CARE OF THE HIGH RISK INFANT ON THE POSTNATAL WARD

INTRODUCTION

This document covers the recommended care and assessment of high risk infants on the postnatal ward. It covers observations, feeding, hydration and jaundice. These babies are at higher risk of hypoglycaemia, poor feeding, respiratory morbidity, hypothermia and jaundice (Tsai, 2012). At risk babies need to be identified and monitored accordingly. All assessments should be documented.

30% of New Zealand babies are born at risk¹ of hypoglycaemia, of these at-risk babies, 50% will develop low BSL’s². This Guideline is intended for use in conjunction with GLM0056 Hypoglycaemia of the Newborn on the Postnatal Ward.

DEFINITION

Approximately 25% of babies born at 35 weeks and 45% of babies born at 36 weeks gestation remain on the postnatal ward (CWH audit 2006) and do not require admission to the neonatal unit.

Preterm or low birth weight (LBW) babies are at higher risk of issues with temperature control, jaundice, establishing feeding, maintaining blood sugars and gaining weight.

BACKGROUND

Inform parents of the unique characteristics of their preterm or LBW baby. For example, they may not wake spontaneously, may not feed effectively, and may lack stamina to take an adequate feed. Consequently closer scrutiny of breastfeeding and protection of lactation by hand expressing and / or electric breast pumping is required to ensure lactation keeps pace with baby’s calorie intake.
MANAGEMENT OF INFANTS BORN < 37 WEEKS OR LOW BIRTH WEIGHT < 9TH CENTILE (UK/WHO GROWTH CHART)

- Daily review, whilst inpatient, by the Neonatal Team.
- Neonatal team to perform the 24 hour baby check and document on Newborn Record (QMR0044)
- Post birth observations (heart rate, respiration rate, saturations, temperature) at 1, 4, 12, 24 hours
- A BSL before the second feed and not exceeding 4-hours post-birth then continue until 3 pre-feed readings are ≥ 2.6 mmol/L
- Referral and review by the Lactation Consultant team to formulate a feeding plan which will include 3 hourly feeds with top-ups of expressed breastmilk (EBM) as available or donor breast milk (unpasteurised) or infant formula if necessary.
- Monitoring of input and output that are consistent with postpartum age with clear documentation on Infant Feeding Record (Ref.9246)
- Weight on day 4 is mandatory, or earlier if requested by the Neonatal Team
- Clearance by the Neonatal Team prior to discharge/transfer -
  - Recommend that these babies all stay at CWH until day 3.
  - On day 3 consideration can be made to the mother and baby’s readiness for discharge after reviewing the whole clinical situation with the following options available:
    1. Stay at CWH for 4 days – mandatory if < 37 weeks at birth
    2. Require ongoing oversight but this could occur at a Birthing Unit from day 3
    3. Be ready to be discharged home (least preferred option) but would need a weight prior to discharge on day 3 to ensure that this is a safe decision
- It is recommended that Vitadol C supplementation (from birth) if < 36 weeks or < 2500 g and also for all exclusively breastfed babies regardless of gestation (MoH guideline). Iron to start from 4 weeks of age if they are breastfed and < 36 weeks or < 2500 g birth weight. This is recommended to continue until 12 months age. Babies needing Vitadol C and Iron should get a prescription before discharge from the Neonatal Team. Babies who just need Vitadol C as they are exclusively breastfed and are ≥ 36 weeks or ≥ 2500 g should have this prescribed by their LMC after discharge.

MEDICAL REASONS FOR SUPPLEMENTATION WITH INFANT FORMULA

Supplementation of a breastfed baby with infant formula is only recommended when the BSL is below the accepted threshold of 2.6 mmol AND when hypoglycaemia is unresponsive to breastfeeding with EBM top-ups AFTER treatment with Dextrose Gel.
Acceptable medical reasons for supplementation are outlined in the New Zealand BFHI documents - available from this link: Baby friendly part 2 pp. 23-24)

For a full list of medical indications for supplementing with expressed breast milk (EBM) or infant formula refer to CDHB Neonatal Handbook.

