

POSITION STATEMENT

Handling of Expressed Human Milk in Health Care Facilities

Background

Human milk is an important source of nutrition and immunological protection for an infant. It can also be a source of infection. Since human milk is a body fluid, many aspects of handling human milk in health care facilities are guided by practices used for other body fluids, e.g., blood, blood transfusions.

Position Statement

To minimize the risk of spreading infection in health care facilities, the principles listed below should be followed. Each facility should take these principles into consideration when making policy decisions regarding the safe handling of expressed human milk:

- Mothers should be taught the basic principles of asepsis as it applies to collection, storage and handling of human milk.
- Expressed human milk should be collected and stored in sterile glass or plastic containers, or plastic bags that are free of bisphenol A (BPA)¹ and made specifically for human milk storage.
- The container should be labelled to include contents, baby's name, mother's name, health care facility identifier, date/time of pumping, date/time of freezing, date/time of thawing and medications or supplements being taken by the mother.
- Freshly expressed human milk should be used within 48 hours and stored in a dedicated refrigerator, otherwise frozen in a dedicated freezer between -17°C to -20°C. It can be kept up to six months in a deep freezer.
- It is essential that the human milk remain chilled or frozen during transport.
- Unrefrigerated fresh human milk should be used within four hours or discarded.
- Each mother should be assigned a dedicated, labelled freezer container for her baby's milk.
- Previously thawed human milk should not be left at room temperature for more than four hours because of the reduced ability to inhibit bacterial growth.
- Frozen human milk should be thawed in the refrigerator and used within 24 hours. Frozen human milk should not be thawed in a microwave oven or in boiling water.
- Use of multi-bottle water baths is discouraged; however if they are used care should be taken to protect the bottles from direct contact with the water to avoid contamination.

1. To determine if plastic container contains BPA, consider reviewing information at:
http://healthycanadians.gc.ca/environment-environnement/home-maison/bisphenol_a-eng.php

- Expressed human milk that has been fortified should be used within 24 hours of preparation if refrigerated.
- The maximum hang time for continuous feedings is four hours. The administration set should be changed every four hours.
- When administering expressed human milk, principles of Routine Practices should be followed.
- At a minimum, a double check mechanism should be used at the time of administration to avoid errors in administration. In facilities with large numbers of mothers who express milk, long term consideration should be given to automated systems such as bar coding to avoid errors in administration.
- A comprehensive written policy including disclosure and course of action should be available in the event of errors involving human milk (e.g., an infant consumes expressed human milk that is not from their mother). Viral testing of “donor” and “recipient” mothers should occur as well as administration of post exposure prophylaxis, if indicated.
- Because of the higher risk of environmental contamination and the potential for cross-contamination in the health care facility environment, breast pump kits/tubing are considered single patient use² (i.e., used by a mother for her specific infant(s).) Each health care facility must provide education and training on how to clean, dry (air dry away from a water source) and store the kits safely between each use of the breast pump kit by the same mother. Alternatively, disposable/single use³ breast pump kits are acceptable.
- Breast pump tubing and membrane filters can be difficult to clean adequately, depending on the make of pump and facility reprocessing expertise. They should be discarded if they come in contact with human milk or if there are issues related to their physical integrity.
- The breast pump should be cleaned with a low-level disinfectant after each use.
- Breast pump kits **cannot** be used by multiple mothers unless reprocessing (cleaning, disinfection/sterilization) can be validated according to the manufacturer’s instructions.

Donor human milk from Canadian milk banks is only available by prescription and according to a specified need. These milk banks abide by strict operating procedures (i.e., Human Milk Banking Association of North America Guidelines), which include donor screening, medical supervision, bacteriological testing, pasteurisation, storage and distribution. Before their infant receives donor human milk, parents are to be informed of the benefits and the potential risks. A written informed consent from parents/guardians must always be obtained before the administration of human donor milk. Health Canada strongly recommends against the consumption of unprocessed donor human milk obtained from private sources such as the Internet or from private individuals.

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2. **Single Patient Use:** A term given to medical equipment/devices that may be used on a single client/patient and may be re-used on the same client/patient, but may not be used on other clients/patients.
 3. **Single-use/Disposable:** A term given to medical equipment/devices designated by the manufacturer for single-use only. Single-use equipment/devices must not be reprocessed.

