Appendix 2 Description of process of systematic review(s) for DBM, including key guideline questions

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**Key references and guidelines**

Scoping searches identified the UKAMB and the HMBANA guidelines. Full-text copies of all references in the UKAMB guidelines (117) and those references assessed as relevant from the title and abstract from the HMBANA guidelines (78) were ordered and checked for inclusion or exclusion.

Any relevant references from the HMBANA position paper (10) were also retrieved and checked for inclusion in the review.

A focussed search was conducted by information services and 5236 references retrieved (with 2 additional from Medline Update – 5238 in total). These were scanned (see the review protocol below) and 406 references were selected on the title and abstract. These were imported into the master database, and any duplication with the UKAMB/HMBANA guidelines corrected. This left a set of core references for full-text examination (525 in total).

References were added from reference lists of relevant articles and where published versions of unpublished/grey reports were found.

Any excluded papers (including those excluded from the HMBANA guidelines) were documented in the Excluded Studies table below.
<table>
<thead>
<tr>
<th>Details</th>
<th>Additional comments</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Review question</strong></td>
<td>What processes and procedures should be undertaken to ensure the safety of donor breast milk?</td>
<td>Indications for donor milk are excluded. Only included paper if explicit reference to donor milk. Excluded therefore for example, studies describing different chemical composition of sample unless directly linked to donor milk services/processes. Included any studies on the handling/ storage/ pasteurization of human milk, and only those studies related to the process of fortification.</td>
</tr>
<tr>
<td><strong>Objectives</strong></td>
<td>To identify all relevant literature on the running of donor breast milk services.</td>
<td></td>
</tr>
<tr>
<td><strong>Language</strong></td>
<td>English only</td>
<td></td>
</tr>
<tr>
<td><strong>Study design</strong></td>
<td>No restriction. Published papers only.</td>
<td>Excluded only articles/publications assessed as ‘news’ or ‘magazine’ items.</td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td>Babies receiving donor milk; donor milk services; donor women.</td>
<td>Excluded studies on maternal milk only.</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td>N/R</td>
<td></td>
</tr>
<tr>
<td><strong>Other criteria for inclusion/exclusion of studies</strong></td>
<td>None applied.</td>
<td>Some studies excluded as ‘not relevant to the UK’. Where a service was described more than once, only the most recent description was included.</td>
</tr>
<tr>
<td><strong>Search strategies</strong></td>
<td>See saved searches.</td>
<td>Re-ran in Feb 2009. Medline updated in Jan 2009, so</td>
</tr>
<tr>
<td>Review strategies</td>
<td>Narrative summary.</td>
<td>Quality assessment tools may not be available for all study designs, so some adaptation may be needed.</td>
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</tr>
</tbody>
</table>

**Key guideline questions**

- How should donor women be recruited, and what information should be provided? The needs of different ethnic, religious and cultural groups will be considered.
- What factors should be assessed to determine the suitability of potential donors?
- What initial and repeat serological testing should be undertaken:
  - When screening potential donors?
  - In donor women whilst continuing to donate?
- When should donor women be advised to stop donating milk, either temporarily or permanently?
- What are the best (safest) methods for collecting, storing and handling donor breast milk?
  - How should donor milk be expressed?
  - How, and for how long, should donor milk be stored at home, during transportation and at the milk bank, including refrigeration and freezing?
  - How should donor milk be tested and treated?
  - Should donor milk be pooled?
  - How should donor milk samples be archived?
  - How should donor milk samples be disposed of?
- How should donor breast milk samples be tracked and traced?
What information should donors and parents or carers of infants using donor breast milk be given to ensure full informed consent, and how should this be recorded?

What training and competencies should the following have:

- Milk bank staff?
- Staff working with mothers and babies who may benefit from, or who are receiving, donor breast milk?
- Staff working with potential donors?

During the development of the evidence reports, it was clear that some evidence reports would include several questions; the GDG were therefore presented evidence on the following areas:

- Administration, including tracking and tracing
- Donor recruitment
- Donor screening and selection, including testing
- Donor stopping
- Donor training and support
- Donor training
- Milk disposal
- Milk expression
- Milk fortification
- Milk handling
- Milk handling at home
- Milk handling at the milk bank
- Milk handling during transportation
- Milk pooling
- Milk testing
- Milk transportation
- Milk treatment
- Staff training
Included studies

See also Appendix 5 for the evidence reviews by clinical question.


Excluded studies

323 references were excluded at the full-text stage.

(1978)
Human milk for feeding premature infants: benefits, risks and precautions for a donor program. 
EXC - not available.

(1979)
The neonate: a day in the life of a wet nurse. 
EXC - historical article on wet nursing.

(1980)
WHO/UNICEF joint statement: meeting on infant and young child feedings. 
EXC - reference. See also NICE PH11 on maternal and infant nutrition.

(1980)
WHO/UNICEF meeting on infant and young child feeding. 
EXC - statement on need to provide human milk through banks. Not operation of services.

(1981)
EXC - not available.

(1981)
Human milk banks. 
EXC - editorial. No detailed reference to operation of milk banks.

(1982)
Acute hemorrhagic conjunctivitis. 
EXC - cited in HMBANA for use in adults.

(1988)
Milk banks: in the light of history. 
EXC - editorial. No detailed reference to operation of milk banks.

(1988)
HIV infection, breastfeeding, and human milk banking. 
EXC - based on 1988 DHSS report, which is assumed to be no longer current.

(1989)
HIV infection, breastfeeding and human milk banking in the United Kingdom. 
EXC - report no longer available, and assumed to be out-of-date.

(1991)
Premature babies need breast-milk. 
EXC - news article.

(1991)
Nutrition during lactation. 
EXC - assumed no longer current. See NICE PH11 on maternal and infant nutrition.

