

Labelling, handling, storage, transport and administration of human milk in New Born Intensive Care Unit (NICU)

Procedure Responsibilities and Authorisation

Department Responsible for Procedure	NICU
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Target Audience	Nurses
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Procedure Review History

Version	Updated by	Date Updated	Summary of Changes
01	Robyn Hills	March 2010	First version
02	Robyn Hills	Sept 2013	3-yearly review
03	Robyn Hills	Sept 2014	Remove “Babies born at 36 weeks gestation and under will continue to use milk produced over the next 2 weeks in sequence. At this time a mixture of fresh and frozen breast milk can be used” from step 1.
04	Robyn Hills	Dec 2017	3-yearly review
05	Alana Cumberpatch	Feb 2022	Updated Storage details to align with NEC Protocol

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1 Overview

1.1 Purpose

- To ensure the safe storage and handling of expressed breast milk.
- To ensure each baby receives the correct milk expressed for them.

1.2 Scope

NICU nursing staff.

1.3 Patient / client group

Neonates & infants in NICU.

1.4 Definitions

Breast milk	Breast milk provides the best nutrition for newborns delivering benefits of immunity, healthy development and psychological and social wellbeing. Babies admitted to NICU may not be able to breastfeed for a variety of reasons, so mothers need to express breast milk to establish and maintain a milk supply for use in the care of their baby.
EBM	Expressed Breast Milk

2 Clinical Management

2.1 Competency required

- Registered Nurse
- Enrolled Nurse under the direction and delegation of a Registered Nurse
- Registered health professionals, e.g. Nurse Practitioner Neonatology, Clinical Nurse Specialist, Registrar and Paediatrician

2.2 Equipment

- Fridge: Each nursery in the NICU has a fridge specifically for milk storage, temperature monitor and document daily.
- Freezer: Freezers are available in the NICU specifically for milk storage, connected to temperature monitor and alarm systems.
- Defrost labels kept in each nursery.
- Warming containers on each baby's locker labelled with identification (ID) labels.
- Gloves

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2.3 Procedure

1. Labelling and Administration of EBM

- Instruct each mother to label her EBM with her baby's ID labels. Patient identification labels are available from receptionist or nurse (in patient's notes) to ensure that milk can easily and correctly be identified and retrieved for use
- Instruct each mother to use a permanent pen to document date and time of expression on container.
- Use EBM in order expressed to ensure babies receive expressed breast milk in the order that they would normally and so that every baby can receive benefits of early colostrum feeding.
- Mothers to label their breast milk in the order it is produced.
- Breast milk produced in the first 4 weeks will be used in sequence for all babies.

2. Defrosting frozen EBM

Correctly defrosted and stored breast milk reduces the chance of infection and maintains integrity of milk.

- Place container of frozen breast milk in fridge and defrost, or
- Place container of frozen breast milk in a container labelled with the baby's ID label of cool water at the bedside until defrosted.
- If previously frozen breast milk during defrosting has remained cold and not reached room temperature or warmer, label with time and date and keep in fridge for no longer than 24 hours.

3. Process of identification

Two staff are required or one staff member and baby's caregiver are required to check the milk to ensure that each baby receives the correct milk expressed for them.

- Two staff or one staff member and caregiver go to the bedside and check the ID label of the baby against the ID label on expressed milk container.
- If only one staff member is present in the nursery at the time do not draw up milk until able to check with a second staff member or baby's caregiver.
- Keep the container of milk at the bedside on the locker or suitable work surface and draw up the correct amount of milk required. Do not remove the milk from the bedside whenever possible.
- Place drawn up milk in baby's labelled milk warming container.

4. Warming EBM

Place checked and measured breast milk in labelled container, and warm in container with warm water until it reaches room temperature to maintain the integrity of breast milk and ensure breast milk given to baby is neither too cold nor too hot.

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5. Handling of EBM

Some blood-borne pathogens may be present in human milk, and correct handling of expressed milk, by the mother at the time of expressing, reduces the chance of infection. Follow standard precautions: hand hygiene, wearing gloves when handling EBM.

- Educate the mother on the importance of avoiding contaminating her milk. Advise her to:
 - i) Maintain good personal hygiene.
 - ii) Always wash hands in warm, soapy, running water prior to and after expressing.
 - iii) Avoid contamination of the inside of the collecting bottle, flange of the breast pump, and the inside of storage pottles.
 - iv) Wash expressing equipment (parts that contact the milk and her breasts) in warm, soapy water, rinse and soak in Milton for at least 15 minutes before re-using.
 - v) Renew Milton solution every 24 hours using cold water.
 - vi) Do not rinse equipment in water or wipe with a paper towel after removing from Milton.
 - vii) Each time a mother expresses, a new container for storage of EBM should be used.

6. Storage of EBM

- Fresh expressed milk may be safely stored in a fridge at 2-4°C for up to 48 hours. Store in fridge only enough milk to be used within this timeframe.
- If the milk is not going to be used within 48 hours, it should be frozen to avoid wastage and save milk for later use.
- Use defrosted milk within 24 hours to comply with food safety recommendations

7. Guidelines for storage of frozen EBM

To ensure storage of breast milk meets recommended food safety practices:

- Freezer box in refrigerator: 2 weeks.
- Separate door fridge/freezer: 3-6 months
- Separate chest/deep freezer: 6-12 months.

8. Transporting EBM

- i) When transporting frozen EBM during inter-hospital transfers: use chilli-bins supplied by NICU when transferring milk to other hospitals.
- ii) Pack milk tightly into chilli-bin, polystyrene insulated bag or bin with sufficient ice packs to keep milk frozen. Use a dampened, pre-chilled towel to fill any empty spaces.

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- iii) For a mother transporting or bringing in frozen EBM, guide mothers to supply their own chilli-bins and icepacks for transfer of milk to/from home; and pack milk according to standard in step “ii”, and advise mothers transporting fresh EBM from home should keep milk well chilled.

Taking these steps will ensure that:

- Milk remains frozen and defrosted milk is not refrozen.
- There is a consistent standard for transporting EBM.
- The safe quality of milk is guaranteed.
- The appropriate cold chain is maintained.

3 Evidence base

3.1 References

- Dougherty D. & Nash A. (2009). Bar coding from Breast to Baby: A Comprehensive Breast milk Management System for the NICU. *Neonatal Network*, 28, 5.
- Huber C, Blanco M, & Davis M. (2009). Expressed Breastmilk: Safety in Hospital. *American Journal of Nursing*, 109, 2.
- Cossey V., Jeurissen A., Thelisson M., Vanhole C. & Shuermens A. (2011). Expressed breast milk on a neonatal unit: A hazard analysis and critical control points approach. *AmJ Infect Control*, 39.
- Ministry of Health (2013). Breastfeeding guidelines. Retrieved July 08, 2013 from <http://www.health.govt.nz/your-health/healthy-living/babies-and-toddlers/breastfeeding-0/problems-breastfeeding/separation-baby/expressing-breast-milk-and-storing-expressed-milk>
- Kidshealth (2017). Breastfeeding. Retrieved on Nov 23, 2017 from <https://www.kidshealth.org.nz/tags/breastfeeding>

3.2 Associated Waikato DHB Documents

- [Ūkaipo-Breastfeeding](#) policy (Ref. 0132)
- NICU Nursing Procedure – [Enteral feeding](#) (4945)
- NICU Medical Protocol: [Standardisation of enteral feeding in Newborn Intensive Care Unit](#) (6171)
- NICU Medical Procedure: [Oral Immune Therapy in NICU](#) (6169)

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