Document Control

Title **Excessive Weight Loss in the Healthy Breastfed Newborn Guideline**			
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Version	**Date Issued**	**Status**	**Comment / Changes / Approval**
1.0	2018	Final	Initial version approved
2.0	Dec 2020	Final	Approved updates
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Superseded Documents			
Issue Date Dec 2020	**Review Date** Dec 2023		**Review Cycle** Three years
Consulted with the following stakeholders: (list all) • Clinical Risk Manager • Head of Community Midwifery • Maternity workforce • Paediatric staff • Infant feeding leads across Devon LMS			
Approval and Review Process • Maternity Specialist Governance Group			
Local Archive Reference G Drive **Local Path** Practice Development Folder / BFI **Filename** ExcessiveWeightLossintheHealthyBreastfedNewbornGuidelinev1Nov2017			
Policy categories for Trust's internal website (Bob) Maternity/ Special Care/ Paediatric			**Tags for Trust's internal website (Bob)** Infant feeding, weight loss, breastfeeding, newborn

CONTENTS

1. Purpose

1.1. The purpose of this document is to detail a framework for prevention and management of excessive newborn weight loss

1.2. The guideline applies to all maternity and paediatric staff

1.3. Implementation of this guidance will ensure that:

- Appropriate feeding assessments are carried out accurately and in a consistent manner
- Relevant weight loss management plans are implemented in a timely manner
- Breastfeeding is supported, including optimising the amount of breastmilk baby receives and ensuring lactation is protected if supplementation is needed

2. Definitions

EBM – expressed breast milk

TCB - transcutaneous bilirubinometer

SBR - serum bilirubin [blood test]

SCBU – Special Care Baby Unit

Breast Compressions – Breast compressions can encourage the let-down reflex and stimulate a sleepy baby and encourage them to suck and increase milk transfer

Switch Nursing - Switch feeding is a short-term option that swaps the baby from one breast to the other and back each time the sucking pattern ceases to be a nutritive pattern, i.e. with audible swallows.

3. Responsibilities

3.1. Northern Devon NHS Healthcare Trust is committed to:

- Providing the highest standard of care to support new mothers to feed their baby and build strong and loving parent-infant relationships. This is in recognition of the profound importance of early relationships to future health and wellbeing, and the significant contribution that breastfeeding makes to good physical and emotional health outcomes for children and mothers.

- Ensuring that all care is mother and family centred, non-judgemental and that all mothers' decisions are supported and respected

- Working together across all disciplines and organisations to improve mothers' and parents' experiences of care and their care outcomes

As part of this commitment the service will ensure that:

- All staff are familiarised and have access to this guideline via BOB

- All staff will receive training to enable them to implement this guideline as appropriate to their role and minimise the risks of significant weight loss to the newborn

4. Background

4.1. Basic understanding of the physiology of breastfeeding shows that early, frequent and effective breastfeeding is essential to successful milk production. The most common cause of excessive weight loss in the new born is inadequate milk intake due to ineffective milk transfer or infrequency of feeding. Support with positioning and attachment is key to ensuring that breastfeeding is effective and adequate milk production and milk transfer is achieved.

Unnecessary supplementation with infant formula will interfere with this physiology, resulting in less frequent feeds. Less milk transfer equates to less milk production. Introducing infant formula changes the gut flora of the baby, making them more susceptible to infections and/or allergies and can also undermine a mother's confidence in her ability to breastfeed. If the infant formula is given by bottle, this can also interrupt in some babies the process of familiarising, imprinting and learning to breastfeed.

4.2. The earliest and most reliable sign that a baby is not receiving enough milk or gaining weight is lack of stooling. Relying on urine output alone can give false reassurance (BFI, 2020).

