



Implementing Donor Milk in the NICU

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EDUCATION

- Pennsylvania State University, University Park, PA—BS in Food Service and Housing Administration (under the option of Administrative Dietetics)

EXPERIENCE

- Clinical Dietitian, 36 years
- Clinical Instructor, 28 years

NATIONAL CERTIFICATIONS

- Certified Nutrition Support Clinician

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Objectives

- Describe the process involved in establishing human milk feedings as the standard of care for very low birthweight infants (< 1500 gm).
- Provide guidelines for use of donor human milk to achieve exclusive human milk feedings and improve feeding-related outcomes.
- Describe the steps involved in developing policies and procedures for implementing donor human milk.

Benefits of Human Milk

- Well established as the optimal feeding for human infants.

J Am Diet Assoc, 2009.

- American Academy of Pediatrics recommends that all preterm infants should receive human milk and that pasteurized donor human milk should be used if mother's own milk is unavailable or its use is contraindicated.

Pediatrics, 2012.

- In the NICU, human milk enhances feeding tolerance as well as decreases risk of infection including late onset sepsis and necrotizing enterocolitis.

Schanler, 1999. Sullivan, 2010.

Establishing Human Milk Feedings as the Standard of Care

- Form a unit-based multidisciplinary committee or practice council responsible for implementation.
- Review current research to justify use of donor human milk (evidence-based practice).
- Review current feeding protocol; identify which infants would receive donor milk, i.e. all infants < 1500 gm birth weight.
- Determine current human milk pumping rates in addition to average # of admissions per year that would meet criteria for donor milk based upon feeding protocol.
- Compare sources of donor human milk in terms of nutritional analysis, testing and storage.

Comparison of Donor Milk Banks

	HMBANA www.hmbana.org	Prolacta Bioscience www.prolacta.com	Medolac www.medolac.com
Donor Screening	yes	yes	yes
Donor Serological Blood Test	yes	yes	yes
Healthcare professional medical release forms (donor, infant)	yes	yes	yes
DNA matching of donor to donated breastmilk	not required	yes	not required
Screened for common drugs of abuse	not required	yes	not required
Nutrition Labeling	varies	complete nutrition analysis on label	standard nutritional facts label
Storage Requirements	must be frozen	must be frozen	room temperature
Processing	pasteurized	pasteurized	commercially sterile

Establishing Human Milk Feedings as the Standard of Care (cont.)

- Develop proposal to present to administration.
 - Cost vs benefit
 - Improved health outcomes
 - Decreased morbidity/mortality
 - Lower health care costs
- Recommend tracking outcomes as part of proposal to use donor human milk.
 - Retrospective chart review
 - Rates of sepsis, NEC, TPN days, feeding intolerance, time to full volume feedings, etc.

Establishing Human Milk Feedings as the Standard of Care (cont.)

- Track same data after implementation of protocol.
- Showing positive outcomes can help justify the continued inclusion of donor human milk in the budget.

Guidelines for Use of Donor Human Milk in the NICU

- Feeding protocol established--determine which infants will receive donor milk and when transition off donor milk occurs.
- Consider initiating feedings the first day of life or as soon as clinical condition allows.
- Use only mother's own milk or donor human milk (no formula).
- Obtain consent for use of donor human milk prior to use.
- Some units wait for mother's own milk to initiate feedings and if none available by 24 hrs of life, initiate feedings using donor human milk.

Guidelines for Use of Donor Human Milk in the NICU (cont.)

CONSENT FOR THE USE OF DONOR HUMAN MILK

I, _____, parent/legally authorized representative of _____ (patient name), have received verbal and written information from _____ Neonatal Intensive Care team concerning the screening, pasteurization and handling procedures for banked Donor Human Milk processed by a member bank of HMBANA (Human Milk Banking Association of North America).
I understand that there are no known risks associated with the use of pasteurized donor human milk. I consent to the use of Donor Human Milk from HMBANA to feed my child, named above.

Parent/Legally authorized representative signature

Date

Time

Witness Signature

An interpreter or special assistance was used to assist patient in completing this form as follows:

_____ Foreign language (specify) _____

_____ Sign language

_____ Patient is blind, form read to patient

_____ Other (specify) _____

Interpretation provided by _____

Signature of Interpreter

Date

Time

Guidelines for Use of Donor Human Milk in the NICU (cont.)

- Emphasize importance of mothers providing their own milk.
- Ideally, donor milk should be used to bridge the gap until mother's own milk is available.
- Donor milk should be fortified just like mother's own milk per current feeding protocol.

Guidelines for Use of Donor Human Milk in the NICU (cont.)

What if parents refuse to sign consent form?

Guidelines for Use of Donor Human Milk in the NICU (cont.)

Nutrition Therapy: Heat Processed Banked Donor Human Milk Parent/Guardian Information Sheet

Human milk is the best food for babies. Special factors in human milk protect babies from infection. Factors in human milk also help brain cells develop and improve vision. These factors make human milk important for small or preterm babies. A mother's own milk is always preferred, but when it is not available, donor milk may be the best option. Heat-processed donor human milk is collected and processed by a member bank of Human Milk Banking Association of North America (HMBANA). This page will help answer questions you might have about banked donor human milk for your baby.

What is banked donor human milk?

