

Breastfeeding – Complex Care Neonates in Maternity

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1. Overview

Purpose

This document identifies neonates admitted to postnatal wards, who may require additional care while establishing breastfeeding. It encourages proactive management to pre-empt or alleviate feeding problems.

Scope

Waitemata DHB maternity staff and access holders, bureau/agency staff, Lactation Consultants and paediatric staff working with newborn babies identified as requiring additional care.

Definition

The term Complex Care Neonate, at Waitemata DHB, refers to babies who have been identified as having risk factors or clinical indications which may increase the risk of requiring admission to Special Care Baby Units and/or Paediatric management.

2. Background information

Complex care neonates are at risk of:

- Hyperbilirubinaemia
- Hypoglycaemia
- Dehydration
- Excess weight loss (defined as >10 % BW in first 3 days of life)
- Infection
- Failure to establish breastfeeding
- Increased likelihood of the use of infant formula

Accurate and early identification of these neonates can ensure appropriate and timely care is provided thus minimising the risk of the above problems.

3. Risk Factors

Most complex care neonates are identified during labour, immediately after birth, and in the first 24 hours.

- Less than 37 weeks gestation
- Less than 10th centile using the WHO growth charts - *WDHB guideline Measuring Growth in Neonates, Infants and Children*

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- Birth trauma
- Exposure to analgesia and anaesthetic agents
- Apgar score <7 at 5 minutes
- Hypothermia
- Maternal infection
- Maternal diabetes
- Maternal drug use (e.g. Propranolol, Prozac (Fluoxetine), illicit drug abuse)
- Neonatal haemolytic disease
- Neonatal syndromes (e.g. Beckwith-Wiedeman syndrome)
- Neurological issues associated with dysfunctional suck/swallow/breath
- Facial/oral anomalies; cleft lip/palate, micrognathia, severe ankyloglossia

Care planning – Where babies identify as having any of the above risk factors, a care plan should be discussed and agreed between the mother/parents and the appropriate clinician (Lead Maternity Carer, Paediatrician, SCBU Neonatal Nurse, Postnatal CCM, LC), then documented **prior to transfer to the postnatal ward**

4. Clinical signs or symptoms

Clinical signs and symptoms include:

- Evidence of biological instability: i.e. poor thermo-regulation, tachypnoea, desaturations, apnoeas. Poor state regulation impacting feeding behaviour and effectiveness i.e. sleepiness, lethargy, hypotonia, stress cues
- Inability to establish and/or maintain an effective latch
- Absent or reduced suck and/or swallow coordination resulting in ineffective milk transfer

A holistic view of the mother –infant dyad including maternal skill level in positioning and latching, abdominal or perineal pain, effects of analgesia/anaesthesia, and possible maternal low lactation/delayed lactation must be also considered.

Identification of a complex care neonate is the responsibility of both the LMC and the clinical staff caring for the baby.

5. Assessment

Infants identified as complex care require:

1. Referral to a lactation consultant
2. Close observation of as many breast feeds as possible
3. Measurement of weight at 72 hours or prior if concerns are identified
4. Assessment of Blood Glucose as per Neonatal Hypoglycaemia - see *WDHB guideline Neonatal Hypoglycaemia*
5. Regular systemic observations of temperature, pulse, and respirations every 3-4 hours before feeds for first 24 hours
6. Documentation onto the newborn feeding and observation chart
7. Support mother to hand express for additional colostrum to offer to baby

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Observation of an effective feed	
Position	Mother supports baby in alignment, baby's chest to mum's, nose to nipple
Latch	Baby's chin leads in, with a wide open mouth, latches with a large amount of breast tissue in mouth, baby maintains latch
Sucking	Effective sucking pattern; initial rapid sucks and then slower sucks with pauses, baby is offered second breast and finishes feed spontaneously and mostly settles This observation should take into account baby's gestational age, days old and mothers lactation
Swallowing	Audible or visible regular soft swallowing, appropriate to age, with no clicking

