

Expressed Breastmilk (EBM) guideline: Storage and administration of breastmilk, cleaning of breast pumps in hospital areas, home storage and transportation of breastmilk to hospital

Maternity Services Lothian Guidelines

1.0 INTRODUCTION:

All mothers who are breastfeeding should be taught how to hand express their breastmilk. Antenatal women may also wish/need to hand express their breastmilk.

This guideline is to support staff to correctly store breastmilk in a hospital setting.

It will also support staff to assist women with transportation of their breastmilk from home whether expressed breastmilk (EBM) is antenatally or postnatally expressed.

It will also include cleaning of breast pump equipment for those postnatal mothers separated from their babies or who need to use this equipment to obtain breastmilk

2.0 AIM:

Women expressing breastmilk will have a discussion on the procedures for storing EBM, and transportation of their breastmilk if this is necessary.

Postnatal women using breast pump equipment should know how to safely wash and store the collecting set and clean the pump.

3.0 GUIDELINES:

3.1 Provide the following information to each woman wishing to hand express or use a breast pump:

- **Explain the importance of good hand hygiene**
- **Explain how to label and store expressed breastmilk**
- **Explain how to use breast pump and collecting set**

4.0 STORAGE

4.1 Postnatal expressed breastmilk storage in hospital

- Each syringe/bottle should be capped and labelled with baby's name, identifiable number, date and time of expression
- Individually labelled plastic trays should be used to store syringes/bottles for each mother's expressed breastmilk when this stored in the fridge
- Postnatal EBM can remain at room temperature for 4 hours in a capped syringe or sterile bottle with lid if not required within this time. Postnatal EBM should be stored in the main section of the fridge, not in the door and used within 5 days

4.2 Please note that if breastmilk is required for a baby admitted to Neonatal Unit (NNU) /Special Care Baby Unit (SCBU) the recommendation is for breastmilk to be taken directly to NNU/SCBU immediately and stored accordingly to NNU/SCBU guidelines.

- All EBM should be stored in a **designated fridge with a temperature between 0- 4°C**
- **Fridge & freezer temperatures should be checked and recorded twice daily. Action should be taken if the fridge/freezer is not within required range.**

This section to be completed by document control.

The designated fridge/freezer should also be checked for any expired breastmilk which should be removed and discarded

- EBM from the fridge should be taken out and allowed to come to room temperature
- Running under warm water is NOT acceptable because of the risk of contamination with *Pseudomonas aeruginosa*

4.3 Checking of breastmilk:

- The hospital identifiable number and name on the expressed breastmilk syringe/bottle should be checked against the **baby's name band**
- The first checker should be a registered practitioner and the second can be another member of staff and /or the mother
- **All EBM should be checked at the bedside** prior to giving it and written documentation includes a staff member's signature on the infant feeding chart to identify that the correct checking procedure has been achieved. The breastmilk given should be documented in baby electronic patient record (EPR) on TRAK

4.4 Antenatal expressed breastmilk storage in hospital

Provide the following information to each woman wishing to antenatally hand express:

- A new sterile syringe should be used at each expressing
- A cap should be placed over the end of the syringe to seal
- Each syringe/bottle should be labelled to include:

**Woman's own surname
Woman's Hospital Chi number
Date and time of expressing**

- The syringe should be placed in the provided plastic bag
- The plastic bag can be stored at the back of the fridge to a maximum temperature of **4°C**
- Individually labelled plastic trays should be used to store syringes/bottles for each woman's expressed breastmilk when milk is stored in the fridge
- Freshly expressed **antenatal** breastmilk must be used within **24 hours** of expressing

4.5 Removing freshly expressed antenatal breastmilk from fridge in hospital

When a woman's freshly antenatal expressed breastmilk is removed from fridge always check it is:

- Clearly labelled
- Given to the correct baby
- Check the milk label has:
 - Woman's surname
 - Hospital Chi number
 - Date & time expressed
 - The expiry date & time on the label
 - Antenatal breast milk should be used within that time

This section to be completed by document control.

