. 0562)
 - [Amoxicillin for neonates](#) (Ref. 0569)

Doc ID:	1659	Version:	3	Issue Date:	6 MAY 2020	Review Date:	6 MAY 2023
Facilitator Title:	Clinical Director			Department:	NICU		
IF THIS DOCUMENT IS PRINTED, IT IS VALID ONLY FOR THE DAY OF PRINTING							Page 3 of 4

Antibiotic Usage in Newborn Unit

- [Amoxicillin - Clavulanic Acid for neonates](#) (Ref. 0582)
- [Cefotaxime for neonates](#) (Ref. 0601)
- [Flucloxacillin for neonates](#) (Ref. 2918)
- [Gentamicin for neonates](#) (Ref. 2923)
- [Vancomycin IV for neonates](#) (Ref. 2976)

Doc ID:	1659	Version:	3	Issue Date:	6 MAY 2020	Review Date:	6 MAY 2023
Facilitator Title:	Clinical Director			Department:	NICU		
IF THIS DOCUMENT IS PRINTED, IT IS VALID ONLY FOR THE DAY OF PRINTING							Page 4 of 4