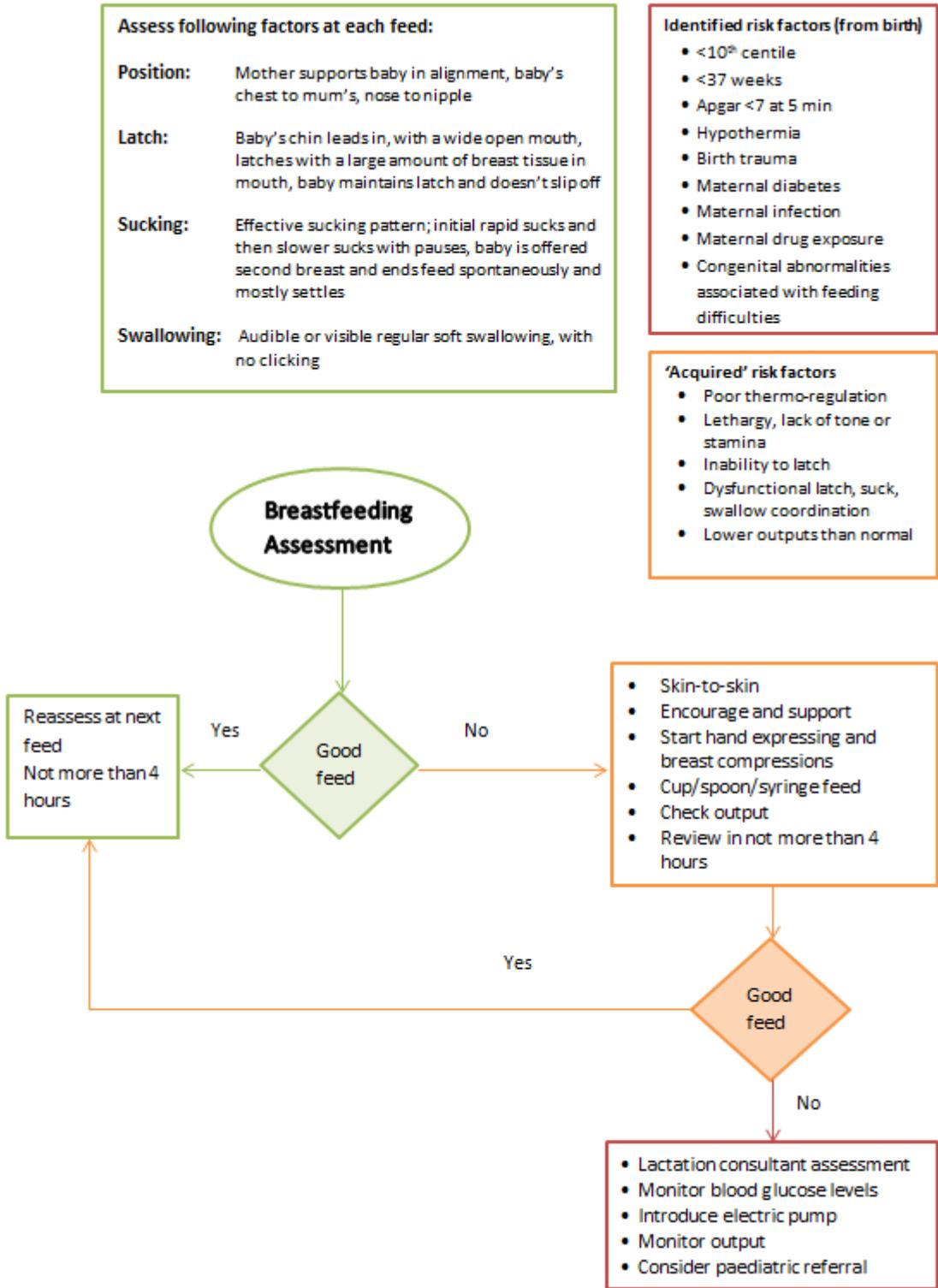
Observation of output (expected)			
	Day 1-2	Day 3-4	Day 5-6
Urine	1-2 or more per day; urates may be present (normal)	3 or more per day; nappies feel heavier Persistent urates may indicate insufficient milk intake	5 or more per day
Stools	1 or more per day, dark green/black tar-like meconium	2 or more per day, green brown, orange, yellow, becoming looser. changing stools	2 or more per day, yellow , may be quite watery

Observation of weight	
Amount of weight loss	Management
9 -10% of BW	Refer lactation consultant
Over 10% of BW	Refer paediatrician

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6. Breastfeeding assessment pathway



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7. Care planning

The LMC in collaboration with the ward staff is responsible for undertaking a daily assessment and updating the care plan accordingly. Additional advice and support can be provided by the lactation consultant and paediatrician.

