Ashford and St. Peter's Hospitals
NHS Foundation Trust

St Peter's Hospital Milk Bank

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Guideline History		
Date	**Comments**	**Approved By**
Jan 2024	New guideline	NGG

1. INTRODUCTION

The milk bank follows NICE (National Institute for Health and Clinical Excellence) and UKAMB (United Kingdom Association of Milk Banks) guidelines. Copies of both guidelines are kept in the Milk Bank cupboard in the milk kitchen.

2. PURPOSE

Our purpose is to offer breast milk to vulnerable infants whose own mother is either unable to express her own breast milk, or whose supply is not sufficient for the needs of their baby. Vulnerable babies include extremely preterm and growth restricted infants- who are at an increased risk of conditions such as necrotising enterocolitis- an inflammatory bowel condition that can lead to significant complications including death. Breast milk reduces the risk of necrotising enterocolitis, and whilst maternally expressed breast milk is always the first choice, donated breast milk is preferred to formula in these babies.

3. DUTIES/RESPONSIBILITIES

Selecting and Screening Donors

Following an email enquiry from a potential donor, a member of the milk bank team will email with a donor recruitment letter, a donor questionnaire and a Could you be a breastmilk donor leaflet. (See Appendix 1)
Telephone enquiries are written in the milk bank message book (found on the carousel at NICU reception) theses enquiries will be followed up by the milk bank team at the next milk bank shift.
On receipt of a completed donor questionnaire and eligibility confirmed an email will be sent to the donor and a new donor pack will be sent by post to the donor's address containing.

- 24 x Sterile Bottles
- Sheet of Labels
- Information for donors' leaflet
- Handwashing leaflet
- Plastic Bag
- Luggage label
- Freezer thermometer
- Donor freezer temperature recording form

(**See Appendix 2**)

A handwritten blood test request form will be included. The blood tests needed are; HIV 1 and 2, HTLV 1 and 2, Hepatitis B and C, Syphilis
The donor will arrange her blood test appointment with Ashford Hospital, GP or a local hospital.
We will contact the donor with her results.
The donor can donate until 6 months post birth.
Advise the donor to please contact the milk bank immediately with any change of circumstances that may affect the answers to the initial donor questionnaire.
Donor details will be added to the database.

Transport of milk to the milk bank

The donor will email the milk bank to request a collection of her frozen expressed breast milk within 2 months of expressing.
The milk bank will acknowledge the donor's email and email SERV SSL to request the collection from the donor including

- Donor name
- Telephone number
- Address
- Quantity to be collected
- If more bottles are required for donors.

On arrival at NICU the milk will be placed into the unpasteurised donor milk freezer **F4** immediately. Should the driver require additional packs of bottles to deliver to donors, packs of bottles for SERV drivers are in labelled boxes on a shelf in the milk kitchen.

Preparation for pasteurizing

Defrost the frozen unpasteurised donor milk in the unpasteurised donor milk fridge **F6** for a maximum of 24 hours.

Pasteurising

Inform staff and parents that you are about to close the milk kitchen for about 1 hour. Collect the key for the milk kitchen door from the key cupboard in the room behind reception.
Place the laminated poster, which is kept in the milk bank cupboard, in the window of the milk kitchen door with the time on that you are closing the kitchen.

Equipment required

- Sterile jug of appropriate size
- Bottle for pre pasteurised specimen
- Bottle for spare pre pasteurised sample

- Lab form/plastic bag
- Long sleeve gown
- Paper hat
- Gloves
- Pen
- 100ml sterile Axifeed bottles
- Blue tamper proof lids marked '*donor ebm'*

Preparation

Ensure all milk is from the same donor, within 3 months of expressed date and all the bottles have defrosted. Discard any cracked or leaking bottles.
Label specimen bottles along with the laboratory form. A sample of how to fill laboratory form in is kept with milk bank grey folder (on carousel at NICU reception)
Clean all surfaces that you will be using with Cliniwipes.
Turn off air conditioning
Place a maximum of 39 sterile 100ml Axifeed bottles on the clean work surface along with the bagged Blue lids and jug.