(1994)
American Academy of Pediatrics Committee on Drugs: The transfer of drugs and other chemicals into human milk.
EXC - information on drugs in breast milk. Refer to latest BNF information.

(1995)
Policy no 5: infant feeding policy.
EXC - general statement on breast feeding. No specific reference to donor milk.

(1999)
EASL International Consensus Conference on Hepatitis C. Paris, 26-28, February 1999,
Consensus Statement. European Association for the Study of the Liver.
EXC - statement on screening for HepC. No specific reference to donor milk. Also
assumed no longer current.

(1999)
EXC - assumed to be UKAMB guidelines. Also no longer current.

(2001)
WHO resolution.
EXC - resolution on the benefits of breast feeding.

(2002)
Infant and young child nutrition: global strategy on infant and young child feeding.
EXC - global strategy. See also NICE PH11 on maternal and infant nutrition.

(2002)
Guide for parents. The right way to store breast milk.
EXC - basic information on storage. Noted that applies to milk for healthy infants only.
Will refer to more current guidelines.

(2002)
Ensuring the safety of stored breast milk.
EXC - promotional article on a specific type of bottle. No references.

(2005)
Kids' health & safety: borrowing breast milk.
EXC - magazine article

(2006)
Standards for blood banks and transfusion services.
EXC - see UK standards, if relevant.

(2006)
Handling of expressed breast milk (EBM) in acute care facilities: position statement Pediatric
Interest Group, CHICA-Canada.
EXC - relates to maternal milk in acute care facilities.

(2008)
Neonatal intensive care feeding management system implemented.
EXC - promotional article on a specific type of bottle. No references.

(2008)
Donor breast milk service.
EXC - news article on establishment of satellite service.

(2008)
Donation of portable pumps to NICUs aims to reduce the number of babies missing out on
breastmilk.
EXC - magazine article
HIV infection, breastfeeding, and human milk banking.
EXC - based on 1988 DHSS report, which is assumed to be no longer current.

Afolabi, O. A. and others. (1985)
A preliminary survey of aerobic bacteria in breast milk of mothers from the low-income group in Nigeria.
EXC - study to assess the quality of milk from a specific group of women. Not relevant to UK.

Effect of Fortification with Human Milk Fortifier (HMF) and other Fortifying Agents on the Osmolality of preterm Breast Milk.
EXC - aims to assess the safety of specific fortifiers. Not donor specific or related to the process.

Ajusi, J. D. and others. (1989)
Bacteriology of unheated expressed breast milk stored at room temperature.
EXC - study to determine appropriate storage time for maternal milk for working mothers.

Al Naqeeb, N. A. and others. (2000)
The introduction of breast milk donation in a Muslim country.
EXC - duplicate. See Al Naqeeb 2000 Currents...

Al Naqeeb, N. A. and others. (2000)
Currents in human milk banking: the introduction of breast milk donation in a Muslim country.
EXC - specifically related to donor milk banking in a Muslim country.

Almroth, S., Greiner, T., and Latham, M. C. (1979)
Economic importance of breastfeeding.
EXC - not donor specific.

American Academy of Pediatrics. (1943)
Recommended standards for the operation of mothers’ milk bureaus.
EXC - assumed no longer current.

Use of donor breastmilk in the nutrition management of chronic renal failure: three case histories.
EXC - indications for donor milk.

Breast-feeding and cognitive development: a meta-analysis.
EXC - rationale for breast feeding.

Arnold, L. and Erickson, M. (1988)
The early history of milk banking in the USA.
EXC - not available.

Arnold, L. (1993)
Milk bank screening procedures.
EXC - quoted HMBANA guideline recommendations.

Arnold, L. (1997)
Contamination in expressed breast milk: a non-issue.
Arnold, L. D. (1990)
Clinical uses of donor milk.
EXC - not available.

The statistical state of human milk banking and what the future holds.
EXC - duplicate. See Arnold 1991 Currents...

Currents in human milk banking: the evolution of services in modern human milk banking.
EXC - historical article describing the evolution of services over time

Arnold, L. D. (1992)
North American milk banks.
EXC - detailed description of services provided (not processes used). Assumed to be out-of-date.

Arnold, L. D. (1992)
Human milk storage and preservation in the early 1900s.
EXC - descriptive historical article.

HIV and breastmilk: what it means for milk banks.
EXC - quoted HMBANA guideline recommendations.

HMBANA guidelines on breast pumps and human milk storage and handling.
EXC - quoted HMBANA guideline recommendations.

Immunologic benefits of breast milk in relation to human milk banking.
EXC - quoted HMBANA guideline recommendations.

EXC - duplicate.

Informal sharing of human milk: not-so-hypothetical questions, concrete answers.
EXC - quoted HMBANA guideline recommendations.

Donor human milk for premature infants: the famous case of the Dionne quintuplets.
EXC - duplicate. See Arnold 1994 Currents...

EXC - duplicate.

EXC - duplicate. See Arnold 1995 Currents...

Use of donor human milk in the management of failure to thrive: case histories.
EXC - duplicate. See Arnold 1995 Currents...

Storage containers for human milk: an issue revisited.  
**EXC** - duplicate. See Arnold 1995 Currents...

Possibilities for donor milk use in adult clinical settings—a largely unexplored area.  
**EXC** - duplicate. See Arnold 1996 Currents...

Donor milk banking in China: the ultimate step in becoming baby friendly.  
**EXC** - duplicate. See Arnold 1996 Currents...

What are the characteristics of the ideal human milk donor?  
**EXC** - see Arnold 1996 Currents...

Arnold, L. D. (1997)  
**EXC** - survey of US services. Assumed no longer accurate description of services.