5. Weighing in the Neonatal Period

- Some weight loss in the first days after birth is normal and usually relates to body fluid adjustments. This weight loss usually stops after about 3-4 days of life and they should have returned to their birth weight by 3 weeks of age (NICE, 2017)

- All babies should be weighed at birth, 5 days and around 10 days of age as part of their feeding and wellbeing assessment

- Neonatal weight is measured using calibrated, electronic neonatal scales
- For consistency, wherever possible the same scales should be used
- Ideally babies should be weighed pre-feed. The relation to feed should be documented as pre or post
- Weighing should be carried out on a hard, even surface and the baby should be naked
- Weight should then be documented in the appropriate neonatal records and acted upon accordingly

5.1 Calculating percentage weight loss

Percentage weight loss is the difference between the current weight and the weight at birth expressed as a percentage of the birth weight.

birth weight – current weight = weight loss

percentage weight loss = weight loss x 100 / birth weight

example: birth weight 2900g - current weight 2700g = 200g

$$\frac{200g \times 100}{2900g} = 6.9\%$$

6. Identification and Management of Excessive Weight Loss in the Newborn

Weight loss of 8% or more requires additional breastfeeding support. Weight loss of >12.4% requires paediatric review to exclude and/or manage underlying illness. With any significant weight loss a full breastfeeding assessment using the Breastfeeding Assessment Form (app.2) and including observing a full feed, should be carried out to determine whether there is a problem with milk production, milk transfer or both.

6.1. Start actions immediately to increase hormonal milk-making response:

- skin-to skin, nuzzling at the breast, laid back position
- Encourage breast massage and hand expression
- Encourage frequent breastfeeds (at least 10 times in 24 hours)
- Discuss frequency of night feeds

- Consider breast compression and switch nursing for sleepy babies or perceived low milk supply
- Consider referral to the Infant Feeding Clinic for additional support

6.2. Assessing effective milk transfer:

At the beginning of a feed, the baby makes quick, shallow sucks to get the milk flowing before settling into deeper, slower jaw action suckles. The suck/swallow ratio should be 2:1. A suck/swallow ratio of 3 to 4 sucks or more per swallow indicates ineffective milk transfer and a possible low milk supply. Revisit positioning and attachment to ensure the baby is effectively attached to the breast.

Output:

Inadequate urine and particularly stool output in the early weeks indicate that the baby may not be receiving enough breastmilk – see table below

Wet Nappies	Stools and Dirty Nappies
Day 1-2: 1-2 or more in 24hrs	Day 1-2: 1 or more in 24hrs with meconium
Day 3-5: Should increase by 1 daily, beginning with 3 on the third day and 5 on the fifth day (should also be heavier)	Day 3-4: At least 2 (preferably more) in 24hrs with changing stool Day 5+: At least 2 (preferably more) soft, runny, yellow stools each day
Day 6+: 6 or more heavy, wet nappies in 24hrs	Weeks 4-6+: All babies under 4-6 weeks old should have a minimum of 2 stools a day. When breastfeeding is more established, some babies may go a few days without stooling. Breastfed babies are never constipated and when they do pass a stool it should be soft, yellow and abundant.

7. Action Plans

Amount of weight loss	Management plan indicated
8-10%	Plan A
10.1-12.4%	Plan B
12.5-14.9%	Plan C
>15%	Plan D

Plan A **Weight loss** **(8-10%)**	• Re-check weights and percentage calculations as mistakes are common • Observe a full breastfeed to ensure effective positioning and attachment • Advise 10 or more feeds in 24 hours • Skin-to-skin contact to encourage breastfeeding • Observe for change in frequency/amount of urine and stools • For sleepy babies or those with a poor suck, consider switch feeding and breast compressions • Re-weigh in two to three days (sooner if stools and urine are of concern) • If weight is increasing, continue to monitor stools and urine closely and provide encouragement • If no or minimal weight increase or further loss, see plan B
Plan B **(10.1 – 12.4%)**	**As in plan A, plus:** • Exclude infection or illness • Refer to the Infant Feeding Clinic for additional support • For sleepy babies or those with a poor suck, advise/ discuss switch feeding and breast compressions • Express breastmilk after each feed and offer to baby *aim for half volume (120ml/kg/day – e.g.120 x 3.5kg / 8 = 52.5 / 2 = 26mls) or a minimum of 120mls total supplement in 24 hours • Weigh again in 24-48 hours • If no or minimal weight increase or further loss, see plan C
Plan C **(12.5% - 14.9%)**	**As in plans A and B, plus:** • Paediatric opinion required • Consider re-admission to exclude and/or manage underlying illnesses • U&Es may be required if baby is unwell • Ensure referral to the Infant Feeding Clinic for additional support has been made • Ensure a minimum of eight feeds in 24 hours plus top ups after each feed, ideally with expressed breastmilk (EBM) • Express using a hospital grade electric pump – if there is insufficient EBM, use donor milk if available or infant formula and then reduce this as breastmilk supply increases • Weigh again in 24 hours and continue to monitor output • Monitor until clear trend towards birth weight
Plan D **(> 15%)**	**Note: Weight loss in excess of 15% is significant and will require re-admission, fluid replacement and breastfeeding support** **Manage as in plan C, plus:** • Re-check weight and calculations as mistakes can be made • Discuss with consultant paediatrician • U&Es may be required • IV fluids if baby is unwell • Refer to the Infant Feeding Clinic for ongoing support