Milk preparation

Wash hands and put on hat, gown and gloves.
Open sterile packs containing the jug.
Give each bottle of milk a gentle shake to mix well and pour into the jug until all the bottles are empty or the jug is full.
Once all the milk is in the jugs, pour a small amount of milk (about 20mls) into 2 x sterile bottles. These are the **pre and spare pre-pasteurisation samples.**

The post pasteurisation sample will be a 60ml bottle randomly selected from the batch post pasteurisation.

Pre and post pasteurisation samples are labeled accordingly. The pre and post samples should be sent to microbiology frozen. The spare pre sample is stored in a plastic box marked 'spare samples' stored in the donor milk freezer.
Divide the remaining milk equally amongst the sterile bottles ideally 60ml per bottle.
Place the Blue lids securely on. Clean any milk from the outside of the bottles.
If there are less than 39 bottles (40 with post sample) in the batch please fill the gaps in the baskets with white lidded bottles found under the sink in the milk kitchen.
Take the 2 bottle baskets out of the machine. Making sure the pasteuriser lid is closed, turn on the mains switch to the right of pasteuriser located on the wall behind the machine. Then start the machine by pressing the red square button. The printer will click and give out information including the preset bottle size (type 2=100ml Axifeed) and the batch number that forms the code on the bottles.
Press the rightside button marked 'Ent' to begin the pasteurising process.

An audible warning will sound and a visual prompt will appear on screen for baskets of milk to be loaded. Load the baskets with the bottles of unpasteurised milk. Then load the baskets into the pasteuriser.

The tank is very hot (57-70degrees C) at this stage and gloves must be worn.

Close the pasteuriser lid, an alarm will sound and then you press the 'Ent' button to begin process of pasteurising.
When the pasteurising is complete (approximately 1hour 15mins) an alarm will sound for the baskets to be removed from the machine.

Dispose of the empty donors' bottles in the clinical waste bin and clean all used surfaces.
Scrub the jugs in hot soapy water, rinse and dry and return to SDU.
Remove your protective clothing.

Open Milk Kitchen for use.

While the machine is pasteurising print the labels for the bottles, (see Appendix 3) and enter batch details to the database including

- Date
- Batch number
- Amount in litres
- Amount of bottles
- Donor name

When the audible alarm sounds the screen will read pasteurising complete. Press the red button to switch off machine, detach the computer printout from pasteuriser. Check temperature has been at 62.5 C for 30 minutes. Sign printout and place in appropriate folder.
Lift the pasteuriser lid and remove the bottle baskets.

Check the bottle lids are tight as you remove them from the basket and lay them on a clean towel on a clean trolley.
Dry the bottles and firmly attach the labels.
Select a 60ml bottle from the batch as the post pasteurised sample. Attach hand written label (donor NHS number, donor name, date of birth, batch number, date, and time) to pre and post pasteurised sample. Send 'pre' and 'post' sample to the lab.
Place the bottles upright in a clean plastic bag with 'DO NOT USE AWAITING RESULTS + BATCH NUMBER' red sign in the bag and seal.
Place the sealed bag in Freezer (**F3**), until results are received.
When acceptable results are received (See Appendix 4) remove sign 'DO NOT USE AWAITING RESULTS' reseal bag and place in Pasteurised Donor EBM Freezer. (**F1**)

Sterilization of Pasteuriser

This should be done weekly – See Appendix 5

Servicing of Pasteuriser

Hospital engineers have been trained to carry out a service by ACE- InterMed.

General Information

There is a separate freezer in Milk Kitchen for pasteurised Donor Milk. All pasteurised Donor Milk must be used by 3 months post pasteurising. Use defrosted pasteurised donor EBM within 12 hours if defrosted in the Medela Calesca milk warmer or 24 hours if defrosted in the nursery fridge. All the freezers are kept at -20degrees. All freezers have their temperatures recorded on the ward daily check list.

