THE PHILIPPINE HUMAN MILK BANKING
(MANUAL OF OPERATION)
FOREWORD

"Mother's milk, time-tested for millions of years, is the best nutrient for babies because it is nature's perfect food.” —Robert S. Mendelsohn

Breastmilk contains all the nutrients that the baby needs from 0-6 months of age and continuing breastfeeding with addition of appropriate, adequate and safe complementary food is recommended up to two years and beyond.

The benefits of breastfeeding to the baby, to the mother, community and country cannot be overemphasized.

The mother and the baby may experience conditions like severe illnesses where breastfeeding might not be possible though, this can happen for a short duration in most cases. Mothers in a stressful environment such as a disaster or emergency situation may experience a decrease or temporary cessation of breast milk production. It is in this critical setting where mothers are most vulnerable to using artificial milk for their infants and young children especially when appropriate counseling support is neither readily available nor accessible and therefore exposes the baby to greater health risks exemplified by stunting, malnutrition, diarrhea, and respiratory diseases, etc.

The Department of Health offers the “Philippine Human Milk Banking Manual of Operation” to provide guidance in the management and operation of a Human Milk Bank to ensure that every Filipino child is not deprived of the optimum nutrition, health and development during the critical years of their lives.

We encourage lactating mothers to continue breastfeeding and donate a few ounces of their breast milk to the milk banks. In this way, they will be helping thousands of babies survive and enjoy the best nourishment that only breast milk can provide. The tedious process of collecting, donating, storing and saving can be truly rewarding as it can actually save babies lives.

Thus, with the development of this MOP as inspired by the RA 10028, “Expanded Breastfeeding Promotion Act of 2009”, hospitals but not limited to medical centers are encouraged to establish a Human Milk Bank. This manual describes in detail the ideal state of human milk banking to be adopted in the Philippines. Since its conception, donor mothers have nourished premature babies even those suffering from congenital defects.

In essence this manual is a genuine effective tool towards achieving improved quality of health care, under “Kalusugan Pangkalahatan.”

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The superior value of human milk in the nourishment and treatment of conditions associated with prematurity and other neonatal illnesses has been proven through numerous scientific publications worldwide. The level of evidence for the superior nutritional and immunologic properties of human milk remains incontestable. For this reason, a baby’s own mother’s milk is the current recommendation for the neonate’s health maintenance and ideal growth & development. When a mother is unable to provide her own milk for various reasons, the World Health Assembly, in its 2002 document on Infant and Young Child Nutrition: Global Strategy on Infant and Young Child Feeding, lists donor milk as the first alternative. In the same manner, the Infant and Young Child Feeding Program in the Philippines encourages setting up of a Human Milk Bank for the above reasons and their successful contribution presented during emergencies.

Donor Human Milk Banking dates back to the early 20th century when the first human milk bank was established in Boston, Massachusetts as a result of the growing recognition among physicians that infant mortality and morbidity were significantly improved by breastfeeding alone. The initial “bank” was essentially a home for lactating women who were paid to wet-nurse infants in need while breastfeeding their own infants. As early as 1943, the American Academy of Pediatrics’ Committee on Mother’s Milk published standards for milk bank operations, including collection, processing, storage and dispensing of donated human milk. An updated policy statement has since been published in 1980 and the Canadian Pediatric Society published its own statement in 1985 as well. The late 1980’s brought concerns about transmission of viruses including CMV and HIV through human milk. With increasing scientific evidence of both the benefits of human milk and the effectiveness of pasteurization and freezing in the destruction of viruses in human milk, donor human milk banking remains an important program of service for all newborns (and even adults) who stand to benefit from the nutritional and immunologic value of human milk.

In March 16, 2010, Republic Act 10028, the “Expanded Breastfeeding Promotion Act of 2009” was signed into a law amending Republic Act No. 7600 (“An Act Providing Incentives to all government and private health institutions with rooming-in and breastfeeding practices and for
Under Section 5 of the law, health institutions are encouraged to set up milk banks for storage of breastmilk donated by mothers and which have undergone pasteurization.

The Implementing Rules and Regulations (IRR) of the law, which was signed on August 22, 2011, explicitly describes the implementation of Milk Storage and Milk Banking in Health Institutions. Hence, the IRR should be supported by guidelines or manual of operation for a successful and safe establishment and implementation of Human Milk Banks in the country.

To achieve this goal, the National Center for Disease Prevention and Control (NCDPC) of the Department of Health gathered local experts with experience in human milk banking in the country to set standard guidelines that are appropriate for the Philippine setting. A steering committee, named as the Philippine National Committee on Human Milk Banking (PNCHMB) was formed to ensure the safe and effective operations of human milk banks in the country. This strategy is in cooperation with the government’s efforts to achieve our Millennium Development Goals (MDGs) — that is, to, provide the optimal nutrition to the Filipino newborns (MDG 1) and consequently, reduce childhood mortality (MDG 4).

THE PHILIPPINE NATIONAL COMMITTEE ON HUMAN MILK BANKING

VISION:

To be the exemplary and internationally recognized leader in the field of human milk banking, unparalleled in training, education, research and experience, and devoted to the provision of best nourishment for the Filipino infant.

MISSION:

To ensure that every infant in need will have access to safe human milk according to the standards set by the National Committee

OBJECTIVES:

1) Standardization of the establishment and operation of human milk banks in the country
2) Training of milk bank personnel on lactation and human milk banking
3) Formulation of policies for accreditation and monitoring of milk banks
DEFINITIONS

*Human Milk Bank* – a service established for the purpose of collecting, screening, processing, storing, and distributing donated human milk to meet the specific needs of individuals for whom human milk is prescribed by health care providers who are licensed to prescribe.

*Milk Storage* - a facility for storing expressed breastmilk at 0 to 4 °C.

*Milk donor* – a healthy lactating mother who volunteers to give breast milk for the benefit of other infants in need of breast milk

*Donor milk* – voluntarily given by women other than the biological mother of the recipient

*Mother’s own milk* – breast milk expressed only for the consumption of mother’s own baby

*Fresh-raw milk* – milk stored continuously at approximately 4° C for use not longer than 72 hours after expression

*Fresh-frozen milk* – fresh raw milk that has been frozen and held at approximately -20° C for not longer than 6 months to 12 months from date of collection.

*Heat-processed milk* – fresh-raw and/or fresh-frozen milk that has been heated to a minimum of 62.5 °C, but no more than 63° C for 30 minutes (Holder Pasteurization), to minimize loss of the unique beneficial properties of the milk, while destroying bacteria and viruses.

*Pooled pasteurized milk* – milk from more than 1 donor (preferably a minimum of 4 donors and a maximum of 6) which has been pooled and pasteurized at 62.5° C for 30 minutes.

*Preterm milk* – milk pumped within the first month post-partum by a mother who delivered at or before 36 weeks gestation.

Background and Rationale of Human Milk Banking

A human milk bank is a service established for the purpose of collecting, screening, processing, storing and distributing donated human milk to meet the specific medical needs of
individuals for whom human milk is prescribed. These individuals include preterm babies, critically-ill neonates with necrotizing enterocolitis, immunodeficiency disease, feeding intolerance, allergies, inborn errors of metabolism, etc. who are admitted in hospitals.

Every individual has the right to the highest standard of health. While God created the ideal mother to nourish her infant by letting him or her suckle at her breast, these mothers cannot be with their nursing infants all the time. The mother-baby dyad may be split in circumstances wherein either the mother or the child is critically ill.

Breastmilk has been proven by clinical and research studies to be the best source of nutrition for the infant because of its compelling nutritional, immunoprotective, neurodevelopmental, psychological, social, economic and environmental benefits. Breastmilk is a complex fluid, rich in nutrients and non-nutritional bioactive components that cannot be replicated by artificial formula so that in infants who do not have access to their own mother’s milk, donor milk can be life-saving. It is the best alternative feeding option for both full term and preterm infants.

Human milk is particularly beneficial for the nutritional support of preterm babies and the immunocompromised, yet these are the infants who may be separated from their mothers because of illness.