8. Babies who are slow to gain weight

Most babies should have regained their birth weight by 14 days of life and all babies by 3 weeks of life (NICE, 2017). Babies who are slow to gain weight within this time frame should be reviewed regularly by midwifery staff to ensure that the baby remains well and an appropriate plan of care is in place to optimise feeding.

If a baby is significantly below birth weight by day 14, refer to the Infant Feeding Clinic for additional support or contact can be made with the Infant Feeding Coordinators to discuss an on-going plan of care. If they are unavailable then paediatric advice can be sought.

Referral to the Specialist Health Visitor Infant Feeding Clinic for additional feeding support should be made for mothers and babies who are discharged from midwifery care before regaining birth weight or still on a feeding plan

https://ndht.ndevon.swest.nhs.uk/midwifery/infant-feeding/specialist-hv-infant-feeding-clinic-referral-form/

9. On-going care of babies who have had excessive weight loss

- Have a sensitive conversation to establish feeding goals and take a breastfeeding history (use breastfeeding assessment tool where appropriate)
- Monitor baby's stool and urine output
- Promote and encourage ongoing skin-to-skin contact to boost hormonal response
- Explain importance of night feeds, keeping baby close and the impact of dummies
- Support responsive feeding irrespective of feeding method
- As the baby starts to gain weight, support the mother to maximise her breastmilk and reduce use of supplementation (EBM or infant formula) slowly and return to full breastfeeding (see below)
- If the mother has been giving small amounts of EBM/ formula it may be possible to revert to breastfeeding immediately. Let her know that her baby may feed more frequently
- If the mother has been giving large volumes of EBM/ formula it is important to only gradually reduce this whilst working to increase her milk supply

- Urine and stool output remain particularly important markers that the baby is receiving enough milk in-take to ensure safety

9.1. Reducing Supplementation and returning to full breastfeeding

- Maintain the number of breastfeeds as this will help to sustain lactation
- Avoid increasing the number of formula feeds and keep formula feeds to roughly the same time every day
- Encourage frequent and responsive feeds – breast compressions or switch nursing may help
- Encourage breast massage and expressing
- Gradually replace infant formula with expressed breastmilk/breastfeeding
- If supplementing after every feed, consider giving larger and less frequent supplements and then withdraw these gradually as lactation increases
- Maintain regular clinical review
- Refer to the Specialist Health Visitor Infant Feeding Clinic when discharging from midwifery care for continued feeding support

  https://ndht.ndevon.swest.nhs.uk/midwifery/infant-feeding/specialist-hv-infant-feeding-clinic-referral-form/

10. Monitoring Compliance with and the Effectiveness of the Guideline

Standards/ Key Performance Indicators

Key performance indicators comprise:

- Reduction in the number of babies readmitted to hospital with excessive weight loss
- Reduction in rate of formula supplementation without clinical need
- Reduction in confirmed cases of hypernatremia