Pasteurised donor breast milk (PDM) is not currently available on the postnatal wards. It may be available for use in specific cases on the Neonatal unit. See the Neonatal Handbook for further details. For the use of unpasteurised donor breastmilk link on CDHB premises please refer to the policy link here: Unpasteurised donor breast milk

Assessment of Hydration
Signs of good milk intake:

<table>
<thead>
<tr>
<th>Output of Urine</th>
<th>Colour - pale straw or colourless</th>
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<tbody>
<tr>
<td></td>
<td>Odour - non offensive</td>
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<tr>
<td></td>
<td>Frequency - minimum of six per day( if no other fluids given) from day 4</td>
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<tr>
<td></td>
<td>Volume - soaked nappy</td>
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<tr>
<td>Feeding Frequency</td>
<td>8-12 per 24 hours</td>
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<td></td>
<td>This depends on the age baby and individuality.</td>
</tr>
<tr>
<td>Behaviour</td>
<td>The baby settles well after most feeds and is generally contented. Most babies have a normal ‘ unsettled” period, often in the early evening – but frequently between 10pm and 4am – this will settle with time</td>
</tr>
<tr>
<td>Appearance</td>
<td>Good skin colour and perfusion</td>
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<tr>
<td></td>
<td>Bright eyes</td>
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<tr>
<td></td>
<td>Alert and responsive</td>
</tr>
<tr>
<td>Bowel Motions</td>
<td>Changing stool by Day 4</td>
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<td></td>
<td>Breast milk bowel motion regularly by day 7</td>
</tr>
<tr>
<td>Weight</td>
<td>Regains birth weight by 10 -14 days</td>
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<tr>
<td></td>
<td>Gains 140 - 170 g per week, this may slow after the first month</td>
</tr>
</tbody>
</table>

Reference:
Mohrbacher, N (2010) Breastfeeding Answers
ACUTE DEHYDRATION

Signs of dehydration:
- Dry skin and mucous membranes with poor skin turgor (this is a late sign and may be missed)
- Weak cry
- Lethargy
- Scant urinary output - urates present if > 4 days old. Note urine output may continue due to the poor concentrating ability of the kidneys in the first few days after birth.
- Urine may be concentrated, reduced frequency, and not at every feed.
- Depressed fontanelle - May be a late sign of dehydration.
- Apathetic feeding at the breast, including falling asleep at the breast, difficult to waken.

Weight loss of greater than 10% on day 4 - 5 may be accompanied by hypernatraemic dehydration, therefore paediatric assessment and a blood test to check electrolytes are considered a minimum medical requirement.

- Lethargic, underfed babies will require adequate calorie intake and hydration before they will feed well. Assessment of feeding dyad and early detection of problems with appropriate interventions are key in preventing significant problems.
- Observe and document at least one breastfeed in clinical notes in each 8 hour period during the hospital stay. Assessment of urinary output and stoolsing patterns appropriate to age of infant should also be documented.
- Dehydration is associated with apathetic feeding and weight loss.
- Dehydration can occur due to baby not receiving an adequate amount of his mother’s milk. Jaundice may also be evident. If it is identified during observation of feeding that milk transfer is inadequate but mother has an adequate supply then mothers should be assisted to express and supplement baby with their own breast milk.
HYPERBILIRUBINAEMIA

Risk factors
- Jaundice in first 24hrs
- Blood group incompatibility – ABO or Rhesus
- Previous jaundiced sibling
- Preterm infants
- Bruising
- Sepsis
- East Asian ethnicity.

If hyperbilirubinaemia, requires treatment with phototherapy then a full assessment of breastfeeding is required including baby’s level of alertness, ability to transfer milk, urinary output and stooling patterns.
- If there is evidence of insufficient milk transfer then mothers should be supported to express and supplement their infant with EBM following a breastfeed.
- If feeding is inadequate and mother unable to supplement baby with her EBM then it may be necessary for the baby to be supplemented with Infant formula.
- Supplementing baby with infant formula or intravenous fluids has been shown to decrease the rate of exchange transfusion and reduce the time under phototherapy.
- Close observation and assessment of breastfeeding and appropriate supplementation must be undertaken to optimize breastfeeding outcomes.
REFERENCES


Guidance on the development of policies and guidelines for the prevention and management of Hypoglycaemia of the Newborn (2013) The Baby Friendly Initiative, Unicef, United Kingdom, [www.babyfriendly.org.uk](http://www.babyfriendly.org.uk) was also used to inform this document.