Arnold, L. D. (1997)  
A brief look at drip milk and its relation to donor human milk banking.  
**EXC** - duplicate. See Arnold 1997 Currents...

How to order banked donor milk in the United States: what the health care provider needs to know.  
**EXC** - duplicate. See Arnold 1998 Currents...

Cost savings through the use of donor milk: case histories.  
**EXC** - duplicate. See Arnold 1998 Currents...

Donor milk banking in Scandinavia.  
**EXC** - duplicate. See Arnold 1999 Currents...

Arnold, L. D. (2001)  
Trends in donor milk banking in the United States.  
**EXC** - quoted HMBANA guideline recommendations. Also describes US services - assumed no longer accurate description.

**EXC** - cost effectiveness linked to health outcomes for pre-term babies (indications)

The ethics of donor human milk banking.  
**EXC** - discussion of the ethics using theoretical case studies and personal experiences

Global health policies that support the use of banked donor human milk: a human rights issue.  

U.S. Health policy and access to banked donor human milk.  
Currents in human milk banking: the statistical state of human milk banking and what the future holds.  
EXC - quoted HMBANA guideline recommendations.

Human milk for premature infants: an important health issue.  
EXC - not available.

The lactariums of France: the Lactarium Docteur Raymond Fourcade in Marmande... part 1.  
EXC - survey of services in France. Assumed no longer accurate description of services.

The lactariums of France: how association milk banks operate... part 2.  
EXC - survey of services in France. Assumed no longer accurate description of services.

EXC - case report. Also quoted HMBANA guideline recommendations.

EXC - case report.

EXC - case report. Also quoted HMBANA guideline recommendations.

EXC - not available.

Currents in human milk banking: what are the characteristics of the ideal human milk donor?  
EXC - quoted HMBANA guideline recommendations.

Currents in human milk banking: possibilities for donor milk use in adult clinical settings -- a largely unexplored area.  
EXC - indications for donor milk in adults.

EXC - survey of US services. Assumed no longer accurate description of services.

EXC - duplicate. See Arnold 1997 Currents...

Currents in human milk banking: cost savings through the use of donor milk: case histories.
Currents in human milk banking: how to order banked donor milk in the United States: what the health care provider needs to know.  
EXC - quoted HMBANA guidelines.

Asp, K. (2007)  
Good health. Banking on breast milk.  
EXC - magazine article.

Asquith, M. T. and others. (1984)  
The bacterial content of breast milk after the early initiation of expression using a standard technique.  
EXC - relates to the timing of expression of milk by mothers for their own pre-term babies.

Human Milk Banking Association of North America.  
EXC - statement of the aims of the HMBANA.

Atkinson, A. (2001)  
Decontamination of breast milk collection kits: a change in practice.  
EXC - decontamination of breast pumps on the neonatal units for maternal milk. Not donor specific.

EXC - information on drugs in breast milk. Refer to latest BNF information.

Health care costs of formula-feeding in the first year of life.  
EXC - rationale for breast feeding.

Guidelines for the establishment and operation of human milk banks in the UK.  

Guidelines for the establishment and operation of human milk banks in the UK.  

Balmer, S. E. (1995)  
Currents in human milk banking: donor milk banking and guidelines in Britain.  

Balmer, S. E. (1995)  
Donor milk banking and guidelines in Britain.  
EXC - duplicate. See Balmer 1995 Currents...

Bank, M. R. and others. (1985)  
Effect of storage time and temperature on folacin and vitamin C levels in term and preterm human milk.  
EXC - storage of milk in freezers for home use. No specific reference to donor milk.

Human milk banking.  
EXC - not available.
Baron, S. and others. (2000)
Oral transmission of human immunodeficiency virus by infected seminal fluid and milk: a novel mechanism.
EXC - specific action of milk on HIV. Not related to processing of donor milk.

Human milk banks.
EXC - letter explaining why donor milk should not be used. Supports the need for evidence based guidelines for donor milk, not the processes to be followed. Also assumed to refer to practices no longer current.

Another mother’s milk saves AIDS babies.
EXC - news article on new service in South Africa.

Breastmilk banking regains vital expression.
EXC - news article on service in South Africa.

Bates, C. J. and others. (1985)
Susceptibility of riboflavin and vitamin A in breast milk to photodegradation and its implications for the use of banked breast milk in infant feeding.
EXC - related to the use of tubing when feeding premature babies to preserve nutrients.

Baum, J. D. (1982)
Human milk banking.
EXC - duplicate. See Baum 1982 Donor...

Guidelines for the establishment and operation of human milk banks in the UK.

Beckholt, A. P. (1990)
Breast milk for infants who cannot breastfeed.
EXC - historical description of services, with some mention of the effect of HIV.

Disposition of acetaminophen in milk, saliva, and plasma of lactating women.
EXC - drugs in breast milk. Refer to BNF.

Berlin, C. M., Jr. and others. (1984)
Disposition of dietary caffeine in milk, saliva, and plasma of lactating women.
EXC - drugs in breast milk. Refer to BNF.

Where can mothers donate excess milk?
EXC - organisation of HMBANA members in the US.

Nutrition now. Storing breast milk.
EXC - magazine article

The breastfeeding advisor. Using banked donor milk: a realistic option.
EXC - magazine article

Pseudo-Cushing syndrome caused by alcohol in breast milk.
EXC - maternal alcohol, not donor. Refer to latest guidance on alcohol and breast feeding.

Bishop, N. J. and others. (1996)
Early diet of preterm infants and bone mineralization at age five years.
EXC - indications for donor milk.

Infection risks from electrically operated breast pumps.
EXC - related to use of equipment by several mothers, so specific to expression on neonatal unit. Not process of donor milk banking.