**HISTORY OF HUMAN MILK BANKING IN THE PHILIPPINES**

There are three hospitals with operational human milk banks in the country – Dr. Jose Fabella Memorial Hospital (DJFMH), the Philippine Children's Medical Center (PCMC) and the Philippine General Hospital (PGH).

Breastfeeding advocacies in these hospitals have been strengthened by lactation courses and Mother Baby Friendly Hospital Initiative certifications since 1989.

In 1996, the system of milk banking at PCMC was started through the efforts of the former head of the Section of Neonatology, Dr. Gloria B. Ramirez who created the Alay Gatas Community Program. Nearby Barangay Central followed by Barangay Pag-asaw were tapped for this purpose. Activities involved community mobilization, donor recruitment and screening, education and training of barangay health workers. Donor milk was frozen in the -200°C medical grade freezer, thawed and distributed to NICU patients without undergoing heat processing. Since 1997,
Dr. Ramirez, being a charter member of the Academy of Breastfeeding Medicine, communicated with Lois D.W. Arnold, Director of the Human Milk Banking Association of North America (HMBANA). In 1998, PCMC's first pasteurizer was developed by Dr. Ramirez and Mr. Vincent Valentus of the Advanced Science and Technology (ASTI).

In 1999, Dr. Soccoro Mendoza, former Chair of the Department of Newborn Medicine of DJFMH, likewise started the concept of own mothers' milk bank. This area was beside the NICU which also served as breastfeeding and milk expression area. Mothers expressed their milk which was stored in an ordinary refrigerator with freezer to be dispensed to their own babies. Donor milk was pooled and underwent the Pretoria pasteurization method. Dr. Jose Fabella Memorial Hospital has a big advantage of having a steady supply of human milk with its 60-80 deliveries/day. Mothers stay in the hospital for as long as their babies are hospitalized.

In 2003, Dr. Ma. Asuncion Silvestre and Dr. Pura Flor Isleta of PGH visited Meyer Hospital’s Milk Bank in Florence, Italy to observe on human milk banking.

In 2004, Mr. Gerwin Guba of ASTI produced the fourth generation pasteurizer for PCMC which to this day has proven to be very efficient.

In 2007, the human milk bank of PGH was formally launched, together with opening of the Breastfeeding Gazebo at the maternity ward.

In 2008, through the tireless efforts of Dr. Melissa Juico, Chair of the Department of Newborn Medicine, with full support of Dr. Estrella Olonan-Jusi, HMB Coordinator, and Dr. Ruben Flores, Medical Director, DJFMH Human Milk Bank was inaugurated with equipment donations from Mont Blanc Foundation and Philippine College of Health & Sciences (PCHS). In the same year, PCMC Human Milk Bank was likewise inaugurated. This was a facility funded by San Miguel Corporation and it now housed all equipment. Nowadays, the bulk of PCMC milk donors are private mothers.

In 2009, PGH Human Milk Bank became fully functional with the arrival of pasteurizer donated by ARCI, Tocsana, Italy. In 2010, Dr. Jessamine G. Sareno and Dr. Aurora Gloria I. Libadia were sent to Florence, Italy for milkbanking exposure at milk bank of Meyer’s Children Hospital.
1. ORGANIZATIONAL STRUCTURE and SUPPORT SYSTEM

1.1 COMPOSITION OF THE ORGANOGRAM

1.1.1 ADVISORY BOARD

- The board provides general guidelines, oversees the implementation of procedures and protocols, acts as a liaison officer with the medical community and be available for consultation with milk bank personnel.

  - Chair: Medical Center Chief / Director
  - Members: Executive Committee
    Human Milk Bank Head

1.1.2 HUMAN MILK BANK HEAD

- has education, training and experience in milk banking
- heads in the planning, development, implementation and evaluation of the administrative, medical and educational services of the milk bank
- works for the creation of a regulatory body for human milk banks

1.1.3 HUMAN MILK BANK COORDINATOR

- implementation, evaluation of the operations of the milk bank

1.1.4 THE MILK BANK COMMITTEE

- Human Milk Bank Head
- Human Milk Bank Coordinator
- Consultative Panel

  - The Technical Group
    - Assists in the formulation of guidelines related to milk bank operation.
    - Acts a consultant for laboratory screening procedures and responsible for identifying bacterial growth based on culture before and after pasteurization.
    - Monitors proper implementation of milk bank procedures and ensure continuous quality improvement protocols using assessment tools.
    - Recommends solution/s to identified problem/s, in consultation with milk bank head/ coordinator.
• Gives feedback to the advisory group as needed.
• The technical group may consist of the following personnel:
  ➢ Lactation Specialist
  ➢ Pathologist / Medical Technologist
  ➢ Infectious Disease Consultant / Head of Infectious Committee
  ➢ Quality Improvement and Safety Officer (CQI officer)
  ➢ Medical Ethics Personnel
  ➢ Lawyer
  ➢ FDA Representative

• The Clinical Application and Research Development Group
  ➢ Formulates and implements promotional strategy and cost-recovery plan.
  ➢ Establishes contact with hospitals which cater to critically-ill neonates as end-users of pasteurized human milk.
  ➢ Networks with hospitals with milk banks, to augment the supply of human milk, to exchange information and ideas.
  ➢ Establishes linkage and coordination with private and government agencies.
  ➢ Develops research protocols and conduct researches related to human milk banking operations, etc.
  ➢ Conducts conferences/meetings with other members to discuss problems/issues related to the milk bank operations.
  ➢ Implements guidelines on proper collection, storage, dispensing of human milk as well as its disposal.
  ➢ Monitors efficiency of pasteurized unit and constant availability of supplies.
  ➢ Keeps milk bank records such as donor records, administrative records, and recipient records for tracking and recall of donor human milk purposes.
  ➢ Develops promotional activities that will uplift public knowledge on the value of human milk, increase the milk bank’s donor pool and incite interest of private individuals and organizations to support the milk bank.
  ➢ This group may be composed of:
    ➢ Department Chairs / Representatives:
      ➢ Obstetrics
      ➢ Pediatrics
      ➢ Newborn Medicine
      ➢ Nursing
      ➢ Outpatient department
      ➢ Public Health
      ➢ Midwifery
    ➢ Medical Technologist
    ➢ Milk Bank Secretary
The committee shall meet on a regular weekly basis and as the need arises to discuss strategies, problems, policies and practices pertaining to milk bank.

1.1.5 THE MILK BANK STAFF

The Milk Bank Staff are persons who report every day to the Milk Bank facility to oversee and facilitate the day-to-day milk banking process, activities and evaluation. At a minimum, the staff must be composed of the:

- Milk Bank Head
- Milk Bank Coordinator
- Lactation Counselors
  
  o Breastfeeding education and advocacy - information campaign on breastfeeding and milk donation, makes information and education materials like flyers, leaflets, booklets, other reading materials.
  o Implementation of guidelines on proper collection, storage, dispensing of human milk as well as its disposal.
  o Monitoring efficiency of pasteurized unit and constant availability of donor milk.
  o Training and teaching of doctors and nurses, paramedical staff, mothers and milk bank volunteers, communities and other hospitals.
  o Special attention will be given to NICU mothers to maintain and increase lactation.

- Designated Personnel
  
  o Washing and sterilization of supplies (breast milk containers, etc.)
  o Pasteurization of breast milk
  o Handling of breast milk upon acceptance and arrival from different milk collecting stations, labeling
  o Distribution of pasteurized breast milk
- Administrative Clerk
  - Keeps milk bank records such as donor records, administrative records, and recipient records for tracking and recall of donor human milk purposes.
  - Coordinates transportation for picking up milk from donors, and distributing/delivering milk to end-users.
  - Handles finances, supplies and equipment inventory.

**THE HUMAN MILK BANK ORGANOGRAM**

- The Milk Bank Committee
- The Milk Bank Staff
1.2 AREAS OF RESPONSIBILITIES

1.2.1 Education and Advocacy

- Breastfeeding education and advocacy.
- Training support and teaching of doctors and nurses, paramedical staff, mothers and milk bank volunteers, communities and other hospitals.
- Focused and intensive lactation support to NICU mothers.