4.6 **Freezing freshly expressed antenatal breastmilk in hospital**

Antenatal expressed breastmilk can be stored in the freezer below **-18 °C** within **30 minutes** of hand expressing and always check it is in a clearly labelled syringe/bottle with:

- **Woman's** surname & Chi Number
- Date & time of expression
- Use a different colour label to identify milk when placed in freezer
- Store syringes/bottles in a plastic bag/plastic box for the correct woman

4.7 **Removing frozen antenatal expressed breastmilk from freezer in hospital**

Always check it is

- Clearly labelled with all the identifiable information
- The date and time of expiry is clearly written on the label
- Thawed expressed breastmilk must be defrosted in a designated milk fridge and given **within 24 hours** of defrosting and discarded if not used within that time
- Any unused frozen EBM should be returned to the mother to take home on discharge from hospital, as per transportation section of this guideline (see point 5.0). Please document this on TRAK EPR
- If the mother does not wish to take her breastmilk home, then with her consent it can be discarded and this information documented on TRAK EPR

4.8 **Storing antenatal expressed breastmilk at home**

Staff should be aware that recommending antenatal hand expressing of breastmilk at home is not actively encouraged. However, if a woman chooses to adopt this approach it is important to explore all the relevant information including:

- **Good hand hygiene**
- **Supplying essential equipment for expressing**
- **Safe storage at home**
- **Transportation of antenatal breast milk to hospital**
- **If the received milk has signs of leakage in the syringe or the plastic bag/container, it will be discarded due to risk of bacterial contamination**
- **If there are signs of soiling that suggest milk has not been stored appropriately, the ward staff must not administer the milk to the infant and document clearly in the TRAK EPR**

4.9 Staff should provide the necessary equipment required for hand expressing including the following information

- **Patient information leaflet (PIL) & antenatal hand expressing guideline**
- Store syringes in refrigerator below **4°C** in a plastic bag at the back of fridge
- At the end of each day expressed breast milk syringes/bottles can be stored in a home freezer **below -18 °C** for up to **6 months or** up to **2 weeks** in the ice compartment of a fridge
- Defrost the frozen breastmilk in the fridge and use immediately
- **Do not refreeze defrosted breastmilk**

This section to be completed by document control.

- Explain to individual women how important it is that each expressed breast milk syringes /bottles may be discarded if the conditions of these syringes/bottles are of poor quality or written information on the label is unclear or incorrect

5.0 Transporting expressed breastmilk to hospital

For women travelling from out with hospital their expressed breastmilk can be brought into hospital ready for use

- If women live some distance away fresh or frozen breastmilk should be transported in a chilled container surrounded by ice packs (not ice cubes) to maintain the chilled or frozen state of the breastmilk
- If women live close by (within 15-20 minutes), breastmilk (fresh or frozen) can be wrapped in clean paper kitchen roll/towel
- On arrival to hospital the breastmilk can be placed in the fridge or freezer as soon as possible
- Once breastmilk is received by hospital staff please follow the in hospital storage and use outlined in this guideline
- Explain to each woman about storage of expressed breastmilk including safely transporting their breastmilk to hospital. It is a woman's responsibility to inform staff on arrival that they have breastmilk that needs stored safely

<http://intranet.lothian.scot.nhs.uk/Directory/infantfeeding/Pages/default.aspx>

6.0 Breast Pump

Breast Pumps are not recommended for Antenatal Expressing

Equipment: Breast pump, collecting set, detergent wipes, dedicated washing bowl, neutral detergent, plastic sealable bag, enteral (purple) syringes, caps, sterile bottle lids, identification labels

- Explain the importance of hand hygiene
- Explain how to use the breast pump and collecting set (see manufacturers or local guideline)
- Explain the washing, rinsing, drying procedure
- Explain how to label and store expressed breastmilk

Washing breast pump equipment

- If using a pump, the collecting set is provided sterile and ready to use
- After use, **separate the parts that come into contact with breastmilk** (funnel, connector and valve) from the rest of the equipment
- Use an individual designated bowl for washing breast pump equipment, this should also be washed in warm soapy water and dried after each use
- Women with a baby in NNU/SCBU should have a **Golden Basin** for this purpose which should be returned to Labour on discharge

This section to be completed by document control.