Boo, N. and others. (2001)
Contamination of breast milk obtained by manual expression and breast pumps in mothers of very low birthweight infants.
EXC - related to contamination of maternal milk for pre-term/LBW babies. Not donor specific.

Human milk bank.
EXC - reference to HMBANA.

Development of a breast milk banking program at a University Medical Center "nursing at a distance".
EXC - not available.

Drugs in pregnancy and lactation.
EXC - reference text. Assumed to be out-of-date.

Brink, S. (1977)
The successful use of human breast milk in a premature infant with the surgical short gut syndrome.
EXC - indications for donor/breast milk.

Milk for life... milk banks.
EXC - magazine article.

Calvo, E. B., Galindo, A. C., and Aspres, N. B. (1992)
Iron status in exclusively breast-fed infants.
EXC - study on need for additional supplementation for breastfed babies.

Candelaria, L. (2007)
Got milk -- but what do I do with it? Teaching patients about the process of donating human milk.
EXC - news article.

Candelaria, L. (2007)
Got milk -- but what do I do with it? Teaching patients about the process of donating human milk.
EXC - news article.

Candelaria, L. (2008)
RN appreciates knowing where to donate breast milk... "Banking on breast milk"... September/October 2007.
EXC - news article.
Casey, C. E., Neville, M. C., and Hambidge, K. M. (1989)
**EXC - trace elements in breast milk.**
No effect of storage/treatment reported.

Lecithin decreases human milk fat loss during enteral pumping.
**EXC - fortification to minimise fat loss during enteral pump delivery.**

Cocaine convulsions in a breast-feeding baby.
**EXC - maternal drug use. Refer to latest guidance on drug use and breast feeding.**

Trans mono- and polyunsaturated fatty acids in human milk.
**EXC - fats in breast milk.**
No effect of storage/treatment reported.

Charnock, J. (2007)
RN appreciates breastmilk article... “Banking on breastmilk” (June issue).
**EXC - news article.**

Cohen, R. S. (2009)
Current issues in human milk banking.
**EXC - not available.**

Corbett, A. (1992)
Banking on breast milk.
**EXC - review/description of other milk services.**

A comparison of colony counts of breast milk using two methods of breast cleansing.
**EXC - not donor specific. Assume will refer to latest guidance on breast feeding/expressing.**

Coveney, J. (1985)
Is breast milk the best food for all infants?
**EXC - review article on breast feeding. Not donor specific. Also refer to latest guidance on breast feeding for contraindications.**

Cowan and Steel's Manual for the identification of medical bacteria.
**EXC - reference text. Assumed out-of-date.**

People to people ambassador programs: breastfeeding and human lactation delegation to the People's Republic of China.
**EXC - report of visit to China. No detailed report of donor milk processes.**

Breast milk and infection.
**EXC - not available.**

DARE, E. G. (1948)
The human milk bank.
**EXC - service description of Queen Charlotte's milk bank. Old report, and newer descriptions available.**
Davis, M. K. (2001)
Breastfeeding and chronic disease in childhood and adolescence.
EXC - rationale for breast feeding.

Davis, W. E. (1913)
Statistical comparison of the mortality of breast-fed and bottle-fed infants.
EXC - rationale for breast feeding.

Davy, S. T. (1975)
Human milk banks.

de Louvois, J. (1982)
Laboratory monitoring of banked human milk.
EXC - service description of Queen Charlotte's milk bank. More recent report available.

de Louvois, J. (1990)
Milk banking at Queen Charlotte's.
EXC - no details of process (overview only).

Transmissible spongiform encephalopathy agents: safe working and the prevention of infection. Infection control of CJD and related disorders in the healthcare setting.
EXC - no longer current. Latest guidance is at http://www.advisorybodies.doh.gov.uk/acdp/tseguidance/index.htm but does not appear to have any reference to breast milk.

Department of Health and Social Security. (1989)
HIV infection, breastfeeding and human milk banking. Committee on Medical Aspects of Food Policy.
EXC - report no longer available, and assumed to be out-of-date.

Dickens, V. (2007)
Every drop counts: report of a study day: understanding and supporting preterm breastfeeding for optimal nutrition, Bristol, 6 July 2007.
EXC - report of a meeting describing the UK milk banking services.

Dickens, V. (2007)
Daisy or Doreen: choices for mothers where human milk is banked for donation: report from the United Kingdom Association for Milk Banking (UKAMB) Roadshow.
EXC - report of a UKAMB workshop.

From breast to baby: quality assurance for breast milk management.
EXC - detailed process for management of maternal milk in the NICU, not donor milk.

Use of the six sigma methodology to reduce incidence of breast milk administration errors in the NICU.
EXC - detailed process for management of maternal milk in the NICU, not donor milk.

Dunn, D. T. and others. (1992)
Risk of human immunodeficiency virus type 1 transmission through breastfeeding.
EXC - review of reports of maternal transmission of HIV through breastfeeding. Not donor specific.

Dworsky, M. and others. (1983)
Cytomegalovirus infection of breast milk and transmission in infancy.
EXC - maternal transmission, not donor specific or treatment to prevent this.

Dyas, A. (1986)
Evaluation of the 'NUK-2000 Steam Steriliser', an alternative baby bottle disinfecter.
EXC - baby bottle disinfection.

el Mohandes, A. E. and others. (1993)
Bacterial contaminants of collected and frozen human milk used in an intensive care nursery.

el Mohandes, A. E. and others. (1997)
Use of human milk in the intensive care nursery decreases the incidence of nosocomial sepsis.
EXC - rationale for human milk.

Routine handling of milk fed to preterm infants can significantly increase osmolality.
EXC - the effect of fortifiers on milk chemistry.

Experiences with milk banking in Bombay.
EXC - more current description included.

Ferreira, C. S. and others. (2001)
Pasteurization of human milk to prevent transmission of Chagas disease.
EXC - not relevant to UK.

