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Weighing babies on the postnatal ward and managing neonatal weight loss over 10% of birth weight (Or 7% in low birth weight babies)

Hutt Maternity Policies provide guidance for the midwives and medical staff working in Hutt Maternity Services. Please discuss policies relevant to your care with your Lead Maternity Carer.

If they are inpatients, term healthy babies (birth weight >2.5Kg) should be weighed between 72 hours of age.

Late preterm, low birth weight or small for gestational age babies should be weighed around 48 hours of age.

Purpose

Infant weight measurement is a screening tool for assessing adequacy of hydration and breastfeeding adequacy. Breastfeeding neonates receive only small amounts of colostrum in the first days of life. They tend to lose weight for 3-4 days, before they begin to gain weight.

Abnormal weight loss (over 10% in a normal term baby or over 7% in a baby weighing 2.5Kg or less) can indicate low milk production or insufficient milk transfer. However it could also represent a baby who was overloaded at birth, who has now returned their fluid levels to homeostasis. The purpose of this policy is to ensure adequate intake and, to avoid inappropriate supplementation.

The emphasis of this policy is on preserving the exclusive breastfeeding relationship and maximizing lactation, whilst ensuring that the babies are managed appropriately and safely. There are considerable differences in how this group of babies present. Whilst some babies have symptoms of dehydration others may appear clinically well and feeding vigorously.

Mild hypernatraemia (plasma sodium level 146-150mmol/l) is found at all levels of weight loss. Mild hypernatraemia is probably not of clinical significance, as it has been documented in almost 1/3 of breastfed babies and should therefore “probably be considered a normal physiological process secondary to the inevitable period of limited fluid and energy intake during the first few days of life” (Marchini et al 1997). Severe hypernatraemia (> 150 mmol/l) suggests an unusual degree of physiological stress, and is found to accompany 73% of babies with a weight loss of 11.8% or above, indicating that weight loss of 11.8% or over is a significant problem to these babies (Marchini et al 1997).

Scope

Babies with a significant weight loss may be inpatients in the postnatal ward, in the Neonatal Intensive Care Unit, or the paediatric wards. They may also be in the community, under the care of the Primary Team Midwives, or their Lead Maternity Carer Midwife.

Definitions

Low birth weight

2.5kg or less

Small for gestational age (SGA)

Birth weight below 10th centile on grow chart.

Some SGA infants are small due to genetic or ethnic disposition; others have been exposed to a less than optimal growth environment. This will impact on their ability to make a successful transition into extra utero life. Even as term or late preterm infants they may have inadequate stamina and resources to cope with the requirements of life. Infants exposed to intrauterine growth restriction are such an example.

Physiological weight loss

Neonatal weight loss in the first 3-4 days following birth is expected. Weight loss up to 7% is considered physiological (Noel-Weiss 2008)

Abnormal or pathological weight loss

Weight loss over 10% (MacDonald et al 2008) in term babies, or over 7% in low birth weight babies.

Iatrogenic weight loss

Birthing practices, hospital routines, and birth experiences are associated with the amount of weight lost. There is evidence that infants born to mothers who received IV fluids during parturition are overloaded with fluid at birth and experience greater weight loss, due to ridding themselves of the excess fluid. (Noel-Weiss et al 2011). Careful assessment of the baby and breastfeeding is required to distinguish between a baby who is well and one who is dehydrated. This includes reviewing the birth details.

Indications

Abnormal weight loss i.e. over 10% in a normal term baby or over 7% in a preterm baby, or one weighing 2.5Kg or less.

Abnormal weight loss is frequently attributable to inadequate milk volume and/or to poor breastfeeding technique by either mother or infant, (Manganaro et al, 2001, Dewey et al, 2008).

Risks and precautions

Risk factors which may lead to excessive weight loss after birth:

- Primiparas (particularly with large infants)
- Long labour
- Caesarean section
- Labour medications

- Obese mother
 - Women with flat or inverted nipples, breast hypoplasia or history of breast surgery
 - Babies with suboptimal breastfeeding behaviour
 - Gestational age (preterm or late preterm (34-37 weeks))
 - Small for gestation age, intrauterine growth retardation, low birth weight
 - Separation from mother for more than 24 hours
 - Other underlying condition (e.g. cardiac, metabolic, gastrointestinal etc.)
 - Oral anatomical defects
 - Neurological or neuromotor problems
 - Sucking disorganization
 - Hyperbilirubinemia, especially if using phototherapy
 - Multiple births
 - Systemic illness
 - Difficulty latching correctly
 - Sleepy baby with poor or subtle feeding cues
 - Irritability, fretfulness, apparent hunger after feeds
 - Excessive pacifier use
- (Dewey et al 2008, Walker, 2006).