4. DISSEMINATION AND IMPLEMENTATION

5. MONITORING OF COMPLIANCE

7. ARCHIVING ARRANGEMENTS

8. REFERENCES AND BIBLIOGRAPHY

References:

National Institute for Health and Clinical Excellence February 2010 – Donor Breast Milk: The Operation of Donor Milk Bank Services

Guidelines for the Establishment and Operation of Human Milk Banks in the UK. 3rd Edition September 2003. United Kingdom Association for Milk Banking September 2003

Application of HACCP within Donor Milk Banks, Mark Green, Regulatory Services

9. APPENDICES

Appendix 1

Donor recruitment letter - **T:\NICU_PDSISTER\Milk Bank\DONOR RECRUITMENT LETTER.docx**

Leaflet. Could you become a breastmilk donor? - **T:\NICU_PDSISTER\Milk Bank\Could you become a breastmilk donor leaflet.docx**

Donor Questionnaire - **T:\NICU_PDSISTER\Milk Bank\Blank Donor Questionnaire (1).doc updated 12.2022.doc**

Appendix 2

Contents of new donor pack

- 24 x 100ml bottles
- 1 x sheet labels
- Leaflet. St Peter's Milk Bank information for donors - **T:\NICU_PDSISTER\Milk Bank\Information for Donors leaflet.docx**
- Handwashing instructions leaflet - **T:\NICU_PDSISTER\GUIDELINES\St Peter's Hospital Milk Bank Guidelines.docx**
- Clear plastic bag
- Freezer thermometer
- Donor freezer temperature recording form -***T:\NICU_PDSISTER\Milk Bank\Donor Freezer temperature updated.doc***
- Luggage label
- Hand written pathology request form for donor bloodtest

Appendix 3

Label printing instructions

- Use PC in NCOT office with Zebra printer connected.
- Click Milk Label icon
- Click print
- Enter batch number
- Enter value-1
- Enter amount of bottles
- Click print

Printer carbon rolls and labels are kept in the milk bank cupboard in the milk kitchen.

Appendix 4

Milk Bank - Microbiology interpretation (ASPH)

Donor milk should be discarded if:-

1. **Enterobacteriacae more than 10^4 CFU/ml e.g.**

   Enterobacter (any)
   Klebsiella (any)
   Escherichia (any)
   Pantoea (any)
   Salmonella (any)
   Yersinia (any)
   Shigella (any)
   Proteus (any)
   Serratia (any)
   Citrobacter (any)

2. **Staphylococcus aureus more than 10^4 CFU/ml**

   This is a specific organism. Other staphylococci fall into the next category.

3. **Total viable organisms more than 10^5 CFU/ml e.g.**
   Mixed growth >10^5 too many to identify
   10^2 of anything AND 10^1 of anything else = 10^6 CFU (i.e. exceeds total allowed of 10^5 CFU/ml)

   Micrococcuss luteus
   Skin Flora
   Staphylococcus (untyped)
   Staphylococcus haemolyticus
   Staphylococcus lugdunensis

Staphylococcus epidermidis
Acinetobacter (any)
Enterococcus,
Pseudomonas
Streptococcus

4. **Post pasteurisation**, **any bacterial growth** (<10 CFU) of **ANY** organism will lead to the **batch of milk being discarded**.
5. **MONTHLY frozen milk batch sampling** - the aim is to resend a randomly selected 60ml bottle of post pasteurisation frozen milk from each batch in our freezer on a monthly basis - e.g. if a milk batch is pasteurised on 21/8/23, a repeat 60ml randomly selected sample of milk will be sent on 21/9/23 and 21/10/23 (up until 3 months when the batch, if not used, will be discarded) to our lab for bacterial assessment. If this is positive the batch will be discarded. This should put in some safety nets to ensure that milk is not given to babies when it has been potentially contaminated accidentally post pasteurisation. It is also in line with the NICE guidance suggestions.

Appendix 5

Sterilising of Pasteuriser Instructions

Press the upper or lower push button to select STERILISING, then press the right hand (Ent) push button to start the process. The sterilising process takes several automatic phases to complete.

Phase 1 ADD STERILISING TABLETS

The display will instruct the operator to add sterilising tablets to the tank. Using the default level of 60mm the tank will contain approximately 5 litres of water when sterilising an HMP2000 or 10 litre's for HMP 2000 40 HC. Once the appropriate quantity of sterilising fluid (or tablets) has been added, close the lid and press the right hand (Ent) push button to continue.
Phase 2 FILLING

The pasteuriser tank is automatically filled to approximately 60mm (constant 13). The progress is measured on the lower line of the display.
Phase 3 CIRCULATING

The sterilising fluid is circulated for a period 30 minutes (constant 14) throughout the system.

Phase 4 DRAINING

At the end of the circulating cycle the sterilising fluid is automatically drained, a tone will sound to alert the operator that the sterilising process has completed.