Fidler, N. and others. (2001)
Fat content and fatty acid composition of fresh, pasteurized, or sterilized human milk.

Francis, J. and others. (2008)
Comparative analysis of ascorbic acid in human milk and infant formula using varied milk delivery systems.
EXC - methods of feeding.

Gartner, L. M. and others. (2005)
Breastfeeding and the use of human milk.
EXC - rationale and policy on breast feeding. See also NICE PH11 on maternal and infant nutrition.

Garza, C. and Nichols, B. L. (1984)
Studies of human milk relevant to milk banking.

A "personalised" human milk bank.
EXC - description of process for maternal 'milk-bank'.

Geraghty. (2005)
Erratum: "The development of a research human milk bank".
EXC - research milk bank, not 'clinical' milk bank.

The development of a research human milk bank.
EXC - research milk bank, not 'clinical' milk bank.

Human breast milk banking in Oklahoma.
**EXC - more current description included.**

Decontaminating breast pump collection kits for use on a neonatal unit: review of current practice and the literature.
**EXC - equipment for maternal expression in the NICU setting.**

**Goldblum, R. M. and others. (1984)**
Rapid high-temperature treatment of human milk.
**EXC - not available.**

From wet nurse directory to milk bank: the delivery of human milk in Boston, 1909-1927.
**EXC - historical article.**

**Golding, J. (1997)**
Unnatural constituents of breast milk—medication, lifestyle, pollutants, viruses.
**EXC - contaminants in breast milk. Refer to latest guidance on breast feeding. No effect of storage/treatment reported.**

**Goldman, A. S. and others. (1982)**
Immunologic factors in human milk during the first year of lactation.
**EXC - milk composition. No effect of storage/treatment reported.**

**Goldman, A. S. and others. (1994)**
Immunologic protection of the premature newborn by human milk.
**EXC - rationale for breast milk. Only very brief discussion of effect of storage on composition, with no specific mention of donor milk.**

**Greenough, A. (2007)**
Antioxidant properties of human milk.
**EXC - brief review on the composition of milk, citing Hanna 2004.**

**Greer, F. R. (2001)**
Feeding the premature infant in the 20th century.
**EXC - historical article.**

The utility of bilateral breast pumping system for mothers of premature infants.
**EXC - maternal expression, not donor specific.**

Human milk banks in Brazil.
**EXC - duplicate. See Gutierrez 1998 Currents...**

**Gyorgy, P. (1962)**
Are human milk banks still necessary?
**EXC - not available.**

**Hale, T. (2002)**
Medications in mother's milk.
**EXC - reference text. Refer to latest BNF information.**

**Hamosh, M. and others. (1984)**
Handling and storage of human milk specimens for research.
**EXC - research milk bank, not 'clinical' milk bank.**
Hamosh, M. and others. (1996)
Breastfeeding and the working mother: effect of time and temperature of short-term storage on proteolysis, lipolysis, and bacterial growth in milk.
EXC - storage for breast feeding mothers (upto 24 hours). Not donor specific.

Hamosh, M. and others. (1997)
Digestive enzymes in human milk: stability at suboptimal storage temperatures.
EXC - storage for breast feeding mothers (upto 24 hours). Not donor specific.

Hamosh, M. (2001)
Bioactive factors in human milk.
EXC - rationale for human milk.

Hampecht, K. and others. (2008)
Cytomegalovirus transmission to preterm infants during lactation.
EXC - review of the process of transmission. Not focus on the treatment of milk to prevent transmission.

Hanson, L. A. (1999)
Human milk and host defence: immediate and long-term effects.
EXC - rationale for human milk.

Henker, J. and Schmidt, B. (1989)
[History of the human milk collection bank of the Pediatric Department of the Dresden Medical Academy].
EXC - not English language.

Hernell, O. and others. (1986)
EXC - specific parasite. Not donor milk banking specific.

Hino, S. and others. (1985)
Mother-to-child transmission of human T-cell leukemia virus type-I.
EXC - not donor transmission. Refer to latest guidance on breast feeding.

Holland, R. (2005)
Donor human milk -- part 1: historical, national and international perspectives.
EXC - historical review. Also compares international systems citing references - all of which are reviewed in this guideline.

Hopkinson, J., Garza, C., and Asquith, M. T. (1990)
Human milk storage in glass containers.
EXC - not available.

Pulmonary pharmacology.
EXC - drugs in milk. Refer to BNF.

Hughes, V. (1990)
Guidelines for the establishment and operation of a human milk bank.
EXC - quoted HMBANA guidelines.

Hughes, V. (1992)
Testimony presented at public hearing on regulation of tissue and organ transplantation.
EXC - duplicate. See Hughes 1992 Currents...

Hughes, V. (1992)
Currents in human milk banking: testimony presented at public hearing on regulation of tissue and organ transplantation.

EXC - report of testimony to a Working Group on US policy. Assumed to be no longer current.

EXC - generic guidance to mothers. Not donor specific.

EXC - see 2008 edition.

EXC - mother’s own milk bank. May be some relevant information, but not donor specific.

EXC - rationale for human milk.

EXC - focus on storage of maternal milk. Not donor specific.

EXC - news article.

EXC - assesses the effect of fortification on the osmolality of milk. Not donor specific, or about the process of fortification.

EXC - letter from authors offering to provide/clect information on milk banks. No primary information.

EXC - study on the fortification and use of milk on the NICU. Not process of donor milk banking.

EXC - not donor specific, or about the process of milk banking.

EXC - historical article. Also report of the 2003 HMBANA guidelines.

EXC - duplicate. See Jones 2003 Currents...
Jones, L. (1996)
Breast feeding. Mother’s own expressed breast milk: guide-lines for storage.
EXC - duplicate. See Jones 1996.