Procedure

On the Postnatal Ward (or in the Community):

- If they are inpatients, term healthy babies (birth weight >2.5Kg) **should be weighed at 72 hours of age.**
- Late preterm, low birth weight or small for gestational age babies **should be weighed around 48 hours of age.**
- If a term healthy baby born by Caesarean section is to be discharged, or transferred to another unit, before 72 hours they do not necessarily need to be weighed unless there is a clinical indication. The LMC should be informed of whether the baby has been weighed.
- Before weighing a baby, discuss with the parents and whanau why weighing is helpful, and what the expectations are. Warn the parents that some weight loss is normal and that this is not necessarily a cause for concern. Clear communication is vital to avoid undermining the mother's confidence in her breastfeeding
- If there is abnormal weight loss (term baby's weight loss is $\geq 10\%$ birth weight or $\geq 7\%$ birth weight in late preterm or LBW babies), parents need further reassurance that there is not necessarily a problem, but that further investigation and support will be required
- Thoroughly assess the baby's condition to differentiate between a well-baby and an unwell baby. Include:
 - Baby's tone, behaviour and response to handling
 - **Observations:** temperature, respirations, heart rate, o2 SATS
 - Review the feeding history
 - Output: colour and amount of urine and stools

- Review the birth history. If the mother had intravenous fluids in labour the baby may have be overloaded with fluid at birth, so may pass larger amounts of dilute urine (Dahlenberg et al 1980).
- If the **baby is unwell, inform paediatrician immediately** and inform the Lead Maternity Carer. If available a lactation consultant's input may be useful.

Feeding Assessment

- **Assess a full breastfeed**, including:
 - Baby's readiness to feed
 - observe and improve the latch
 - watch the **full breastfeed**, noting frequency of swallows, length of feed, vigour of suckling
 - encourage milk flow using breast compressions
- **Assess the woman's lactation:**
 - Fullness of the breasts before and after feed
 - Signs of milk coming in (lactogenesis II)
 - Support the woman expressing,

If the **baby is well**, then the management of breastfeeding is within the scope of practice of the midwife. Complete a full assessment of a breastfeed and the mother's lactation and give guidance to optimise these, as per the Breastfeeding Management Plan Baby has lost >10% of birth weight.

- Give the parents a copy of the **breastfeeding management plan for a baby who has lost >10% birth weight** and explain it to them.
- If supplementation is required, prioritise breast milk. This is a clinical indication for supplementation if there is insufficient milk. Use the Guidance volumes for supplementary infant feeds in the first week of life to decide the volume of supplementation.
 - **Remember the suggested volumes are for a full feed – if the baby breastfeeds actively (with evident swallows) for over 10 minutes, give half the volume.**
 - **If the mother is close to producing the suggested volume of supplement, avoid giving small volumes of formula but encourage her to express more.**
- If lactation is insufficient to meet the baby's need, supplementation with formula will be required. Inform the woman that her aim is to replace formula supplements with breast milk, and ultimately just breastfeed.
- Discuss with parents the best method in order to support breastfeeding (i.e. 'tube to breast'/supplementary nursing system or cup feeding). Avoid using bottles and teats unless none of these methods are appropriate.
- Reweigh the baby in 24 hours. An acceptable daily weight gain is 20g or over. A decision to discharge the family is made based on the overall picture,

including the weight gained, the baby's breastfeeding and the woman's lactation and ability to feed the baby.

- **If the baby has gained less than 20g, reassess the baby's condition, the breastfeeding and the lactation. Once the full assessment is complete, discuss with a paediatrician.**
 - The baby's gestation, condition and mode of delivery
 - The effectiveness of breastfeeding and the mother's lactation
 - The effectiveness of the breastfeeding management plan initiated 24 hours ago, and any additional details.
 - Consider referral to Breastfeeding Support Clinic as an outpatient for follow up.