1.2.2 Clinical and Research Group / Quality Assurance

- Develop methods through research that would further ensure quality and safety of banked human milk.
- Engage in researches relevant to human milk banking and breastfeeding (example, creatematocrit testing, sulfuric acid test to check for contamination with bovine milk).
- Donor screening.
- Routine bacteriologic evaluation of all pooled raw human milk and all batches of pasteurized donor milk.
- Create a Hazard Analysis Critical Control Point (HACCP) as part of quality control.

1.2.3 Production

- Handling of breast milk upon acceptance and arrival from different milk collecting stations, labeling.
- Pasteurization of breast milk.
- Proper Storage of breast milk.
- Distribution of pasteurized breast milk.
- Washing and sterilization of supplies (breast milk containers, etc.)

1.2.4 Administrative

- Donor/Recipient records
- Donor-tracking and recipient patient tracking
- coordinates transportation for milk pick-up, and distributing/delivering milk to end-users
- handling of finances, supplies and equipment inventory
- regular monitoring, maintenance of equipment
1.2.5 **Promotional Strategies**

- Formulates and implements promotional strategy and cost-recovery plan
- Establishes contact with hospitals which cater to critically-ill neonates as end-users of pasteurized human milk
- Networks with other hospitals with milk banks to augment the supply of human milk, to exchange information and ideas
- Establishes linkage and coordination with private and government agencies
- Donor recruitment and support

2. **DONORS– Definition, Recruitment, Screening and Education**

2.1 **DEFINITION OF A DONOR**

2.1.1 The breast milk donor must be a healthy, lactating woman who is capable of donating her expressed breast milk.

2.1.2 The breast milk donor must be willing to undergo verbal and written screening. If eligible, she must be willing to submit to a thorough physical examination and serologic testing.

2.1.3 A breast milk donor must be willing to receive and follow basic instructions on expression, collection, storage and transport of milk.

2.2 **DONOR RECRUITMENT**

An active donor recruitment programme of the member milk bank is needed to provide continuous stream of new donors to maintain milk supply. Recruitment can be increased if milk banks offer breastfeeding support and services to the donors. Potential donors can be reached through the following channels:

2.2.1 Coordination with partner agencies e.g. government and private offices shall be done. Office administrators are encouraged to establish breastfeeding and milk collection stations in their respective offices.
2.2.2 Different health centers and local community groups in the hospital’s catchment areas shall be involved in the education campaign on milk banking, recruitment of milk donors and the establishment of milk storage stations in the communities.

2.2.3 Residential communities and homeowners’ groups shall also be tapped to help in the recruitment of milk donors.

2.2.4 Provision of written information (in clear, non-technical language) posted at or left in:
- Antenatal clinics in out-patient departments
- Doctors’ clinics
- Maternity wards in hospitals
- Birthing clinics
- Maternity and infant shops
- Breastfeeding shops

2.2.5 Direct referrals or recommendations by:
- Current and previous donors
- NICU staff
- Doctors in contact with postpartum mothers (family physicians, obstetricians and pediatricians)
- Childbirth educators
- Organizers and attendees of prenatal and postnatal classes
- Lactation support groups
- Women’s groups and other non-governmental organizations working with mothers and children

2.2.6 Incorporation of concept of milk donation in:
- Breastfeeding / lactation seminars
- Pre-natal classes
- Pre-nuptial seminars

2.2.7 Mass media communication such as:
- newspapers, newsletters, magazines and journals
- mass media such as television and radio

2.2.8 Social networking sites and other related media

2.2.9 Public space advertisements (e.g. malls, bus stops, train stations)
2.3 DONOR SCREENING

2.3.1 Mothers who volunteer to become milk donors are interviewed by an authorized milk bank staff using a standard interview form. (See Appendix 1)

- Mothers can donate their stored breast milk in their own homes provided that the milk has been stored in a 2-door freezer for a period not exceeding 2 months.
- All donors are made to sign a consent and commitment form (See Appendix 2).

2.3.2 Conduct the screening interview with potential donors at a mutually acceptable time and place, either face-to-face or by telephone (if by telephone, request her to come personally for the physical examination and testing once screened to be eligible).

2.3.3 Physical examination of the breast to check for presence of skin/breast lesions and evidence of intravenous drug use or presence of tattoos is an integral part of the screening process.

2.3.4 Donors who pass the interview and physical examination are asked to submit to HIV testing.

2.3.5 If all of the above are acceptable, the candidate may donate her milk anytime. Arrangements regarding transport of milk, i.e. if there is a need to pick up the milk either through:

- an identified collection vehicle in the community
- the milk collection vehicle (or hospital ambulance) of member milk bank
- private vehicle of milk bank staff

In some circumstances, the donor offers to deliver the milk herself to the milk bank by private vehicle or public transportation. Once the transport arrangement has been made, she is given a standardized instruction on breast milk collection, storage and transport. (See Appendices 4 and 5).

2.3.6 Advise a potential donor that she is NOT ELIGIBLE to donate milk if she:

- currently smokes or uses nicotine replacement therapy (NRT)
is using, or has recently used, illicit drugs including (but not limited) to marijuana, methamphetamine, cocaine, heroin.

regular use of more than 2 ounces of hard liquor or its equivalents: 355 ml or 2 cans of regular beer, 240 ml of table wine in 24 hours

**NOTE:** If potential donor is using illicit drugs, alcohol or tobacco, advise to stop exposure due to risk to her infant and to herself

has previously tested positive for HIV 1 or 2

**NOTE:** HIV positive mothers can opt to breastfeed their own infants after undergoing specialized counseling.


belongs to any of the following high-risk groups for HIV/STDs:

- Sexual partners of men known to be infected with HIV
- Drug users or sexual partners of drug users, who have injected themselves with drugs at any time
- Sexual partners of men who have had sexual intercourse with other men at any time
- Sexual partners of hemophiliacs known to be HIV-infected
- Have sexual partners at any time who had lived in countries where heterosexual spread of HIV is common – such as sub-Saharan Africa or South East Asia
- Commercial sex workers (prostitutes)
- have received in the preceding 12 months blood donation or other blood products (except RhoGam) while in a country where screening of blood donors is not routine

has any recent exposure to the following diagnostic, therapeutic and environmental radiation

- radioactive iodine (131I) therapy
- exposure to nuclear radiation (>1mSv/yr)
NOTE: Advise mother to submit milk for gamma (radiation) counter in a nuclear medicine laboratory before deciding to resume breastfeeding or donate milk.

- receipt of an organ or tissue transplant within the last 12 months
- have (or had a sexual partner) ears or other body parts pierced with instruments not intended for single use, permanent tattooing/make-up applied by needle, or an accidental stick with a contaminated needle within the last 12 months.

2.3.7 Potential milk donors with the following conditions are temporarily disqualified:

- Rubella in the donor or a family member. A donor may be accepted as a donor four weeks after infection starting from the time the lesions start to crust
- Recent immunization containing live rubella vaccine (e.g. MMR). Four weeks after vaccination, a donor may be accepted as a donor
- During the 12-hour period following consumption of alcohol (hard liquor, beer, or wine)
- Clinical mastitis and any active breast or nipple infections (monilial, fungal, eczema, HSV, shingles).
- Recent Technetium-labeled diagnostic radiation. Acceptable to donate after 3 days.

After temporary disqualification, milk donation shall resume at the discretion of the Milk Bank Coordinator or Medical Director.

2.3.8 The following conditions are acceptable:

- Use of the following medications is acceptable: human insulin, thyroid replacement hormone, nasal sprays, asthma inhalers, topical treatments, eye drops, progestin-birth control products, and low-dose estrogen birth control products.
- During a reactivation of latent infection with herpes simplex virus (HSV), varicella zoster (shingles) or any skin infection (infected eczema) as long as the site of lesion is away from the breast and it is covered during expression of milk.
- Recent X-rays, MRIs, CAT scans, Intravenous Pyelogram (IVP), ultrasound, mammograms, DMSA, and barium scans do not affect breastfeeding
2.3.9 Other precautions that shall be considered by the milk bank coordinator in making the final decision to consider a donor as an acceptable milk bank donor:

- Donor mother on long-term prescribed medication
- Donor mothers with any chronic illness or systemic disorder.
- Donor mothers with regular use of over-the-counter medications.