Stakeholders

This position statement is directed to health care providers in perinatal care and paediatrics.

Participants in Development of Position Statement

The original position statement was developed by the IPAC Canada Paediatrics Interest Group members.

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Bibliography

1. Red Book 2012, Report of the Committee on infectious Diseases, 2012.29th ed. American Academy of Pediatrics. Page 126-133.
2. Guidelines for Perinatal Care, 7th ed. 2012, American Academy of Pediatrics and The American College of Obstetricians and Gynecologists. Page 291-293
3. Canadian Pediatric Society, Position Statement: Human Milk Banking. Nov 1 2010 Reaffirmed: Feb 1 2014.
4. Barry C. et al. Management of EBM: Is the right breast milk being fed to infants? *Can J Infect Control* 1998;13(1):16-19.
5. Ogundele M. Techniques for the storage of human breast milk: Implications for anti-microbial functions and safety of stored milk. *Eur J Paediatrics* 2002;159:793-797.
6. Pediatric Nutrition Practice Group of the American Dietetic Association (2011).2nd ed. Infant Feedings: Guidelines for preparation of human milk and formula in health care facilities.
7. Mead Johnson (2002). Letter to Health Care Professionals. August 9, 2004.
8. APIC Text of Infection Control and Epidemiology, 3rd ed. Jan. 2009.
9. Health Canada. Laboratory Centre for Disease Control, Division of Nosocomial and Occupational Infections. Infection Control Guidelines. Hand Washing, Cleaning, Disinfection and Sterilization in Health Care. *Can Commun Dis Rep*. 1998;24 Suppl 8:1-54.
10. Doxtator L, Zoutman D. (Summer 2006) Management of breast pump kits: a review. *Can J Infect Control* 2006;21(2):92-95.
11. Human Milk Banking Association of North America Website [<http://www.hmbana.org>].Retrieved April 2014.
12. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Provincial Infectious Diseases Advisory Committee. Best practices for cleaning, disinfection and sterilization of medical equipment/devices. 3rd ed. Toronto, ON: Queen's Printer for Ontario; May 2013. Retrieved from: www.publichealthontario.ca/en/eRepository/PIDAC_Cleaning_Disinfection_and_Sterilization_2013.pdf
13. Provincial Infectious Diseases Advisory Committee (PIDAC). Routine Practices and Additional Precautions in All Health Care Settings. Toronto, ON: Queen's Printer for Ontario; 2012 [cited February 18, 2012]. Retrieved from: www.publichealthontario.ca/en/eRepository/RPAP_All_HealthCare_Settings_Eng2012.pdf
14. Provincial Infectious Diseases Advisory Committee (PIDAC). Infection Prevention and Control in Perinatology in All Health Care Settings that Provide Obstetrical and Newborn Care. Toronto, ON: Queen's Printer for Ontario; 2012 [cited November 25, 2012]. Retrieved from:

www.publichealthontario.ca/en/eRepository/IPC%20in%20Perinatology_ENGLISH_Final_2012-05-25%5B1%5D.pdf

15. Sehulster, L, and Chinn, R.Y. (2003). Guidelines for environmental infection control in health-care facilities: Recommendations of CDC and the healthcare infection control practices advisory committee (HICPAC). *MMWR*, 52(RR-10):1-42. Retrieved from www.cdc.gov/mmWR/preview/mmwrhtml/rr5210a1.htm.
16. Canadian Patient Safety Institute (CPSI): Hand hygiene. Available at: <http://www.handhygiene.ca/English/education/pages/default.aspx>.
17. Bisphenol A (BPA) Available at: http://healthy Canadians.gc.ca/environment-environnement/home-maison/bisphenol_a-eng.php.
18. Recommendations for the Preparation and Handling of Powdered Infant Formula (PIF) Available at: <http://www.hc-sc.gc.ca/fn-an/nutrition/infant-nourisson/pif-ppn-recommandations-eng.php>
19. *Enterobacter sakazakii* Infections Associated with the Use of Powdered Infant Formula --- Tennessee, 2001. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5114a1.htm>.

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