Jones, L. (1996)
Mother’s own expressed breast milk: guide-lines for storage.
EXC - maternal milk. Some reference to donor guidelines, but focus is not on donor milk banking.

Kerrey, B. T. and others. (2006)
Breast milk as a source for acquisition of cytomegalovirus (HCMV) in a premature infant with sepsis syndrome: detection by real-time PCR.

Klein, E. B., Byrne, T., and Cooper, L. Z. (1980)
Neonatal rubella in a breast-fed infant after postpartum maternal infection.
EXC - maternal transmission. Refer to latest guidance on breast feeding.

Koff, R. S. (1992)
The low efficiency of maternal-neonatal transmission of hepatitis C virus: how certain are we?
EXC - maternal transmission. Not donor specific.

Krugman, S. (1975)
Letter: Vertical transmission of hepatitis B and breast-feeding.
EXC - not donor specific, and no storage/treatment issues reported. Refer to latest guidance on breast feeding.

Labrecque, M. and others. (1989)
Feeding and urine cotinine values in babies whose mothers smoke.
EXC - maternal smoking. Refer to latest guidance on breast feeding.

Lal, R. B. and others. (1993)
Evidence for mother-to-child transmission of human T lymphotrophic virus type II.
EXC - maternal transmission. Refer to latest guidance on breast feeding.

Lal, R. B. and others. (1994)
Mother-to-child transmission of human T-lymphotropic virus type II (HTLV-II).
EXC - maternal transmission. Refer to latest guidance on breast feeding.

Lang, S., Orme, R., and Lawrence, C. (1993)
A comparative study of hand and mechanically expressed human milk - nutritional content and effect on babies' weight and growth.
EXC - assumed to be report of Lang 1994.

Lang, S. and others. (1994)
Sodium in hand and pump expressed human breast milk.
EXC - maternal milk. Not donor milk banking specific.

Larson, E. and others. (1984)
Storage of human breast milk.
EXC - related to maternal milk. Not specific to donor milk banking.

Lawrence, R. A. (2001)
Milk banking: the influence of storage procedures and subsequent processing on immunologic components of human milk.
EXC - almost identical review to Lawrence 1999. No additional references.
Donating milk... "Got milk -- but what do I do with it?".
EXC - news article

Letter: HBAg in breast milk.
EXC - maternal transmission. Refer to latest guidance on breast feeding.

Breastfeeding and the use of recreational drugs--alcohol, caffeine, nicotine and marijuana.
EXC - maternal use of drugs. Refer to latest guidance on breast feeding.

Little, R. E. and others. (1989)
Maternal alcohol use during breast-feeding and infant mental and motor development at one year.
EXC - maternal alcohol. Refer to latest guidance on breast feeding.

Effect of immunization against rubella on lactation products. II. Maternal-neonatal interactions.
EXC - maternal transmission. Refer to latest guidance on breast feeding.

A human milk formula.
EXC - method of adjusting the composition of human milk for feeding preterm neonates.

Multicentre trial on feeding low birthweight infants: effects of diet on early growth.
EXC - rationale and indications for donor milk.

Breast milk and neonatal necrotising enterocolitis.
EXC - indications for donor milk.

Lucas, A. and others. (1992)
Breast milk and subsequent intelligence quotient in children born preterm.
EXC - rationale for breast milk.

Lucas, A. and others. (1994)
A randomised multicentre study of human milk versus formula and later development in preterm infants.
EXC - indications for donor milk.

Nicotine and cotinine concentrations in serum and urine of infants exposed via passive smoking or milk from smoking mothers.
EXC - maternal smoking. Refer to latest guidance on breast feeding.

Changes in the fatty acid composition of preterm and term human milk from 1 week to 6 months of lactation.
EXC - indications for donor milk.

Mascola, M. A. and others. (1998)
Exposure of young infants to environmental tobacco smoke: breast-feeding among smoking mothers.
EXC - maternal smoking. Refer to latest guidance on breast feeding.
McGee, D. H. (1959)
Mothers’ milk bank at the Delaware Hospital.
EXC - not available.

Donor human milk versus formula for preventing necrotising enterocolitis in preterm infants: systematic review.
EXC - indications for donor milk.

Human milk banking: current concepts.
EXC - review of the HMBANA guidelines.

Treatment of IgA deficiency in liver transplant recipients with human breast milk.
EXC - indications for donor/breast milk.

Mitoulas, L. R. and others. (2002)
Efficacy of breast milk expression using an electric breast pump.
EXC - not specific to donor milk banking.

Mitoulas, L. R. and others. (2002)
Effect of vacuum profile on breast milk expression using an electric breast pump.
EXC - not specific to donor milk banking.

Enteropathogenic Escherichia coli.

Randomized diet in the neonatal period and growth performance until 7.5-8 y of age in preterm children.
EXC - indications for donor milk.

Narayanan, I. and others. (1980)
Partial supplementation with expressed breast-milk for prevention of infection in low-birth-weight infants.
EXC - indications for donor/breast milk.

Narayanan, I., Prakash, K., and Gujral, V. V. (1981)
The value of human milk in the prevention of infection in the high-risk low-birth-weight infant.
EXC - indications for donor/breast milk.

Narayanan, I. and others. (1982)
A planned prospective evaluation of the anti-infective property of varying quantities of expressed human milk.
EXC - indications for donor milk.

Aflatoxin M(1) and ochratoxin A in a human milk bank in the city of Sao Paulo, Brazil.
EXC - not relevant to UK [**TO check with GDG]

Erratum: Postnatal transmission of HIV-1 through pooled breast milk.
EXC - erratum for Nduati 1994 (see annotated paper).