4. Guideline Governance

a. Scope

This guideline is relevant to all staff caring for babies across neonatal intensive care, transitional care and maternity.

b. Purpose

i. This guidelines aims to facilitate a common approach to the management of babies admitted under neonatal care. At times deviation from the guideline may be necessary, this should be documented and is the responsibility of the attending consultant.

ii. This guideline is subject to regular review to ensure ongoing evidence based practice.

c. Duties and Responsibilities

What is expected from the health care professionals using this guideline to look after infants.

d. Approval and Ratification

This guideline will be approved and ratified by the Neonatal Guidelines Group.

e. Dissemination and Implementation

i. This guideline will be uploaded to the trust intranet 'Neonatal Guidelines' page and thus available for common use.
ii. This guideline will be shared as part of ongoing education within the Neonatal Unit for both medical and nursing staff.
iii. All members of staff are invited to attend and give comments on the guideline as part of the ratification process.

f. Review and Revision Arrangements

a. This policy will be reviewed on a 5 yearly basis.

b. If new information comes to light prior to the review date, an earlier review will be prompted.
c. Amendments to the document shall be clearly marked on the document control sheet and the updated version uploaded to the intranet. Minor amendments will be ratified through the Neonatal Guidelines Group. A minor amendment would consist of no major change in process, and includes but is not limited to, amendments to documents within the appendices.

g. Equality Impact Assessment

Background • Who was involved in the Equality Impact Assessment
Methodology • A brief account of how the likely effects of the policy was assessed (to include race and ethnic origin, disability, gender, culture, religion or belief, sexual orientation, age) • The data sources and any other information used • The consultation that was carried out (who, why and how?)
Key Findings • Describe the results of the assessment • Identify if there is adverse or a potentially adverse impacts for any equalities groups
Conclusion • Provide a summary of the overall conclusions
Recommendations • State recommended changes to the proposed policy as a result of the impact assessment • Where it has not been possible to amend the policy, provide the detail of any actions that have been identified • Describe the plans for reviewing the assessment

h. Document Checklist

To be completed (electronically) and attached to any document which guides practice when submitted to the appropriate committee for approval or ratification.

Title of the document:

Policy (document) Author:

Executive Director:

		Yes/No/ Unsure/NA	Comments
1.	**Title**		
	Is the title clear and unambiguous?	**Yes**	
	Is it clear whether the document is a guideline, policy, protocol or standard?	**Yes**	
2.	**Scope/Purpose**		
	Is the target population clear and unambiguous?	**Yes**	
	Is the purpose of the document clear?	**Yes**	
	Are the intended outcomes described?	**Yes**	
	Are the statements clear and unambiguous?	**Yes**	
3.	**Development Process**		
	Is there evidence of engagement with stakeholders and users?		
	Who was engaged in a review of the document (list committees/ individuals)?		**NGG**
	Has the policy template been followed (i.e. is the format correct)?	**Yes**	
4.	**Evidence Base**		
	Is the type of evidence to support the document identified explicitly?	**Yes**	

		Yes/No/ Unsure/NA	Comments
	Are local/organisational supporting documents referenced?	**Yes**	
5.	**Approval**		
	Does the document identify which committee/group will approve/ratify it?	**Yes**	
	If appropriate, have the joint human resources/staff side committee (or equivalent) approved the document?		
6.	**Dissemination and Implementation**		
	Is there an outline/plan to identify how this will be done?	**Yes**	
	Does the plan include the necessary training/support to ensure compliance?	**Yes**	
7.	**Process for Monitoring Compliance**		
	Are there measurable standards or KPIs to support monitoring compliance of the document?		
8.	**Review Date**		
	Is the review date identified and is this acceptable?	**Yes**	
9.	**Overall Responsibility for the Document**		
	Is it clear who will be responsible for coordinating the dissemination, implementation and review of the documentation?	**Yes**	
10.	**Equality Impact Assessment (EIA)**		
	Has a suitable EIA been completed?		

Committee Approval (Neonatal Guidelines Committee)			
If the committee is happy to approve this document, please complete the section below, date it and return it to the Policy (document) Owner			
Name of Chair	**Dr Saer Almeree**	**Date**	**January 2024**
Ratification by Management Executive (if appropriate)			
If the Management Executive is happy to ratify this document, please complete the date of ratification below and advise the Policy (document) Owner			
Date: n/a			