References

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Related documents

Breastfeeding Management Plans:

Baby has lost >10% of birth weight. CapitalDocs ID 1.100362 GA BF MP-05

Guidance volumes for supplementary infant feeds in the first week of life CapitalDocs ID 1.101516 GA BF MP-18

Other documents:

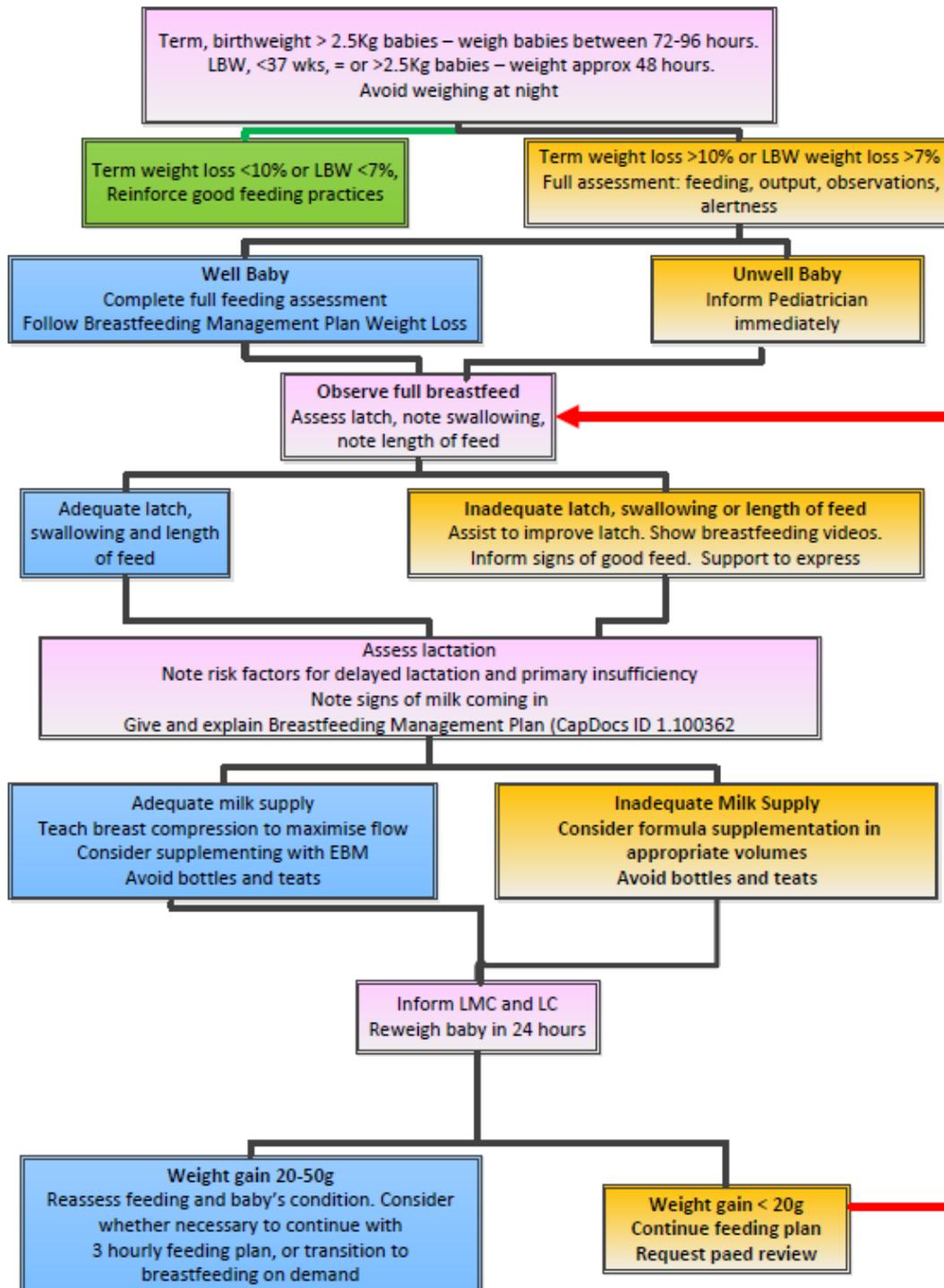
- WHO/UNICEF Ten Steps to Successful Breastfeeding
- WHO Code of marketing of breast milk substitutes

Informed Consent

The right of a consumer to make an informed choice and give informed consent, including the right to refuse medical treatment, is enshrined in law and in the Code of Health and Disability Consumers' Rights in New Zealand. This means that a woman can choose to decline treatment, referral to another practitioner, or transfer of clinical responsibility. If this occurs follow the process map on page 18 of the Referral Guidelines (Ministry of Health, 2012).