Consequences on the newborn of chronic maternal consumption of coffee during gestation and lactation: a review.

EXC - maternal caffeine intake. Refer to latest guidance on breast feeding.

Neville, M. C. and others. (1991)
Lipoprotein lipase in human milk: compartmentalization and effect of fasting, insulin, and glucose.
EXC - description of effect of freezing and thawing, but had no reported link to infant nutrition or safety. Not related to the process of donor milk banking.

Prevention of mother-to-child transmission of HIV-1 infection.
EXC - maternal transmission. Refer to latest guidance on breast feeding.

Antenatal screening for syphilis.
EXC - maternal transmission. Refer to latest guidance on breast feeding.

Nightingale, S. and others. (1993)
Antenatal survey for the seroprevalence of HTLV-1 infections in the West Midlands, England.
EXC - maternal prevalence, not donor specific. Refer to latest guidance on breast feeding.

Nwankwo, M. U. and others. (1988)
Bacterial growth in expressed breast-milk.
EXC - not relevant to the UK.

Inactivation of bile-salt-stimulated human milk esterase: effect of storage and heat.
EXC - same study as O'Connor 1985.

Olowe, S. A. and others. (1987)
Bacteriological quality of raw human milk: effect of storage in a refrigerator.
EXC - storage of milk for a mother's own baby. Not donor milk specific. Also study conducted in a tropical environment - not relevant to UK practice.

Microbial growth in stored human breast milk.
EXC - storage for only 6 hours maximum. Not relevant to donor milk banking.

HTLV-I screening in Britain.
EXC - maternal prevalence and transmission. Refer to latest guidance on breast feeding.

Parks, Y. A. and others. (1987)
Methicillin resistant Staphylococcus aureus in milk.
EXC - report of infection on a SCBU, but neither infection route nor control measures specific to donor milk banking.

Parry-Hilhorst, G. M. (1968)
The mothers' milkbank.
EXC - not available.

Penc, B. (1996)
Organization and activity of a Human Milk Bank in Poland.
EXC - duplicate. See Penc 1996 Currents...
Philipp, B. L. and Merewood, A. (2002)
A primer on breast pumps.
EXC - not specific to donor milk banking.

Philipp, B. L. and Merewood, A. (2003)
Encouraging patients to use a breast pump.
EXC - duplicate. See Philipp 2002.

Picciano, M. F. (2001)
Nutrient composition of human milk.
EXC - rationale for human milk.

Mother's own milk: guidelines for storage and handling.
EXC - maternal milk only. No reference to donor milk banking.

Pittard, W. B., III and others. (1985)
Bacteriostatic qualities of human milk.
EXC - related to 24h room temperature effect on maternal milk. Not relevant to donor milk banking.

Quan, R. and others. (1992)
Effects of microwave radiation on anti-infective factors in human milk.
EXC - related to the thawing of milk for feeding. Not donor milk banking.

Setting up a nursing mother's room.

Milk banks and milk banking. Setting up a nursing mother's room.
EXC - not available.

Rangecroft, L., de San, Lazaro C., and Scott, J. E. (1978)
A comparison of the feeding of the postoperative newborn with banked breast-milk or cow's-milk feeds.
EXC - indications for donor/breast milk.

Breast pumps: the good, the bad and the noisy.
EXC - review of breast pumps. No specific mention of use for donor milk banking.

Renfrew, M. J. and others. (2008)
Assessing levels of contaminants in breast milk: methodological issues and a framework for future research.
EXC - process and rationale to 'develop guidelines for the most effective way to establish and maintain a national archive of breast-milk samples.' Not donor milk banking.

Simplified milk banking.

Reynolds, G. J. and others. (1982)
Simplified banking of human milk.

Use of banked milk for feeding infants with abdominal wall defects.
EXC - no published reference found.

Riordan, J. M. (1997)
The cost of not breast feeding: a commentary.
EXC - rationale for breast feeding.

Is breast milk collected at home suitable for raw consumption by neonates in Brazilian public neonatal intensive care units?
EXC - evaluated maternal milk only.

Ryu, J. E. (1985)
Caffeine in human milk and in serum of breast-fed infants.
EXC - maternal intake. Refer to latest guidance on breast feeding.

Cytolytic action of stored human milk on blood cells in vitro.
EXC - 24 hours storage only. No specific reference to donor milk banking.

Composition of breast milk obtained from mothers of premature infants as compared to breast milk obtained from donors.
EXC - indications for donor milk.

Effects of nutrients in human milk on the recipient premature infant.
EXC - indications for donor/breast milk.

EXC - indications for donor/breast milk.

Sibbald, B. (2000)
Canada’s only human milk bank may close.
EXC - news article.

Neonatology for the generalist: human milk banks and evidence-based medicine.

Early nutrition in preterm infants and later blood pressure: two cohorts after randomised trials.
EXC - rationale for human milk.

Low nutrient intake and early growth for later insulin resistance in adolescents born preterm.

Slusher, T. and others. (2007)
Electric breast pump use increases maternal milk volume in African nurseries.
EXC - evaluating the effect of different breast pumps to increase maternal milk volume. Not donor specific.

Human milk banking in Germany.
EXC - duplicate. See Springer 1997 Currents...
News about human milk banking in Germany.
EXC - brief article. See Springer 1997 for a fuller description of practice.

Donor milk for preterm and sick children: human milk banking in Germany.
EXC - brief article. See Springer 1997 for a fuller description of practice.

Physiologic effects of maternal smoking on breast-feeding infants.
EXC - maternal smoking. Refer to latest guidance on breast feeding.

Breast milk transmission of viral disease.
EXC - maternal risk, no specific reference to donor milk. Refer to latest guidance on breast feeding.