Medical indications for additional feeds of Infant Formula MUST be documented within the Clinical Record

Mothers requesting use of privately arranged donor milk are supported in their choice see Breastfeeding – Donor Milk

Where there is persistent poor suck or feeding, unrelated to gestation, the LMC MUST refer to the Paediatrician, but should also refer to the lactation consultant

8. Breastfeeding management plan for complex care neonates

Step	Initial Breastfeeding management plan
1	<ul style="list-style-type: none"> • Ensure skin to skin contact for extended periods wherever possible • Observe baby for at least one breastfeed per shift. Ensure effective positioning and latching. • Consider expressing to stimulate lactation • Ensure minimum of 8 feeds in 24 hrs. • If baby unable to feed, or if otherwise indicated, express breast milk after every feed and give via spoon/syringe/cup • <i>If continued concerns continue to Step 2</i>
2	<ul style="list-style-type: none"> • For sleepy or premature babies introduce breast compressions throughout whole feed • Introduce electric breast pump alongside hand expressing after each feed and give EBM to baby via spoon/syringe/cup (or 'lactaid' at breast under LC's instruction). • If minimal EBM available take a BG level. If <2.6mmols/l refer to Waitemata DHB Neonatal Hypoglycaemia guideline • Assess if there are issues specific to mother; Is she using a nipple shield? PPH with prolonged hypotension? Previous delayed Lactogenesis II? GDM? • Consider weighing to assist with feeding plan • Refer to Lactation Consultant or Paediatrician • <i>If continued concerns continue to Step 3</i>
3	<ul style="list-style-type: none"> • Daily input from Lactation Consultant • Paediatric assessment – bloods may be required – U&Es, SBR, septic screen, urine microscopy • Frequent breastfeeds, plus expressing • <i>Consider</i> use of a galactagogue(for mother) for delayed/low lactation • Donor EBM (refer to Waitemata DHB <i>Breastfeeding – Donor Breastmilk</i> guideline) or infant formula is indicated when weight loss is in excess of 10% and minimal EBM is available. • Reduce supplements as maternal milk supply increases • Reweigh in 24 hours, then twice weekly until BW is re-established or the trend is increased weight gain

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9. References and associated documents

Document type	
NZ legislation	<i>Primary Maternity Services Notice (Section 88)</i> , MoH
WDHB guidelines & policy	Breastfeeding (10 Steps) Neonatal Hypoglycaemia Diabetes – Postnatal Breastfeeding – Donor Breastmilk
Professional body guidelines (N America and UK)	The Academy of Breastfeeding Medicine Clinical Protocols #3 <i>Hospital Guidelines for the use of supplementary feedings in the healthy term breastfed neonate</i> (2017) #10 <i>Breastfeeding the Late Preterm (34–36 6/7 Weeks of Gestation) and Early Term Infants (37–38 6/7 Weeks of Gestation)</i> , Second Revision 2016
Flaherman, V. Kuzniewicz, M. et al	(2013) <i>First-day weight loss predicts eventual weight nadir for breastfeeding newborns</i> ADC-FNN Online First, published on July 17, 2013 as 10.1136/archdischild-2012-303076
Hale, T.	(2017) <i>Medications and Mothers' Milk</i> , Hale Publishing
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Livingstone V.	(1997) <i>Neonatal insufficient breastmilk syndrome</i> . Obstetrics & Gynecology Medicine North America March 1997
Mohrbacher, N.	(2010) <i>Breastfeeding Answers Made Simple</i> Ps.203, 414, 619.
Santoro, W., Eulo' gio Martinez, F., et al	(2010) <i>Colostrum Ingested during the First Day of Life by Exclusively Breastfed Healthy Newborn Infants</i> The Journal of Pediatrics www.jpeds.com Vol. 156, No. 1
Watson Genna, C.	(2008) <i>Supporting Sucking Skills in Breastfeeding Infants</i> Jones & Bartlett Publishers.
Walker, M.	(2009) <i>Breastfeeding the Late Preterm Infant</i> Hale Publishers.
NZBA	(2017) BFHI Documents for Aotearoa New Zealand – www.babyfriendly.org.nz