2.3.10 If a mother had previously donated breastmilk, she should be screened similarly but questions relating to use of prescription and illicit drugs, smoking and alcohol intake must be answered for the period when the milk was expressed.

2.3.11 Always ensure mother’s and own infant’s health before donation.

- Using informal interview and referring to mother’s health records (with consent) if necessary, ask the potential donor questions on the topics that follow. Use the information she gives to make a balanced decision about her eligibility to donate based on possible risks to recipients and/or the results of subsequent serological tests. Ask questions about:
  - **her health**: to confirm that she is in good general health
  - **her baby**: document the age and health (including weight gain) of the baby
  - **any medication that she is taking**: is she currently taking any medication or undergoing any other medical therapy?

  **NOTE:** *Milk bank personnel shall search LactMed (evidence-based Drugs and Lactation Database) to determine if the medications are true contraindications to breastfeeding.*

- Advise the potential donor that depending on her answer to any of these questions she may or may not be eligible to donate milk.

2.3.12 All eligible donors must undertake laboratory testing after initial screening interview and physical examination.

- When potential donors first contact the milk bank about donating milk, explain that:
  - Work-up may be requested as necessary based on initial interview or physical examination.
Obtain informed consent before testing.

Donors with cough of >2 weeks at the time of milk collection must be cleared by her attending physician.

**NOTE:** Donors with suspicion of pulmonary TB must be counseled properly and referred accordingly to her attending physician for further diagnosis and management.

Serologic tests for HTLV, Hepatitis B, CMV, and Syphilis are not mandatory tests if initial screening process (interview, antenatal records and PE) is not significant.

Perform all screening tests at the time of enrolling for donor milk banking. Antenatal test results done within 6 months from enrollment may be applicable.

All tests should be undertaken in accredited laboratories.

Milk bank personnel to secure official reports of HIV screen.

Provide counseling on breastfeeding for HIV positive mothers. If needed, offer further help and support including information about counseling and local support groups.

In the context of Infant Feeding in Emergencies (IFE), any screening test is waived.

(Please see Appendix 3 for Algorithm for Donor Screening)
2.4 DONOR EDUCATION AND SUPPORT

2.4.1 One best practice that can ensure safety and quality of donated milk is to instruct donors in the proper methods and protocols in milk expression, collection, handling, storage and transportation of the human milk.

2.4.2 Provide verbal and written instructions to the donors which must include:

- Proper hand washing and personal hygiene
- Proper techniques for milk expression and collection
- Use of breast pumps and milk containers and how to clean them
- Milk storage
  - Comparison of different milk containers
  - Appropriate labeling of containers including time and date of collection
  - Cooling, freezing and storage instructions
- Proper transport of milk to the bank including temperature and time limit to ensure that the milk is maintained frozen at all times.

2.4.3 Complete information on all milk expression options, suitability of each method in every home setting and collection techniques must be provided to donors.

- Hand expression is the recommended method for milk expression.
  - Actively encourage donors to hand express milk (Marmet technique) because a pump (or electrical source) may not always be available. (See Appendix 4 for technique instructions).
  - Accept pump-expressed milk if donors prefer this method
- Drip milk collected during or between feedings is acceptable for donation.
- Clean, dry containers made of food-grade polypropylene plastic or glass with leak-proof lids are acceptable for storage of human milk. Avoid polycarbonate plastic containers due to risk of leaching bisphenol A. (See Appendix 4 for different storage containers).
- Do not discard the first 10 ml of expressed breast milk.
- Fill each milk container ¾ full (or leave 1 inch from the top of bottle) to allow room for milk expansion with freezing.

2.4.4 Donors must be advised on the different options of storing expressed milk.

- Expressed milk should be frozen as soon as possible.
- Refrigerate milk samples (4°C) collected over 24 hours & then freeze the batch.
- Freshly expressed milk can be added to a bottle of already frozen milk, provided it is within a 24 hour collection.

2.4.5 As needed, donors can be supervised at home while collecting and storing donations to lessen discarded donations.
2.4.6 Donors must be informed on the different methods of storage of expressed milk at home and the maximum duration when it can be used raw and when to bring stored expressed breast milk to the milk bank for immediate pasteurization. (See Appendix 5 for Storage Methods and Duration)

2.4.7 Donors must be educated on the importance of maintaining the cold chain during transport of human milk to the milk bank. Advise to:

- Frozen gel packs are more suitable than ice cubes to keep milk cold or frozen.
- Freshly expressed breast milk can safely be stored for up to 24 hours in a cooler with frozen gel packs.
- Do not use wet ice.
- Small amounts of dry ice (a hazardous substance) can be used for long-distance transport and in extremely warm temperatures. Limit dry ice to <5 lbs. for air transport and avoid use in car transport because it sublimates to carbon dioxide in enclosed spaces.
- Pack frozen milk tightly into a cooler, filling all empty spaces with crumpled paper or towels.

2.4.8 For donor who continues to donate, milk bank staff should regularly ask about her general health, infant’s growth, lifestyle changes (alcohol, smoking, drugs, and risky behavior), medical illness and medications that may prompt her temporary suspension or permanent exclusion as a milk bank donor.

*NOTE:* Donors who develop cough with or without other associated symptoms must be educated to wear face mask every time she breastfeeds her infant and expresses her excess milk for storage.

2.4.9 Aside from basic donor education, offer emotional and psychological support to donors as needed.

2.4.10 Donors can be given special privileges by member milk banks (free hospital consults, laboratory discounts) to encourage continuity of donation. Guidelines should be outlined in the individual manual of operations of the milk bank.
3. MILK BANK REQUIREMENTS and PROCEDURES

3.1 THE MILK BANK FACILITY

3.1.1 The minimal requirement for a milk bank space is to have areas for the processing of milk, storage of milk, reception/collection area and office/administrative space.

3.1.2 Ideally, the milk processing and storage area requires about 650 square feet of space. If this is not feasible, minimum requirement is to have this critical area be a separate unit from the other milk bank areas for proper sanitary control.

3.1.3 Standard equipment includes separate freezers for storing raw from pasteurized milk, a pasteurizer, a refrigerator, a laminar flow hood (or a clean bench) and drying equipment (drying oven or steam sterilizer). -20°C freezer is ideal for storing milk longer than two (2) weeks, (see section on storage).

3.1.4 A wash area must be available for use by milk bank staff where she can hand wash prior to milk handling. Bottles and lids used for pasteurization are washed here. (See Appendix 4.III.1 for recommended methods in cleaning bottles and lids.)

3.1.5 The milk bank must have a separate hand washing facility for mothers coming to the milk bank to express milk.

3.1.6 A comfortable milk expression area (offering enough privacy) must be available for donors as well as for other lactating mothers (patients’ mothers or employees) who wish to pump and express milk for their own children.

3.1.7 Educational materials on milk donation and milk banking and breastfeeding support information must be available for mothers and visitors at the milk bank.

3.2 PERSONNEL HYGIENE AND EQUIPMENT MAINTENANCE

3.2.1 A sterile environment is not necessary but thorough good hand hygiene before and after handling of milk at must be performed by every milk bank staff who handles the milk.
3.2.2 Milk bank personnel should wear protective clothing when handling milk and open containers of milk to prevent contamination, such that:
   - Hair is covered.
   - Sterile gloves are worn and changed between handling raw and pasteurized milk. *The use of gloves does not replace the need for good hand hygiene.*
   - Clean cover gown, apron or lab coat is worn over clothing
   - Face mask is worn during milk handling.

3.2.3 The Human Milk Bank must maintain a detailed manual of procedures. The procedures must be periodically reviewed and updated in consultation with the Milk Bank Committee.

3.2.4 All equipment manuals and users’ instructions of supplies shall be available to milk bank personnel at all times.

3.2.5 Freezer temperatures must be recorded daily by means of a recording thermometer. The freezers must be equipped with temperature-sensitive alarms.

3.2.6 Storage and processing equipment must have scheduled maintenance checks and calibration as recommended by individual manufacturers.