Sunshine, P. (1980)
Human breast milk-storage and safety considerations: protective effects.
EXC - although some mention of milk banking, refers mainly to the process of storing maternal milk.

Breast milk for all in need... "Got milk -- but what do I do with it?" Dec. 17.
EXC - news article

Donor human milk: a gift of life and health.
EXC - not available.

Taneja, N. and others. (2003)
Nosocomial outbreak of diarrhoea by enterotoxigenic Escherichia coli among preterm neonates in a tertiary care hospital in India: pitfalls in healthcare.
EXC - infection not related to process or provision of donor milk.

Terry, J. (2004)
Teaching mothers to express and store breast milk.
EXC - guidance for maternal expression and storage/use of milk. Not specific to donor milk banking.

Thorley, V. (2008)
Sharing breastmilk: wet nursing, cross feeding, and milk donations.
EXC - historical review.

Tully, M. R. (1990)
Banked human milk in the treatment of IgA deficiency and allergy symptoms.
EXC - indications for donor milk.

Human milk banking in Sweden and Denmark.
EXC - more recent service descriptions included. See Arnold 1999.

Is pasteurized mother's own or donor milk an answer to the HIV crisis?
EXC - duplicate. See Tully 1999 Currents...

Donating human milk as part of the grieving process.
EXC - duplicate. See Tully 1999 Currents...

Currents in human milk banking: is pasteurized mother’s own or donor milk an answer to the HIV crisis?
EXC - focus on the use of donor milk for mothers with HIV or babies with HIV. Some mention of donor milk processes, but very general with no details.

Currents in human milk banking: recommendations for handling of mother’s own milk.
EXC - duplicate. See Tully 2000 Currents...

Recommendations for handling of mother’s own milk.
EXC - general paper on process for maternal milk.

A year of remarkable growth for donor milk banking in North America.
EXC - duplicate. See Tully 2000 Currents...

Cost of establishing and operating a donor human milk bank.
EXC - duplicate. See Tully 2000 Currents...

Tully, M. R. (2001)
Excelencia em bancos de leite humano: uma visao do futuro--the First International Congress on Human Milk Banking.
EXC - duplicate. See Tully 2001 Currents...

Recipient prioritization and use of human milk in the hospital setting.
EXC - duplicate. See Tully 2002 Currents...

Stories of success: the use of donor milk is increasing in North America.
EXC - duplicate. See Tully 2004 Currents...

Currents in human milk banking: stories of success: the use of donor milk is increasing in North America.
EXC - article reporting three cases of recipient babies. Not process of donor milk banking.

Milk bank online resource... "Got milk -- but what do I do with it?" Dec. 17.
EXC - news article

EXC - news article

Convention on the rights of the child.
EXC - legal rights for highest standards of health care.

Human milk banking in the United States.
EXC - see more recent service description, Wilson-Clay 2006.
van Zoeren-Grobben, D. and others. (1993)
Lipid peroxidation in human milk and infant formula: effect of storage, tube feeding and exposure to phototherapy.
EXC - related to the handling of donor milk prior to feeding, not donor milk banking specific.

Human milk banks organization in France: legal proceedings and their consequences on milk bank activities.
EXC - magazine article.

Effects of pasteurization on anti-infective agents and other proponents of human milk.
Presentation at the HMBANA Annual Conference.
EXC - no published reference found. See also Orloff 1993.

Wallis, P. (2005)
Baby milk storage advice is relevant.
EXC - letter with no primary data or recommendations. Not donor specific.

Weaver, G. (1999)
The milky way: the remarkable history of the Queen Charlotte's and Chelsea Hospital Milk Bank.
EXC - duplicate. See Weaver 1999 Good idea!

Weaver, G. (1999)
Every drop counts: news from the United Kingdom Association for Milk Banking.
EXC - duplicate. See Weaver 1999 Currents

Weaver, G. (1999)
Currents in human milk banking: every drop counts: news from the United Kingdom Association for milk banking.
EXC - report of UKAMB meeting.

Weaver, G. (1999)
Good idea! The milky way: the remarkable history of the Queen Charlotte's and Chelsea Hospital milk bank.

Weaver, G. (2007)
UKAMB: celebrating ten years of 'making every drop count'.
EXC - magazine article

Wharton, B. A. (1987)
Nutrition and feeding of the preterm infant.
EXC - reference text. Assumed out-of-date.

Clinical case history: donor milk use for severe gastroesophageal reflux in an adult.
EXC - indications for donor milk in adults.

Wight, N. E. (2005)
Donor milk: down but not out.
EXC - discussion of Schanler 2005 paper on indications/use of donor milk.

Helping mothers express milk suitable for preterm and high-risk infant feeding.
EXC - refers to maternal milk, and expressing at hospital. May have some relevance if no other data specific to donor milk banking available.

Williams, A. F. and others. (1985)
Human milk banking.
EXC - see Baum 1982. Although a more recent description of the John Radcliffe service, it is less descriptive and adds nothing to the older article.

Williams, A. F. (1993)
Human milk and the preterm baby.
EXC - related to the use of milk, and fortification linked to indications. Not relevant to the process of donor milk banking.

Williams, L. S. (1992)
Even milk banks for preemies have been affected by AIDS.
EXC - not available.

Williamson, S. and others. (1978)
Organisation of bank of raw and pasteurised human milk for neonatal intensive care.
EXC - more recent service description. See Tomalin 1983.

Food for thought?
EXC - editorial on the need for donor milk. Not process or details of service operation.

Wright, N. (2001)
Donor human milk for preterm infants.
**References cited – selected citation mapping**

As part of the final checking, we wished to see which references were cited most commonly in the included studies. We counted how many times and by whom these had been cited. This was to give an indication of how much weight had been placed on any single primary study. Due to the number of studies, we selected studies known to be cited multiple times.

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