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**MATERNITY AND NEONATAL UNIT GUIDELINE:**

**MANAGEMENT OF WELL BABIES WITH LOW BIRTH WEIGHTS ON THE MATERNITY UNIT**

**AUTHOR:** NNU Quality Co-ordinator

**SCOPE:** All nurses and midwives working in Maternity and Neonatal Unit

**PURPOSE:** To provide safe management of low birth weight in the maternity unit

**DEFINITIONS:**

- Low Birth weight babies are those whose weight is less than 2500 grams
- Full term birth is at 37+0 or more gestational weeks
- Small for gestational age (SGA) babies are those whose birth weight is below the 10<sup>th</sup> centile for gestational age on a customised centile chart

**GUIDELINE:**

**1. Assessment of the baby**

**Customised birth weight centile charts are integrated into MCIS.** A small for gestational age baby's birth weight is below the 10th centile.

Babies whose birth weight is less than 2500 grams may be preterm and/or SGA. It is therefore important to establish gestational age when assessing the baby.

**For babies whose birth weight is less than 2500gms, a referral for paediatric consultation should be recommended to the parents. For babies whose birth weight is less than 2000gms, or who are less than 35+0 weeks gestational age, a referral for transfer of care to the paediatric team should be recommended to the parents (See Referral Guidelines, MoH 2012).**

**There are increased risks of abnormalities, infection and perinatal illness and the baby may need supplementary formula feeding until there is sufficient breast milk to meet the baby's nutritional requirements (see supplementing the breast fed infant guideline).**

The management of a SGA infant will be based on maternal history, birth history and the detailed neonatal examination. The baby should be examined for clinical features of small for gestational age. Head circumference should be measured and recorded.

Small for gestational age infants can be:

- Asymmetric growth restricted infants who have a normal head circumference for their gestation but have little subcutaneous fat and wrinkled skin, and are wide eyed and alert. These infants probably developed fetal malnutrition late in pregnancy.

- Symmetrically growth restricted infants who have smaller head circumferences. These infants have probably had more prolonged fetal malnutrition which has impaired their growth.
- Twins and higher multiple births are often small for gestational age and are at greater risk of intra partum asphyxia and hypoglycaemia
- 2 -3 % of small for gestational age infants have significant abnormalities
- By definition, 10% of new born babies are below the 10<sup>th</sup> centile for birth weight. Although some will have abnormalities as described above, some will be genetically small, symmetrical in terms of weight, length and head circumference, and completely normal. This particularly applies to babies from families who originate from Asia and the Indian subcontinent. The further the weight lies below the 10<sup>th</sup> centile, the less likely is the baby to be normal.

Other factors which make the baby at greater risk of illness are hypothermia, intra partum asphyxia, low Apgar scores or abnormal cord blood gases, infants of diabetic mothers, congenital heart conditions or sepsis.

## 2. Observation of the baby

The baby should have regular and careful observation of his general condition, colour and behaviour.

- **Temperature and respirations should be recorded on an infant's observation chart hourly for the first 3 hours and subsequently 3 hourly for at least the first 24 hours of age minimum or longer if indicated on specified chart.**

## 3. Hypoglycaemia

Infants who are SGA (less than 10<sup>th</sup> centile) and infants who are preterm are at risk of hypoglycaemia.

SGA infants are at risk of hypoglycaemia for **at least** 48 hours as they have inadequate glycogen stores and fail to respond with an appropriate and adequate counter regulatory metabolic and endocrine response to low blood glucose concentrations.

The greatest risk of hypoglycaemia is in the first few hours of life. Minimum observations are:

- Monitor blood glucose after 2 hours of age and prior to the second feed.
- If 2.6mmol/L or higher and baby is well repeat blood glucose testing 3 hourly prior to feeds
- **Continue to monitor the blood sugar until the level is greater than 2.6mmol/L on three consecutive assessments and the baby is asymptomatic and feeding** (i.e. 3 blood sugars 2.6 mmol/L or higher)
- If the level is below 2.6mmol/L see Guideline *Management of Hypoglycaemia of the newborn*.

#### **4. Thermal management**

The infant should have appropriate thermal management to avoid temperature instability. Adequate warm clothing and hats should be used. Consideration of skin-to-skin contact must be used if baby is not maintaining temperature control (*see guideline referral of infants to paediatric service*).

#### **5. Feeding**

Encourage the baby to feed in the first hour of life and thereafter at least 3 hourly. If the baby is not interested in feeding any EBM can be given orally.