3.2.7 Regular orientation on staff hygiene and equipment use must be provided for new milk bank staff or when new equipment/supplies are purchased.

3.3 RECEIVING TRANSPORTED MILK AT THE MILK BANK

3.3.1 Milk Bank staff must ensure proper handling and thorough evaluation of the quality of the donated milk received at the milk bank.

3.3.2 Accurate documentation of the staff must be carried out which should cover the following data:

   - Correct labeling of donor’s name, time and date of expression
   - State of the donated milk upon pick up at donors’ homes or milk depots.
   - State of the donated milk upon arrival at the milk bank must be noted.
• Frozen milk is ideal. Transfer immediately to the milk bank freezer.

• If received partially or completely thawed, determine and record time of pick-up and time of arrival at the milk bank. Thawed milk can be refrigerated and used within 24 hours. Do NOT REFREEZE.

• If received at room temperature or as cold liquid milk, determine and record time of pick up and arrival at the milk bank. If within 4 hours, dispense immediately if with recipient, except to pre-term & critically ill. Otherwise, freeze for subsequent pasteurization. Specify how long from time of expression then freeze immediately.

• If received freshly expressed from the donor, freeze immediately at the milk bank freezer.

  ❖ Milk donated is transported in acceptable milk collection containers
  ❖ Milk containers have not been tampered with.

3.3.3 Store donated milk received in a freezer separate from the pasteurized milk.

3.3.4 Store donor milk at the milk bank freezer awaiting pasteurization for no longer than 3 months from the date of expression.

3.4 HANDLING MILK PRE-PASTEURIZATION

3.4.1 DEFROSTING

  ❖ All donor milk must be thoroughly thawed before pasteurization to ensure uniform heat treatment.

  ❖ Prevent donor milk from reaching 8°C while thawing.

  ❖ Thawing methods can be carried out as follows:

    • Quick thawing in a wide container of warm water (not to exceed 37°C) ensuring that the water does not touch the lids of the bottles. While still chilled, refrigerate and pasteurize within 24 hours.
• Milk to be pasteurized can be transferred from the freezer to a refrigerator to allow slow thawing overnight.

• Milk can be thawed slowly at room temperature but should be monitored and refrigerated before complete thawing while ice crystals are still present. Pasteurize within 24 hours.

❖ Document accordingly, time and date of thawing.

❖ Do not defrost by DIRECT HEATING (ex. microwave)

3.4.2 POOLING AND ALIQUOTING

❖ All pooling and sampling of donor human milk must be done under a laminar flow hood or a clean bench.

❖ Thawed milk from different donors (minimum of 4, maximum of 6 donors) is pooled in a clean flask, filled to half the container. This pooled milk will be considered as one milk batch. The flask must be gently swirled for homogeneity.

❖ The pooled milk shall be aliquoted into clean glass or polypropylene plastic bottles in predetermined amounts.

• The containers shall be filled leaving adequate air space in the container to allow for expansion during freezing.

• All containers should be tightly closed with new caps or pre-sterilized caps to prevent contamination.

3.4.3 PRE-PASTEURIZATION MICROBIOLOGIC TESTING

❖ A 10µl of milk sample is taken from a randomly selected bottle (aliquot) from the pooled batch using aseptic technique.

• The sample should be sent immediately to the laboratory for microbiologic testing.

• If aseptic technique is dubious, discard the bottle from which the sample was taken.

The milk batch can be stored at 4°C overnight while waiting for the microbiology results to be available before proceeding to pasteurization.
Milk suitable for pasteurization should meet the following minimum standards:

- Total viable microorganisms not exceeding $10^5$ CFUs/ml.
- *Staphylococcus aureus* or *Enterobacteriaceae* that does not exceed $10^4$ CFU/ml.
- Presence of organisms defined as being of fecal origin not exceeding $1 \times 10^4$ CFUs/ml.
- Absence of unusual organism such as *Pseudomonas aeruginosa*, spore-bearing aerobes or anaerobes.

If the batch does not meet these standards, the whole batch must be discarded or stored for research purposes.

Only milk from pooled batch with <$10^4$ CFU/ml of normal skin flora (e.g. CONS, diphtheroids, Staph epidermidis or Strep viridans) and NO pathogenic organism will be acceptable to dispense raw to recipients.

### 3.5 Pasteurization and Post-processing Procedures

#### 3.5.1 Heat Processing

- Pasteurize donated milk at 62.5°C for 30 minutes (Holder pasteurization) in a human milk pasteurizer.

- For milk banks who are using equipment specifically designed for human milk pasteurization, the procedures for the use of the machine shall be followed as recommended by the manufacturer.

- Specific details of the pasteurization procedure for a specific pasteurizer must be outlined in the individual manual of operations of the milk bank.

#### 3.5.2 Rapid Cooling

- Current commercial human milk pasteurizers have built-in cooling systems that rapidly cool the milk after the pre-set temperature (62.5°C) and heating time (30 mins).

- If with no built-in cooling system, the processed milk can be rapidly cooled to a temperature of 4°C or lower in ice slurry.

**NOTE:** Caps need to remain above water level to prevent water seepage and bacterial contamination.
3.5.3 POST-PASTEURIZATION MICROBIOLOGIC TESTING

- Remove one bottle for bacteriologic testing. The remainder of the batch should be promptly frozen for storage.

- Any bacteriologic growth is unacceptable for pasteurized donor human milk.
  - If the processed milk does not meet this standard, the whole batch must not be dispensed or it can be stored for research purposes.

3.6 STORAGE OF PROCESSED HUMAN MILK AT THE MILK BANK

- Containers are labeled with batch number and date of treatment and freezing.
- Processed milk must be stored and dispensed with no further handling is done on milk that has already been pasteurized and proven bacteria-free.
- Bottles with pasteurized milk are placed upright in – 20˚C freezer.
- Frozen, pasteurized milk can be stored for 6 to 12 months at – 20˚C
- Thawed, pooled pasteurized milk can be stored for up to 48 hours at 7˚C or refrigerator temperature.
- Milk should be stored in the freezer such that the oldest milk is used first. (first in, first out policy)

4. RECIPIENTS – Selection, Prioritization and Dispensing

4.1 SELECTION OF RECIPIENTS AND DISPENSING

4.1.1 As much as possible, the recipient is given milk from biologic mother and/or from same pooled batch and same age, i.e. premature infant receives preterm milk.

4.1.2 All milk dispensed shall be heat-processed unless the patient’s physician requests fresh frozen milk.

4.1.3 Banked donor milk shall be dispensed only for clinical use by prescription or by hospital purchase order to infants from the NICU, pediatric wards, pay wards and emergency room with the following conditions:
  - prematurity
  - malabsorption
  - feeding intolerance
- immunologic deficiencies
- congenital anomalies
- post-operative surgical conditions

4.1.4 A prescription from attending pediatrician of the child must be secured and submitted to the human milk bank. The prescription should include the full name of the patient, the hospital where he/she is admitted, the name of the attending doctor, age of gestation, date of birth, the indication for giving pasteurized breast milk, the volume of feeding required by the patient, and the approximate duration of need for donor milk.

4.1.5 Attending physician of recipient must assess the following maternal factors prior to prescribing donor milk:
- maternal milk supply

   **NOTE:** Support and counseling will be provided to mothers with problems in lactation.

- medical contraindications to breastfeeding

4.1.6 If supplies of banked milk are sufficient, milk may also be dispensed by prescription in the following situations:
- Lactation failure/insufficient
- Adoption
- Illness in the mother requiring temporary interruption of breastfeeding
- Health risk to the infant from the milk of the biological mother
- Death of the mother
- When supplementation is need

4.1.7 Parents of recipients of donor milk should be given all the information regarding pasteurized human milk. Their consent should be obtained.
- A waiver is also signed that the pasteurized breast milk to be dispensed can only be guaranteed its sterility up to the time the milk is picked up. Instructions on the proper handling and storage of milk must be followed.
- In case of refusal by the parents, and their informed decision is to use milk formula or raw breast milk from a different donor, a waiver should be signed by parent and physician.

