Admission to Level II - Special Care Nursery for neonates

Procedure Responsibilities and Authorisation

Department Responsible for Procedure	NICU
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Procedure Review History

Version	Updated by	Date Updated	Description of Changes
5	Chantelle Hill	June 2017	Updating change in practice
4	Joyce Mok	2015	3-yearly update
3	Chantelle Hill	2012	Update to new format
3	Tricia Ho	2007	update

1. Overview

1.1 Purpose

To ensure infant receives prompt and appropriate monitoring and management; parents and family/whanau are informed and participate in partnership during the care process.

1.2 Scope

For neonates

1.3 Indications for admission:

- Premature infant <36/40
- Low birthweight infant <2500 grams
- Infant with birthweight >5000 grams
- Prolonged rupture of membranes (PROM) with infants exhibiting signs of infection
- Infants with blood sugar levels <2.6 mmol/L after two dextrose gel treatment
- Infants exhibiting signs of mild respiratory distress: tachypnoea, grunting, cyanosis, in-drawing, nasal flaring
- Infants with surgical conditions
- Infants of drug-dependent mothers, showing signs of withdrawal
- Infant requiring close observation e.g. pyrexial, vomiting, abdominal distension, hypothermia.
- Infant with jaundice who needs treatment
- Infants with a blood sugar levels<1.2mmol/L without treatment or clinical concerns
- Re-admission from home at Consultant's discretion e.g. poor feeding, dehydration

2. Clinical Management

2.1 Competency required:

- Registered Nurse who has completed LII orientation
- Enrolled Nurse who has completed LII orientation and under direction and delegation of Registered Nurse

2.2 Equipment:

- Incubator (pre-warmed 34°C) for:
  a) Infants with birthweight less than 2000 grams
  b) Cold infants, e.g. axilla temperatures less than 36°C
  c) Infants exhibiting signs of respiratory distress
  d) Any infant requiring close observations which would be best achieved by using an incubator
- A cot for:
  a) Infants with birthweight greater than 2000 grams, if temperature within normal range
  b) Infants with no signs of respiratory distress

- Incubator and phototherapy light or bilibed for jaundiced infant
- SpO_2 monitor and lead, or apnoea monitor, as indicated (refer to procedure section 15a and 15b)
- Stethoscope
- Laerdal bag and mask
- Suction apparatus set at 80-100mm Hg,
- No. 5, 8 & 10 suction catheters, as needed
- An intravenous infusion pump, if required
- Equipment for blood sugar monitoring for infants at risk
- Length measuring device e.g. statiometer

- **Documentation:** red folder that includes:
  - General treatment sheet
  - Drug prescription chart
  - Stat prescription sheet
  - Laboratory result flow sheet
  - Individualised weight chart
  - Level II observation chart
  - Fluid record chart, as required
  - Patient admission form
  - Patient care plan and feeding plan
  - Level II nursing checklist
- Tamariki Ora Health Book
- Pamphlets, e.g. “Patient Information – Newborn Intensive Care”

2.3 Procedure

1. Perform hand hygiene.
2. Ensure all appropriate equipment is set up and ready for use in advance of any admission to ensure prompt assessment of infant.
3. Welcome parents to the Unit and introduce yourself.
4. Provide information to the family and reassure them as able to ensure that parents and family/whanau understand their infant’s condition or reason for admission.
5. Gain history from health personnel/family, briefly reading through accompanying documentation if time permits.
6. Check infant’s identification bracelet or confirming with family to ensure infant’s identification is correct.
7. Assess infant’s condition quickly.
8. Don gloves.
9. Weigh infant if this has not been done in Delivery Suite and inform receptionist of NICU or WAU baby’s weight.
10. Must weigh infants who are admitted from home or other hospital.

11. Transfer infant into incubator or cot as appropriate.
12. Apply oximeter or apnoea monitor as indicated.
13. Check and document axilla temperature, heart rate and respiratory rate, +/- SpO_2.
14. Measure and document infant's head circumference and length.
15. Monitoring and documentation

a) Indications for continuous SpO_2 monitoring

- Infants <32/40 gestation
- Infants on low flow oxygen therapy
- Infants admitted with a recent history or signs of respiratory distress
- Infants with history or suspected of cyanotic episodes, desaturation or bradycardia
- Infant requiring close monitoring, e.g. history of maternal or infant pyrexia, PROM >24 hours, suspected sepsis
- Hypothermic infants: axilla temperature ≤ 36°C
- Infants with history of administration of drugs causing/potentially causing respiratory depression
- Infant who has Naloxone immediately after birth
- Infant with history of abnormal movements within the last 48 hours

Documentation required for infants on continuous SpO_2 monitor:

- If on nasal flow, hourly gas flow, gas source (blender or wall), oxygen concentration, SpO_2 and HR, and 2 hourly of RR
- Respirations must be manually counted
- If in room air, 2 hourly SpO_2 and 1-2 hourly HR & RR as indicated by infant's condition
- Document apnoea, bradycardia, or desaturations

b) Indications for apnoea monitoring:

- Infants with a history of apnoeic episodes *without* associated desaturations
- Infants receiving caffeine medication and/or within 5 days of its withdrawal
- Hypothermic infants (axilla temperature ≤ 36°C)
- Infants ≤ 34/40 gestation

Documentation required for infants on apnoea monitor:

- Minimum 4-hourly manual count RR and HR
- Document all apnoea, bradycardia, or desaturations

c) Indications for cardio-respiratory SpO_2 waveform monitoring:

- Infants with history of antenatal/perinatal/postnatal abnormal cardiac rhythm, e.g. Supraventricular tachycardia (SVT)

- Infants receiving anti-arrhythmia medication

Documentation required for infants on cardio-respiratory oximeter waveform monitoring:

- Hourly or 2-hourly SpO_2, HR, and RR as indicated by infant's condition.
- Document apnoea, bradycardia, or desaturations

d) Infants for whom routine monitoring is not automatically indicated:

- Term/near term infants admitted or re-admitted to NICU with problems not related to respiratory symptoms, e.g. jaundice requiring phototherapy, blood sugar ≥ 2.6mmol/L.
- Stable infants who have progressed to term/near term & no longer receiving respiratory stimulants for ≥ 5 days
- Infant of diabetic mother with stable blood sugars ≥ 2.6mmol/L for 24 hours
- Stable infants of ≥ 35/40 gestation on admission or of corrected age who have had no respiratory symptoms for minimum of 5 days

Documentation required for infants not on monitoring:

- Minimum once per shift – axilla temperature, manual count RR and HR.

16. Some infants may have feed before blood sugar is taken, as per instructions of NNS/CNS/Registrar.
17. Check blood sugar level via heel prick if infant is at risk of developing hypoglycaemia to detect early hypoglycaemia; and document results of blood sugar.

    NB: If the medical staff are planning to inset a peripheral IV catheter or obtain blood from the infant, it may be appropriate for them to obtain blood sugar sample at the same time.

    Indications for monitoring blood sugar levels are:

    - Infants less than 37 weeks gestation.
    - Infants who are small for dates
    - Infants weighing <2500g at birth
    - Infants weighing >5000g at birth
    - Infants of diabetic mothers
    - Infants exhibiting signs of respiratory distress
    - Infants with history of poor feeding
18. Report and record any abnormal findings to Registrar/NNP/CNS to ensure appropriate treatment is commenced.
19. **If NICU Receptionist is on duty:**
    Inform receptionist of infant's admission so that she can record the admission and arrange for identification stickers to be made available. An identification number is required prior to other hospital personnel processing any tests/procedures required.

If a Receptionist is not on duty:

- Coordinator/ACNM to complete the NICU Admission form and fax to WAU receptionist.
- WAU Receptionist will print/ bring to NICU the identification stickers and computer front sheet.
- NICU staff must document all admissions in the "Admission Book" to ensure accurate documentation and provide information used for statistical purposes.

20. Assist medical staff with procedures as appropriate.
21. Administer fluids/feed as prescribed.
22. Ascertain mother's desired method of feeding. If infant is fed with milk formula, obtain parental consent.
23. Advise parents of procedures, blood tests, etc., which are required or have been done.
24. Answer parents' questions as able and provide opportunity for the parents to talk with Registrar/CNS/NNP.
25. Explain to parents NICU policies, e.g. visiting policy, hand washing, etc.
26. Give parents appropriate information pamphlets, e.g. Parent Information – Newborn Intensive Care, Jaundice, etc.
27. Complete NICU Admission and Discharge form (A1770HWF) to obtain essential information pertaining to care of infant and parental/family/whanau's wishes.
28. Provide photograph for parents.
29. Fill in Tamariki Ora Health Book and commence care plan if time permit.

3. Evidence –Base

3.1 Associated documents

- Service Specific NICU medical protocol: Admission policy (2290)
- Service Specific NICU nursing procedure: Heel prick for blood sampling (4352)
- Waikato DHB policy: Breast feeding (0132)
- Waikato DHB policy: Artificial feeding (1901)

3.2 References

- Kenner, C. and Lott, J. (2007*). Comprehensive neonatal care: An integrated multidisciplinary approach*. St Louis: Saunders W.
- Gardner, S. L. et al. (2016). *Merenstein & Gardner's handbook of neonatal intensive care*. St. Louis, Missouri: Elsevier.
- Rennie, J. M. & Roberton, N.R.C (eds) (2012). *Textbook of Neonatology*. Edinburg: Churchill Livingstone 5th Edition.
- Wolters Kluwer (2016). Admission to floor, pediatric. *Lippincott Procedures*.