Both preterm and SGA infants may be lethargic, tire quickly and lack the energy to feed vigorously.

Avoid over handling of the baby as the baby needs to conserve his/her energy for feeding.

Supplementary feeding may be medically indicated to prevent and treat hypoglycaemia and provide sufficient calorific intake to optimize growth and ability to feed. Donated Human Breast Milk or Infant formula should only be given to a breast feeding baby if medically indicated and following consultation and informed consent from the mother.

Feeding should be assessed and recorded on the specific feeding and observation chart for infants at risk of hypoglycaemia.

If the mother has chosen to formula feed, the baby should be formula fed in the first hour of life and thereafter 3 hourly approximately 40ml/kg/day with her choice of formula in the first 24 hours of life and increased daily in accordance with the baby's requirements.

#### **6. Jaundice**

SGA infants are at greater risk of polycythaemia and jaundice. Immaturity increases the risk of jaundice. Observe the infant for jaundice and refer to the paediatrician if jaundice is early (within 24 hours), requiring treatment or worsening.

#### **7. Education for family**

- **BABY ESSENTIALS:** Low birth weight and preterm babies are more vulnerable than full term babies with normal weights. It is therefore essential that infant positioning is modelled and promoted for all babies with the additional benefits to vulnerable babies reinforced. The leaflet 'Back is Best' is provided to all postnatal women (*see guideline Babies and bed sharing or co-sleeping*)
- **PEPI POD** – the LMC will refer mothers and babies where there is an increased risk of SUDI
- **SHAKEN BABY EDUCATION**
- **SMOKEFREE BABIES:** If the mother has smoked during pregnancy the baby is more vulnerable to sickness, asphyxia and SUDI. The family can reduce the risks by ensuring safe sleeping practice, breast feeding and not letting the baby smell or breathe tobacco smoke. They need to ensure these things happen if the baby is in the care of others. It is

essential that the parents are given smoking cessation information and referred to a community smoking cessation provider.

- **WARMTH:** The baby will be more vulnerable to becoming cold than a term baby of normal weight. Adequate clothing, hats and bedding are essential.
- **FEEDING:** The baby needs frequent feeds and initially should be fed approximately 3 hourly until the baby has established vigorous breast feeding (or bottle feeding). The family should contact their LMC if the baby is not feeding well after discharge from hospital. The family should be taught to check nappies to see that the baby is passing urine and stools regularly. Both preterm and small for dates infants can tire easily and not feed vigorously enough to stimulate adequate milk production. The mother may need to use a breast pump to maintain her milk supply.

### **7. Discharge from Maternity Unit and follow up**

The baby and mother should remain in hospital until the baby is well and feeding vigorously, and has stable temperature and a stable blood sugar level.

**Early discharge is contraindicated. If the parents are choosing early discharge against clinical advice, ensure thorough advocacy for the baby and consider requesting a consultation with a member of the neonatal team, complete required documentation for discharge against medical advice.**

The **minimum** postnatal hospital stay for infants weighing 2500gms or less is 48 hours, but must be based on individual assessment of the infant.

Frequent post-natal visits following discharge to the community are essential to assess feeding, weight gain and jaundice.

**It is important to monitor the baby's weight. Normally infants stop losing weight by day 5 and regain their birth weight by approximately 2 weeks of age.**

**A weight loss of more than 7% of birth weight at any stage should be regarded as an alert to review and assess feeding and to consider referral to the Paediatrician.**

A weight loss of more than 10% is considered a **maximum** acceptable weight loss.

The first immunisation is given at normal time.

**ASSOCIATED DOCUMENTS:**

[Referral of inpatient neonates to the paediatric service](#) – Guideline

[Hypoglycaemia, infants at risk of](#) – Guideline

[Breastfeeding](#) – Organisational Policy

Feeding chart – Babies at risk of hypoglycaemia

[Discharge against clinical advice – Organisational Policy](#)

[Discharge against clinical advice form](#)

**REFERENCES:**

Infants with fetal (intrauterine) growth restriction, UpToDate (Nov 2019).

[www.uptodate.com/contents/infants-with-fetal-intrauterine-growth-restriction](http://www.uptodate.com/contents/infants-with-fetal-intrauterine-growth-restriction)

Baby Essentials (2015). [www.changeforourchildren.co.nz](http://www.changeforourchildren.co.nz)

Ministry of Health. 2012. Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines). Wellington: Ministry of Health.

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