4.1.8 Full term healthy newborns should not be given donated expressed breast milk as a pre-lacteal feed. Mother-baby dyads are assisted in establishing a breastfeeding relationship.
4.1.9 All recipients of breast milk coming from the milk bank are required to pay a nominal fee incurred for the processing of donor milk which will be charged on a per ounce basis.

4.2 PRIORITIZING RECIPIENTS

Donor milk will be given to any patient in need. Priority is given to service or private patients who are preterm, post-surgical or critically-ill newborns. Other infants admitted in other hospitals may also be provided pasteurized breast milk, as long as medically indicated.

However, when supply of donated human milk is limited, the following tool was developed by HMBANA for prioritizing distribution of milk.

4.2.1 Recipient Factors:
- Age – preterm vs. term
- Projected length of need – short-term need is more easily met than chronic need
- Medical condition – use of donor milk for health outcome (post-surgical – abdominal wall defects)
- Prognosis – contribution to a better health outcome
- Prevention of problems – donor milk may prevent serious conditions like necrotizing enterocolitis, sepsis, meningitis, etc.
- Research – clinical vs. basic research

4.2.2 Maternal Factors:
- Insufficient milk supply – milk banks have to help and assist the mother in optimizing her milk supply
- Medical contraindications to breastfeeding
- Maternal death
- Adoption

4.2.3 Time Factors
- Short-term use
- Likely to recover
- Preventive treatment

4.2.4 Ethical use
- Community benefit
- Individual benefit / choice
Based on the first 3 factors, ranking from most critical (1) to least critical (3), and community/individual benefit, priority recipients recommended for the Philippine milk banks are as follows:

- Premature infants, sick
- Premature infants, well
- Infants <12 months with medical and abdominal / gastrointestinal surgical conditions likely to respond to donated human milk therapy
- Individuals >12 months with medical conditions likely to respond to donated human milk therapy
- Individuals >12 months with chronic medical conditions, high normal functioning, low dose need
- Individuals >12 months with chronic medical conditions, high normal functioning, high dose need for what?
- Individuals >12 months with chronic medical conditions, low normal functioning, low dose need
- Individuals >12 months with chronic medical conditions, low normal functioning, high dose need
- Infants for short-term use, no specific medical indication
- Research contract for clinical use in well-designated studies
- Laboratory research (milk that cannot be used for human consumption due to drugs used by the donor, lack of complete testing of the donor, or age of the milk)

The decision will be made by the milk bank coordinator and/or the medical director based on diagnosis, severity of illness, availability of alternative treatments and history of previous milk use. Donor milk is never refused solely on the basis of financial limitations.

6. MILK BANK DOCUMENTATION

6.4 DONOR RECORDS

6.4.1 Donor Database (includes contact details and address for donor tracking)
6.4.2 Initial Donor Screening Form with:
  - Medical history
  - Birth history of infant (date, gestational age)
❖ History of communicable diseases
❖ Lifestyle choices (smoking, alcohol, drugs)
❖ Physical examination

6.4.3 Antenatal records
6.4.4 Assessment of newborn health
6.4.5 Signed consent form agreeing to serological blood test
6.4.6 Signed consent form for the use of the donor milk
6.4.7 HIV Screening Results
6.4.8 Donation Log
   ❖ Time and date
   ❖ Volume of donation per donor (quantified in thawed volume)
   ❖ Receiving staff

6.5 RECIPIENT RECORDS

6.5.1 Name, location and contact details of ordering physician or hospital
6.5.2 Batch number and volume of supplied milk provided to each recipient
6.5.3 Dispensing milk bank staff
6.5.4 Transport details to receiving units
6.5.5 Diagnosis and outcome of recipients of per batch of milk

6.6 ADMINISTRATIVE FILES and RECORDS

6.6.1 Procedural Records
   ❖ Log of milk received at the milk bank
     • Date and time collected, transported and received
     • Quality of milk on arrival
     • Milk temperatures
     • Conditions of transport
   ❖ Identification of milk donors comprising each pooled batch
   ❖ Batch information
     • Date and time pooled and aliquoted
     • Containers per batch
• Microbiologic results pre-pasteurization
• Amount of milk dispensed raw
• Amount of milk pasteurized
• Date and time of pasteurization
• Heat treatment times and temperatures
• Microbiologic results post-pasteurization
• Date and time moved to freezer for storage
  ◆ Freezer, refrigerator, incubator / sterilizer temperatures

6.6.2 Milk Bank Documents and Files

◆ PNCHMB National Milk Banking Guidelines
◆ Milk Bank Manual of Operations
◆ Calibration records for all equipment
◆ Supplies inventory
◆ Equipment preventive maintenance checks
◆ User manuals and manufacturers’ instructional guides
◆ Milk bank financial records
◆ Attendance and Minutes of Administrative Meetings
◆ Training and performance records of milk bank staff
### APPENDIX1: STANDARD INTERVIEW FORM

**HUMAN MILK BANK DONOR SCREENING FORM**

<table>
<thead>
<tr>
<th>Date of Birth</th>
<th>Surname</th>
<th>Age</th>
<th>Sex</th>
<th>Middle Name</th>
<th>Home Address</th>
<th>Telephone</th>
<th>Office Address</th>
<th>Telephone</th>
<th>Occupation</th>
</tr>
</thead>
</table>

Name _______________________________________________________________________
Surname First Name Middle Name
Date of Birth __________________________ Age __________ Sex ____________
Home Address ___________________________________________ Telephone________
Office Address ___________________________________________ Telephone________
Occupation _____________________________________________
Name of Child _____________________________________________
Date of Birth _______________________Age______ Sex _____
Birth weight ____ AOG ____

**Type of Donor:** (  ) Community (  ) Private (  ) Employee (  ) Network office/agency

---

**Why do you want to donate milk? (Bakit mo gusto magbigay ng iyong gatas/breastmilk?)**

How did you learn about the Human Milk Bank? (Paano mo nalaman at tungkol sa Human Milk Bank?) __________________________________________________________________

---

Please encircle your answer.

1. Are you willing to donate breast milk on a regular basis for a minimum period of 6 months? (Gusto mo bang magbigay ng gatas nang regular sa loob ng 6 na buwan?)
   - Yes  
   - No

2. Will you be allowed by your husband to donate your breast milk to the Human Milk Bank? (Papayagan ka ba ng iyong asawa na magbigay ng iyong gatas sa Human Milk Bank?)
   - Yes  
   - No

---

**Medical History**

1. Have you donated breast milk before? (Nakapagbigay ka na ba ng iyong gatas dati?)
   - Yes  
   - No

2. Have you for any reason been deferred as a milk donor? (Iyong gatas/ breastmilk?)
   - Yes  
   - No
   If yes, for what reason? _________________________________
   (Kung oo, sa anong kadahilanan?) __________________________

3. Did you have a normal pregnancy and delivery for your most recent pregnancy? (Normal ba ang panganganak mo sa huli mong anak?)
   - Yes  
   - No
4. Do you have any acute or chronic infection, systemic disorders, tuberculosis or history of hepatitis? (Mayroon ka bang kahit anong impeksyon o sakit? Nagkaroon ng sakit sa atay dati?)

5. Have you received any blood transfusion or other blood products within the last 12 months? (Ikaw ba ay nasalinan ng dugo o kahit anung produkto mula sa dugo nitong nakaraan 12 buwan?)

6. Have you received any organ or tissue transplant within the last 12 months? (Ikaw ba ay nakatanggap ng parte ng katawan mula sa ibang tao nitong nakaraang 12 buwan?)

7. Within the last 24 hours, have you had intake of any hard liquor or alcohol? (Nakainom ka ba ng alak nitong nakaraang 24 oras?)
   If yes, how much? ______________

8. Do you regularly use over-the-counter medications or systemic preparations such as replacement hormones and some birth control hormones? (Regular ka bang gumagamit ng mga gamut gaya ng mga hormones o pills?)

9. Do you use megadose vitamins or pharmacologically active herbal preparations? (Gumagamit ka ba ng mga “megadose vitamins” o mga “herbal drugs?”)