- Wash all parts that have come in contact with breastmilk with warm soapy water, rinse the parts in running water, dry with a paper towel and store parts in a sealable plastic bag (or follow local risk assessment)
- Parts that have not come in contact with breastmilk may be cleaned with a detergent wipe
- **The electric pump must be cleaned with a detergent wipe after each use**
- Breast pumps should be regularly checked and maintained according to manufacturer guidance

7. ASSOCIATED DOCUMENTS:

This guideline should be read in conjunction with other NHS Lothian infant feeding policies/guidelines and are available via: [Clinical Guidelines & IFA Contacts](#) web link

1. NHS Lothian Infant Feeding Policy (2018)
2. NHS Lothian Infant feeding guideline (2018)
3. Neonatal infant feeding guideline (2018)
4. Identification and management of hypoglycaemia in full term infant (2018)
5. Hypoglycaemia (PIL) –protecting your baby from low blood sugar (2019)
6. Supporting feeding from birth and management of reluctant feeding (2019)
7. Postnatal supplementation guideline (2013)
8. Antenatal Hand Expressing Breastmilk for Women Admitted To Hospital Guideline (2020)
9. Maternity services Lothian Guideline: Feeding of the well term newborn in the postnatal wards and community
10. NHS Health Scotland (2015) Off to a Good Start – all you need to know about Breastfeeding
11. UNICEF UK Guide to the Baby Friendly Initiative Standards
12. UNICEF UK Breastfeeding and relationship building (2017): A workbook p35

8. REFERENCES:

1. D'Amico CJ, DiNardo CA, Krystofiak S (2003) Preventing contamination of breast pump kit attachments in the NICU, *Journal of Perinatal and Neonatal Nursing* 17:150–157.
2. Great Ormond Street Hospital for Children Breast milk: expressing and handling <http://www.gosh.nhs.uk/health-professionals/clinical-guidelines/breast-milk-expressing-and-handling>
3. Heikkilä MP, Saris PEJ (2003) Inhibition of *Staphylococcus aureus* by commensal bacteria of human milk, *Journal of Applied Microbiology* 95:471- 478.
4. Guidance for neonatal units (NNUs) (levels 1, 2 & 3), adult and paediatric intensive care units (ICUs) in Scotland to minimise the risk of *Pseudomonas aeruginosa* infection from water <http://www.documents.hps.scot.nhs.uk/hai/infectioncontrol/guidelines/pseudomonas-2014-07-v2.pdf>
5. Martinez-Costa C, Silvestre MD, Lopez MC, Plaza A, Miranda M, Guijarro R (2007) Effects of Refrigeration on the Bactericidal Activity of Human Milk: A Preliminary Study. *Journal of Pediatric Gastroenterology & Nutrition*, 45(2):275-277.
6. Morales Y, Schanler RJ (2007) Human Milk and Clinical Outcomes in VLBW Infants: How Compelling Is the Evidence of Benefit? *Seminars in Perinatology*, 31:83-88.
7. Neu J (2007) Gastrointestinal maturation and implications for infant feeding, *Early Human Development* 83:767–775.

This section to be completed by document control.

6. Newburg DS (2005) Innate Immunity and Human Milk, Journal of Nutrition 135:1308-1312
7. NHS Scotland: Sterile Services Provision Review Group: First Report - The Glennie Framework. <http://www.gov.scot/Resource/Doc/158784/0043107.pdf>
8. NICE Guideline Postnatal care (2006 updated 2015) CG37
9. Price E et al (2016) Decontamination of breast pump milk collection kits and related items at home and in hospital: guidance from a joint working group of the Healthcare Infection Society & Infection Prevention Society, Journal of Infection Prevention (2016) vol 17 (2) 53-62
10. Schanler RJ (2000) Symposium: Bioactivity in Milk and Bacterial Interactions in the Developing Immature Intestine. Journal of Nutrition 130:417S-419S.
11. Toscano M, De Grandi R, Peroni DC, Grossi E, Facchin V, Comberiati P, Drago, L. (2017) Impact of delivery mode on the colostrum microbiota composition, BMC Microbiology 17:205 DOI 10.1186/s 12866-017-1109-0

ACKNOWLEDGEMENTS:

Melissa Kallat, Regional Breastfeeding Clinical Quality Improvement Coordinator, Programme for government (Fife, Borders and Tayside)

NHS Lothian Maternity Guideline Committee Members

9. AUTHORS:

Author 1: Jacquelyn Imrie - Infant Feeding Lead

Author 2: Elaine Turnbull – Project Midwife (Breastfeeding)

Author 3: Dr Olga Moncayo - Microbiology Consultant

Author 4: Dr Julie-Clare Becher - Neonatology Consultant

This section to be completed by document control.