Banked donor milk comes from lactating moms who give their milk to a milk bank. The mothers do not get paid for donating milk to the bank. Donor moms must pass many screening tests. Milk is collected from healthy mothers. The milk is also heat-treated (pasteurized) to kill known viruses and bacteria that may have been present in the milk. The milk bank must keep strict standards set by the HMBANA. Most of the nutrients in the milk are kept after heat-treating the milk.

What testing is done on moms who donate milk to the milk bank?

Blood from donor moms is tested before their milk is used by the milk bank. Milk donors are tested and must be free from:

- Human Immunodeficiency Virus (HIV)
- Hepatitis B and C
- Syphilis
- Human T-cell Lymphotropic Virus (HTLV) I and II (causes symptoms similar to HIV)

What are the benefits of using banked donor human milk?

Human milk:

- Contains immune factors to help protect your baby from infections
- Contains growth and developmental hormones
- Provides optimal nutrition
- Is easily digested

What are the risks?

There are no known risks to the use of heat-treated donor human milk. There are no reported cases of pasteurized donor milk infecting a baby with disease.

What are the alternatives?

Infant formula is an alternative to donor human milk if mother's own milk is not available. However, infant formula does not offer the same protective factors found in human milk.

What if I have more questions?

Talk to a member of the medical team, your baby's dietitian, your lactation consultant, or other member of the health care team if you have questions about the use of donor human milk for your baby.

You can also learn more about banked donor milk from HMBANA at website:
<http://www.hmbana.org> or phone number 919-861-4530 or email info@hmbana.org

Policy and Procedures

- MD or NNP order should be required to administer donor human milk.
- Role Clarification: Who will be responsible for inventory, ordering and storage of donor human milk?
- Upon delivery, donor milk (if frozen) should be placed immediately in freezer.
- Develop a log sheet to document date/time frozen milk placed in freezer, lot #, expiration date, # of containers received, dry ice still present, name of staff completing log.

Policy and Procedures (cont.)

HMBANA Donor Human Breast Milk

PLEASE DOUBLE CHECK THE LOT # ON THIS PAGE IS THE SAME AS THE CONTAINER IN YOUR HAND BEFORE SIGNING MILK OUT

Date and Time frozen Donor Breast Milk was placed in freezer	Lot #	Expiration Date	# of containers received	Dry ice still present in cooler	Name of staff logging milk in to freezer
				YES NO	

Date and Time frozen Donor Breast Milk was removed from freezer	# of Containers removed from freezer	Infant Name and MR#	Name of staff removing milk from freezer

Policy and Procedures (cont.)

- If using frozen product, specify thawing process to be used: breastmilk warmer or warm water bath. Provide specific instructions to staff.
- Who will be preparing/distributing feedings?
 - Nurses, techs or both
- Aliquots from one 3-4 ounce container of donor milk can be use for more than one infant (more cost effective)
- Frozen pasteurized donor milk should be stored in a commercial freezer at -20 degrees Centigrade (-4 degrees Fahrenheit)

Policy and Procedures (cont.)

- Once thawed, pasteurized donor human milk can be stored up to 48 hours if kept at less than or equal to 4 degrees Centigrade (≤ 40 degrees Fahrenheit)
- If using commercially sterile donor milk, shelf life after opening is up to 7 days if stored in refrigerator.
- Once prepared, syringes should be labeled with the patient identification label (includes name, medical record number), room number, feeding name and additives, calories/ounce, volume in the syringe, expiration date and time.

Things to Consider

Is there a separate nutrition room in your unit for preparation?

Most preparation rooms can be easily adapted to the preparation of donor human milk without additional equipment.

Guidelines for Preparation of Human Milk and Formula in Health Care Facilities. 2011. Pediatric Nutrition Practice Group.

Things to Consider (cont.)

Is there a laminar airflow hood for preparation?

The use of a laminar airflow hood may provide an additional barrier to potential contaminants, however use of this equipment is optional and is not meant to replace aseptic technique.

Guidelines for Preparation of Human Milk and Formula in Health Care Facilities. 2011. Pediatric Nutrition Practice Group.

Things to Consider (cont.)

If no separate nutrition room, is there a space designated for feeding preparation?

Milk should not be prepared at a bedside table where diapers are placed, medications given. A separate area designated for milk preparation or sharing of space with an already existing formula preparation room is acceptable as long as clean technique is used.

Education: Key to Implementation

- Education/training for all staff.
- Follow unit specific protocols.
- Thorough review of inclusion criteria as well as policies and procedures.

Concluding Remarks

- Establishing donor human milk as an alternative to mother's own milk as the standard of care in the NICU can be beneficial in improving feeding tolerance in preterm infants as well as decreasing risk of sepsis and NEC.
- Moving in this direction can improve outcomes when used as part of an exclusive human milk feeding protocol or to supplement mother's own milk instead of using cow-milk based preterm formula.

References

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Suggested Readings

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4. Carroll K, Herrmann KR. The Cost of Using Donor Human Milk in the NICU to Achieve Exclusively Human Milk Feeding Through 32 Weeks Postmenstrual Age. *Breastfeed Med.* 2013 Jun: 8(3): 286-290.



About Prolacta Bioscience®

Prolacta develops clinically proven, high-value products derived from human milk that are designed to meet the needs of extremely premature infants in the Neonatal Intensive Care Unit.

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