10. Are you a total vegetarian/vegan?
   If yes, do you supplement your diet with vitamins? __________
   (Ikaw ba ay hindi kumakin ng karne o isang “vegetarian?”)
   (Kung oo, umiinom ka ba ng multi-vitamins?) __________

11. Do you use illicit drugs? (Gumagamit ka ba ng ipinagbawal na gamot?)

12. Do you smoke? (Ikaw ba ay naninigarilyo?)
   If yes, how many sticks or packs per day? __________
   (Kung oo, ilang stick o pack sa isang araw? __________

13. Have you had breast augmentation surgery, using silicone Breast implants? (Ikaw ba ay naoperahan na sa suso at nalagyan ng “silicone” o artipisyal na breast implants?)

Sexual History

1. Have you had syphilis, HIV, herpes, or any sexually-transmitted disease? (Nagkaroon ka na ba ng mga sakit na nakukuha sa pakikipagtalik/sex?)

2. Do you have multiple sex partners? (Nagkaroon ka na ba ng karanasang makipagtalik sa hindi lang isang lalaki?)

3. Have you had a sexual partner who is: bisexual promiscuous had an STD, AIDS/HIV received blood for a long period of time for a bleeding problem? Intravenous drug user (Nagkaroon ka ba ng partner na: Nakipagtalik sa kapwa niya kauri Nakikipagtalik sa higit isang tao Nagkaroon ng sakit na nakukuha sa pagtatalik gaya ng STD,AIDS/HIV naulit-ulit na nasalinan ng dugo
Have you had a tattoo applied or have had accidental needlestick or contact with someone else’s blood? (Nagpalagay ka na ba ng tattoo, naturukan ng karayom nang hindi sinasadya o nadikit sa dugo ng ibang tao?)

Yes  No  4.

Donor’s Child

Yes  No  1.  Is your child healthy? (Malusog ba ang iyong anak?)

Yes  No  2.  Was your child delivered full term? (Ipinanganak ba ang anak mo na husto sa buwan?)

Yes  No  3.  Are you exclusively breastfeeding your child? (Puro gatas mo ba ang binibigay mo sa anak mo at walang halong ibang formula/gatas?)

Yes  No  4.  Is/Was your youngest child jaundiced? (Madilaw/nanilaw ba ang bunso mong anak?)
If yes, at what age and for how long? __________
Kung oo, anong edad at gaano katagal? ________

Yes  No  5.  Has your child ever received milk from another mother? (Nakatanggap na ba ang iyong anak ng gatas/breast milk mula sa ibang ina?)
If yes, where? ___________
Kung oo, saan? ___________

Screened by: ___________________
Date screened: ___________________
APPENDIX 2: CONSENT AND COMMITMENT FORM

DONOR’s CONSENT AND COMMITMENT FORM

I certify that I am the person being referred as a prospective milk donor to the Human Milk Bank. I have read and understood all the entries stated above, having been explained to me in clear and understandable language. I certify that I have answered the above questions truthfully and to the best of my knowledge.

I understand that I must undergo blood test for HIV as part of the screening for milk donors. I would like to be oriented on the guidelines for breast milk donation to be able to ensure proper and clean collection of breast milk prior to its pasteurization.

DONOR’S SIGNATURE: __________________________

WITNESS (Saksi): ____________________________

THIS PORTION IS RESERVED ONLY FOR HUMAN MILK BANK

<table>
<thead>
<tr>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough for 2 weeks</td>
</tr>
<tr>
<td>HIV screening</td>
</tr>
<tr>
<td>Pertinent Physical Examination</td>
</tr>
</tbody>
</table>

MILK DONOR is:

ACCEPTED ☐ TEMPORARILY DEFERRED ☐ PERMANENTLY DEFERRED ☐
APPENDIX 3: ALGORITHM FOR DONOR SCREENING

Advise a potential donor that she is NOT ELIGIBLE to donate milk if she:

- Currently smokes or uses nicotine replacement therapy
- Uses, or has recently used, illicit drugs
- Consumes more than 2 oz of hard liquor (355 ml or 2 cans of regular beer, 240 ml of table wine) within 24 hours
- Has tested positive for HIV 1 or 2
- Belongs to any of the high-risk groups for HIV/STDs
- Has any recent exposure to the following diagnostic, therapeutic and environmental radiation
- Received an organ or tissue transplant within the last 12 months
- Had (or had a sexual partner) ears or other body parts pierced with other than single-use instruments, tattooing permanent make-up applied by needle, or an accidental stick with a contaminated needle within the last 12 months

SCREENING INTERVIEW

Ask questions concerning:

- her health: to confirm that she is in good general health
- EXCLUDE donors with cough of >2 weeks at the time of milk collection and advise to consult her attending physician for further management.
- her baby: document the age and health of the baby
- any medication that she is taking
- Search LactMed (Drugs and Lactation Database) to determine if these are contraindicated to breastfeeding.

Advise the potential donor that depending on her answer to any of these questions she may not be eligible to donate milk.

Use the information given along with the results of serological test to make a balanced decision about her eligibility to donate based on possible risks to recipients.

PHYSICAL EXAMINATION

Use the information given along with the results of serological test to make a balanced decision about her eligibility to donate based on possible risks to recipients.

SEROLOGIC TESTING

Obtain consent prior to testing for HIV

NEGATIVE

- Exclude from donating.
- Give serological test result and provide counseling on breastfeeding for HIV positive mothers.
- If needed, offer further help and support including information about counseling and local support groups.

POSITIVE

- Give serological test result and provide counseling on breastfeeding for HIV positive mothers.
- If needed, offer further help and support including information about counseling and local support groups.
APPENDIX 4: DONOR GUIDE FOR MILK COLLECTION

I. Methods of Milk Collection

4.2.2. Manual Milk Expression – Hand Expression (recommended)

4.2.3. Mechanical

4.1.3.1. Manually operated
4.1.3.2. Electrically operated – comfortable and convenient

II. Breast Pump Criteria

1. Convenient, efficient and comfortable to use
2. Ability to adequately clean and sterilize all parts that come into contact with expressed milk
3. Collecting container be made of hard plastic, preferably BPA-free
4. Atraumatic

III. Preparation Before Milk Expression

1. Good hand washing before expressing or handling milk or breastfeeding equipment
   • Lather hand with soap and water for 15 seconds, paying particular attention to the area around and under fingernails.
   • Dry hands with disposable paper towel or sterile single-use towel
   • Maternal hygiene
   • Use clean pumps, kits and container

2. Stimulate letdown reflex by
   1. Relaxation technique
      • Encourage mother to sit in a comfortable position
      • Take a few cleansing breaths
      • Relax for at least 5 minutes
   2. Remove mental and emotional baggage
   3. Drink a glass of warm liquid
   4. Think positively of the baby
   5. Warm compress to the breast
   6. Direct nipple stimulation
   7. Providing a picture of the baby for the mother to look at while pumping
   8. Breast massage (Massage – stroke – shake)

   **Massage** – scientific manipulation treatment on bare skin of the human body to stimulate the milk-producing cells and ducts.

   1. Start at the top of the breast
   2. Press firmly onto the chest wall
   3. Move fingers in a circular motion on one spot of the skin
   4. After a few seconds, move the fingers to the next area on the breast
   5. Spiral around the breast toward the areola
**Stroke** the breast area from the top of the breast to the nipple with a light tickle-like stroke and continue this stroking motion from the chest wall to the nipple and around the breast

**Shake** the breast while leaning forward so that gravity will help the ejection of milk

IV. Manual Milk Expression (Marmet technique)

1. **Hand expression**
   a. Position – thumb on the areola above nipple, forefingers on the areola below nipple
   *Push – Press – Release*
   1.2 Massage all around, avoiding *slipping* of the fingers
   1.3 Timing of the procedure (20 – 30 minutes)
   i. Express each breast for 5-7 minutes
      *Massage, Stroke, Shake*
   ii. Express each breast for 3-5 minutes
      *Massage, Stroke, Shake*
   iii. Express each breast for 2-3 minutes
      *Massage, Stroke, Shake*

2. **Warm bottle Method – for very engorged breast**
   2.1. Clean a large bottle with a wide neck
   2.2. Pour hot water slowly into the bottle until almost full
   2.3. Wrap the bottle in a cloth and pour out the water
   2.4 Cool the neck of the bottle and place it over the nipple
       So that it makes an airtight seal against the breast.
       Hold it there patiently
   2.5 As the bottle cools, it makes a gentle suction which pulls the breast into the neck of the bottle and express milk.