Process for Implementation and Monitoring Compliance and Effectiveness

- NDHT maternity services require that compliance with this policy is audited at least annually using the UNICEF UK, BFI audit tool. Staff involved in carrying out this audit require training on the use of this tool. Audit results will be reported to the Lead Midwife for Maternity Outpatients & Public Health and the Lead Midwives for Infant Feeding, and an action plan will be agreed by the Infant Feeding Steering Group to address any areas of non-compliance that have been identified

- Outcomes will be monitored by the Lead Midwives for Infant Feeding and reported to the Lead Midwife for Maternity Outpatients & Public Health. This will include:

- Monthly rolling audit of the key performance indicators with a bi-annual report to the Maternity Patient Safety Forum

- Formal registration of audit with the Trust's Clinical Audit Team for on-going support with data analysis and reporting

- Use of the BFI audit tools

11. References

- NICE (2017), Faltering growth: recognition and management of faltering growth in children. Online www.nice.org.uk/guidance/ng75. Accessed 21/11/2017

- \\Nds.internal\public\UNICEF BABY FRIENDLY ACCREDITATION\BFI Infant Feeding\Policies and Guidelines\Guidelines\Guidance-challenges-sheet-5D-concerns-about-weight-.pdf

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- UNICEF Baby Friendly Initiative, online:
  https://www.unicef.org.uk/babyfriendly/news-and-research/baby-friendly-research/infant-health-research/infant-health-research-dehydration/

  https://www.unicef.org.uk/babyfriendly/news-and-research/baby-friendly-research/infant-health-research/infant-health-research-growth/
  Accessed 21/11/2017

12. Associated Documentation

- Newborn Infant Feeding Policy
- Hypoglycaemia Management and Prevention in Neonates Guideline

Appendix 1 - Feeding Chart

Patient Identification Label

Please review for jaundice at each feed if possible, and comment under 'Additional Information'

Gestation

Birth Weight

Additional Information

E.g. IVABs, tongue-tie, centile

Feeding Management Plan

Date	Day	Weight	Milk Type / Method	Frequency	If top up required: mls / feed	Total expected Daily Input	Total 24 hour input	Discussed with mother	Comments	Initials

Date	Time Start/Finish		Milk Type / Method	Pre/Post BM	Total Taken	Passed Urine	Stools Colour	Additional Information	Initials

Feeding Management Plan

Date	Time Start/Finish		Milk Type / Method	Pre/Post BM	Total Taken	Passed Urine	Stools Colour	Additional Information	Initials

Appendix 2 – Breastfeeding Assessment Form

How you and your midwife can recognise that your baby is feeding well						*This assessment tool was developed for use on or around day 5. If used at other times:
What to look for/ask about	√	√	√	√		**Wet nappies:** Day 1-2 = 1-2 or more Day 3-4 = 3-4 or more, heavier Day 6 plus = 6 or more , heavy
Your baby: has at least 8 -12 feeds in 24 hours*						
is generally calm and relaxed when feeding and content after most feeds						
will take deep rhythmic sucks and you will hear swallowing*						**Stools/dirty nappies:** Day 1-2 = 1 or more, meconium Day 3-4 = 2 (preferably more) changing stools
will generally feed for between 5 and 40 minutes and will come off the breast spontaneously						
has a normal skin colour and is alert and waking for feeds						
has not lost more than 10% weight						
Your baby's nappies: At least 5-6 heavy, wet nappies in 24 hours*						**Sucking pattern:** Swallows may be less audible until milk comes in day 3-4 Feed frequency: Day 1 at least 3-4 feeds After day 1 young babies will feed often and the pattern and number of feeds will vary from day to day. Being responsive to your baby's need to breastfeed for food, drink, comfort and security will ensure you have a good milk supply and a secure happy baby.
At least 2 dirty nappies in 24 hours, at least £2 coin size, yellow and runny and usually more*						
Your breasts:						
Breasts and nipples are comfortable						
Nipples are the same shape at the end of the feed as the start						
How using a dummy/nipple shields/infant formula can impact on breastfeeding?						
Date						**Care plan commenced: Yes/No:**
Midwife's initials						
Midwife: if any responses not ticked: watch a full breastfeed, develop a care plan including revisiting positioning and attachment and/or refer for additional support. Consider specialist support if needed.						