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Appendix 1 - Medical Indications for the use of formula

The following section has been lifted from the NZBA information on Acceptable Sound Clinical Reasons for Supplementation (NZBA website)

In a small number of situations there may be a sound clinical indication for supplementing with breastmilk or for not using breastmilk at all. It is important to distinguish between:

1. Infants who cannot be fed at the breast but for whom breastmilk is available
2. Infants who may need other nutrition in addition to breastmilk
3. Infants who should not receive breastmilk, or any other milk, including the usual breastmilk substitutes and need a specialised formula
4. Infants for whom breastmilk is not available
5. Maternal conditions that affect breastfeeding recommendation

Infant conditions

Infants who should not receive breastmilk or any other milk except specialised formula include:

- Infants with classic galactosaemia: a special galactose-free formula is needed
- Infants with maple syrup urine disease: a special formula free of leucine, isoleucine and valine is needed
- Infants with phenylketonuria: a special phenylalanine-free formula is needed. Some breastfeeding is possible, under careful monitoring.
- Infants for whom breastmilk remains the best feeding option but who may need other food in addition to breastmilk for a limited period include:
 - Infants born weighing less than 1500g (very low birth weight)
 - Infants born at less than 32 weeks of gestation (very preterm)
 - Newborn infants who are at risk of hypoglycaemia by virtue of impaired metabolic adaptation or increased glucose demand (such as those who are preterm, small for gestational age or who have experienced significant intrapartum hypoxic/ischaemic stress, those who are ill and those whose mothers are diabetic if their blood sugar fails to respond to optimal breastfeeding or breastmilk feeding
- Infants who show symptoms of clinical dehydration, and for whom breastfeeding and maternal lactation has been fully assessed, confirming a delay in lactogenesis II.

Maternal conditions

Mothers who are affected by any of the conditions mentioned below should receive treatment according to standard guidelines.

- HIV infection (New Zealand Ministry of Health Guidelines)
- Maternal conditions that may justify temporary avoidance of breastfeeding:
 - Severe illness that prevents a mother from caring for her infant, e.g. sepsis
 - Herpes simplex virus type 1 (HSV-1). Direct contact between lesions on the mother's breasts and the infant's mouth should be avoided until all active lesions have resolved
 - Maternal medication: sedating psychotherapeutic drugs, anti-epileptic drugs and opioids and their combinations may cause side effects such as drowsiness and respiratory depression and are better avoided if a safer alternative is available
 - radioactive iodine-131 is better avoided given that safer alternatives are available – a mother can resume breastfeeding about two months after receiving this substance

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- excessive use of topical iodine or iodophor (e.g. povidone-iodine), especially on open wounds or mucous membranes, can result in thyroid suppression or electrolyte abnormalities in the breastfed infant and should be avoided
- cytotoxic chemotherapy may require that a mother stops breastfeeding during therapy.

Maternal conditions during which breastfeeding can still continue, although health problems may be of concern:

- Breast abscess. *Breastfeeding should continue on the unaffected breast. Feeding from the affected breast can continue if the situation of the abscess/drainage area permits.*
- Hepatitis B. *Infants should be given hepatitis B vaccine, within the first 48 hours or as soon as possible thereafter.*
- Hepatitis C
- Mastitis. *If breastfeeding is very painful, milk must be removed by expressing to prevent progression of the condition.*
- Tuberculosis. *Mother and baby should be managed according to national tuberculosis guidelines.*
- Substance use
 - Maternal use of nicotine, alcohol, ecstasy, amphetamines, cocaine and related stimulants has been demonstrated to have harmful effects on breastfed babies
 - Alcohol, opioids, benzodiazepines and cannabis can cause sedation in both the mother and the baby.

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