Appendix

Appendix 1 Flow chart baby weigh 72-96 hours of age



Appendix 2: Guidance volumes for infant feeds in the first week of life

Guidance volumes for infant feeds in the first week of life



Womens Health Service

If there is no clinical reason for supplementation (eg. Full term healthy baby not yet latching, or maternal request for formula without indication) only use a physiological amount of supplement. ALWAYS start expressing if formula is given							
Baby age in days	1	2	3	4			
	2-10 ml	5-15 ml	15-30 ml	30-60 ml			
Academy of Breastfeeding Medicine Protocol Committee 2009							
When there is a clinical reason for supplementation (e.g. low BSL, weight loss >10%), full feed volumes are based on these daily amounts. If the baby is also feeding at the breast then clinical judgement is required to reduce the volume of supplements.							
Where a clinical indication exists, a breastfeeding management plan must be in place and expressing must be commenced .							
(Calculation: weight x ml per Kg / 8 = 3 hourly feed volume)							
	Baby age in days	1	2	3	4	5 & 6	7+
	ml / kg / day	40	55	70	100	130	150
mls per 3 hourly feed (8 feeds per day)							
	Baby age in days	1	2	3	4	5 & 6	7+
Weight (Kgs)	2.25kg	11	15	20	28	37	42
	2.5kg	13	17	22	31	41	47
	2.75kg	14	19	24	34	45	52
	3kg	15	21	26	38	49	56
	3.25kg	16	22	28	41	53	61
	3.5kg	18	24	31	44	57	66
	3.75kg	19	26	33	47	61	70
	4kg	20	28	35	50	65	75
	4.25kg	21	29	37	53	69	80
	4.5kg	23	31	39	56	73	84
	4.75kg	24	33	42	59	77	89
	5kg	25	34	44	63	81	94
	5.25kg	26	36	46	66	85	98
5.5kg	28	35	48	69	89	103	

Appendix 3: Breastfeeding Management Plan

Breastfeeding Management Plan: Baby has lost >10% of birth weight (or >7% if preterm or small baby)



Surname:..... NHI:

First names:

Date of birth:/...../..... Sex:

PLACE PATIENT ID HERE

(To be completed and one copy filed in baby's notes and one copy given to mother)

Date	Assessment/Problem: Baby has lost >10% of birth weight (or >7% if preterm or small baby)	Signature (and Print name)
	Consultation (Circle one) : Midwife / Nurse / Lactation Consultant / LMC / Paediatrician	
	Plan: <ol style="list-style-type: none"> 1. Long skin to skin contact at least once a day (face up or face clear, discussed <input type="checkbox"/>) 2. Feed baby 3 hourly, or sooner if baby shows interest, at least 8-12 feeds in 24 hours <ul style="list-style-type: none"> - Midwife/Lactation consultant to observe breastfeed until baby is feeding efficiently - If not effective feed, offer top-ups - Top-up via tube to breast (if latching well), cup or syringe. Avoid bottles and teats 3. Try to finish feed and have baby back in bed within 1 hour 4. Express after feeds to increase milk supply <ul style="list-style-type: none"> - Massage breasts thoroughly - Hand express to start flow - Express using electric pump. Double pump for 10 minutes or until milk starts flowing 5. Write down baby's wet and dirty nappies (wanting 6 per day once the milk is in) on a feed chart 	
	Follow-up: Reweigh daily to assess weight gain, aiming for minimum >20g per day Follow-up by (Please circle): LMC Midwife / Well child Health Provider / Community Lactation Consultant / Breastfeeding clinic / Plunket Family Centre.	
	Discharge Plan:	