V. Storage Containers
## APPENDIX 5. CRITICAL STORAGE TEMPERATURES AND DURATION

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>STORAGE TEMPERATURE</th>
<th>DURATION</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countertop, table</td>
<td>Room temperature</td>
<td>6 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Containers should be covered and kept as cool as possible; covering the container with a cool towel may keep milk cooler.</td>
</tr>
<tr>
<td>Insulated cooler bag</td>
<td>15°C</td>
<td>24 hours</td>
<td>12 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Keep frozen gel packs in contact with milk containers at all times, limit opening cooler bag.</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>4°C</td>
<td>48 hours</td>
<td>24 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Store milk in the back of the main body of the refrigerator.</td>
</tr>
<tr>
<td>Domestic refrigerator</td>
<td>-15°C</td>
<td>2 weeks</td>
<td>2 weeks</td>
</tr>
<tr>
<td>(1-door)</td>
<td></td>
<td></td>
<td>Store milk toward the back of the freezer, where temperature is most constant. Milk stored for longer durations in the ranges listed is safe, but some of the lipids in the milk undergo degradation resulting in lower quality.</td>
</tr>
<tr>
<td>Domestic refrigerator</td>
<td>-18°C</td>
<td>2 months</td>
<td>2 months</td>
</tr>
<tr>
<td>(2-door)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk Bank Freezers</td>
<td>-20°C</td>
<td>3 months</td>
<td>3 months</td>
</tr>
<tr>
<td>Unpasteurized</td>
<td></td>
<td>12 months</td>
<td>6 months</td>
</tr>
<tr>
<td>Pasteurized</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX 6: TESTING FOR PURITY OF BREAST MILK

SULFURIC ACID TEST TO DETECT CONTAMINATION WITH BOVINE OR COW’S MILK

This test is randomly done to check for adulterated breast milk:

1 ml. - donor human milk
1 ml. - 8N solution Sulfuric acid
8 ml. - distilled water

Mix well and allow to stand at room temperature for 5 hours.

Use sterile screw-capped test tube.

RESULTS:

If a precipitate forms on top of the mixture, the solution is positive for bovine or cow’s milk.

Entire donation should be discarded and donor should be removed from donor list.

NOTE: This test needs to be validated further with research.
APPENDIX 7: RECIPIENT CONSENT AND WAIVER

The ______ (name of milk bank) ______________ provides human milk that follows the mandatory guidelines from the Philippine National Committee on Human Milk Banking (PNCHMB) to ensure the safest product possible is provided. All donors provide milk on a voluntary basis. Only healthy women who are non-smokers and have a healthy lifestyle are accepted as donors. All potential donors are triple screened, including verbal and written screening, contact with both the mother’s and baby’s healthcare providers, and mandatory HIV screening. The donor is screened and the milk is pasteurized before it is released from the milk bank.

I, the undersigned, is unable to give breastmilk to my own baby, I am giving consent for my baby to be given donor milk and I promise to replace it as soon as possible.

The above information about pasteurized donor human milk has been explained to me by __________________________________________(RN/MD/LMT).

I, ____________________________________________________________(legal guardian), am in agreement that my baby_____________________________ will received “pasteurized donor human milk”. I understand that the sterility of the pasteurized donor milk to be dispensed can only be guaranteed by the milk bank up to the time the milk is picked up.

Date: ___________________
APPENDIX8:

LACTATION SUPPORT FOR RECIPIENT MOTHERS (on a RELACTATION PROGRAM)

To initiate milk supply without infant suckling, the following guidelines must be done: 10

1. Begin manual pumping as soon after delivery as maternal condition permits.
2. Initiate use of electric pump while in hospital.
3. Begin slowly, increasing time over first week.
4. Pump on more regular basis as soon as engorgement is evident.
5. Pump at least five times in 24 hours.
6. Allow a rest period for uninterrupted sleep of at least 6 hours.
7. Pump a total of at least 100 minutes a day.
8. Use a “double” pump to pump both breasts simultaneously. This can cut total time proportionately.
9. Prepare breasts with warm soaks, gentle stroking and light massage to maximize production of milk.
10. Encourage skin-to-skin-contact (Kangaroo care).

More tips on improving milk production: 10

1. Begin pumping as soon after delivery as possible.
2. Use hospital grade double pumps
3. Pump 10 to 15 minutes every 3 hours until more than a few drops are produced (72 hours)
4. When amount increases, continue to pump for 2 minutes after the last drop is produced (total 20-30 minutes)
5. Keep a record of the time as well as the volume of milk produced during each pumping session.
6. Pump at babies’ bedside when possible.
7. Start with kangaroo care.
8. Stroke and massage breasts during pumping.
9. As soon as an infant is able, place an emptied breast to suckle. The infant may also be put on an empty breast during gavage feedings.
## APPENDIX 9: SAMPLE RECORDING OF MILK BATCH INFORMATION

### DONOR LOG

<table>
<thead>
<tr>
<th>Date/Time of donation</th>
<th>Donor’s Name</th>
<th>Date of Milk Expressed</th>
<th>Time of Milk Expressed</th>
<th>Volume Donated (Thawed Volume in ml)</th>
<th>Receiving milk bank staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept 9, 2011 11am</td>
<td>Santos. Maria</td>
<td>Aug. 31, 2011</td>
<td>5pm</td>
<td>100ml</td>
<td>Cruz, Anne, RN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sept 5, 2011</td>
<td>6am</td>
<td>80ml</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sept 7, 2011</td>
<td>10am</td>
<td>90ml</td>
<td></td>
</tr>
</tbody>
</table>

### RECIPIENT LOG

<table>
<thead>
<tr>
<th>Date/Time received</th>
<th>Recipient’s Name</th>
<th>Location</th>
<th>Diagnosis</th>
<th>Dispensing Milk Bank</th>
<th>Batch number of Milk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept 24, 2011 8am</td>
<td>De Leon, Baby Girl</td>
<td>ZCMC NICU</td>
<td>Preterm, 28 weeks, RDS, Sepsis</td>
<td>ZCMC Milk Bank</td>
<td>B238-N10 B238-N5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Volume given</th>
<th>Reason for Pasteurized EBM</th>
<th>Transport details</th>
<th>Outcome of Recipient</th>
<th>Name/contact no. of prescribing MD</th>
<th>Signature of parent/guardian</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 oz</td>
<td>Prematurity</td>
<td>Cooler with frozen gel packs</td>
<td>Stable, on medications</td>
<td>Dr. De Vera Local 329</td>
<td></td>
</tr>
</tbody>
</table>
Log of milk received at the milk bank

<table>
<thead>
<tr>
<th>Donor name</th>
<th>Milk expression</th>
<th>Transport</th>
<th>Condition of milk when collected from donor</th>
<th>Arrival at milk bank</th>
<th>Condition of milk upon arrival at milk bank</th>
<th>Conditions of transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Time</td>
<td>Date</td>
<td>Time</td>
<td>Date</td>
<td>Time</td>
<td></td>
</tr>
</tbody>
</table>

Processing log

<table>
<thead>
<tr>
<th>Batch no.</th>
<th>Date and time pooled and aliquoted</th>
<th>Donor Name</th>
<th>No. of aliquots/containers per batch</th>
<th>Pre-pasteurization microbiologic results</th>
<th>Date and time pasteurized</th>
<th>Volume pasteurized</th>
<th>Heat treatment temp and duration</th>
<th>Post-pasteurization microbiologic results</th>
<th>Date and time moved to freezer for storage</th>
</tr>
</thead>
</table>

Dispensing log

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Batch no.</th>
<th>Type of milk (raw unpasteurized or pasteurized)</th>
<th>Volume given</th>
<th>Dispensing milk bank staff</th>
<th>Receiving personnel/unit</th>
<th>Name of recipient</th>
<th>Location of recipient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>