

# INFANT FEEDING: 0 – 12 MONTHS - BREASTFEEDING PRACTICE GUIDELINE<sup>®</sup>

## DOCUMENT SUMMARY/KEY POINTS

This document contains details on issues concerning breast feeding. Details covered include:

- Lactation and Breast feeding
- Safe management of expressed breast milk (storage and handling)
- Bed sharing and co-sleeping
- Management of incidents of neonatal/infant exposure to breast milk from a non-birth mother

### **A few points worth noting:**

- If supplementary or complementary feeds are necessary informed consent in writing must be obtained as well as the parent's decision regarding which formula to use.
- Every ward where infants are nursed should have a refrigerator with separate freezer door specifically for the storage of expressed Breast Milk (EBM) and formula.
- EBM stored in ward refrigerators/ freezers must be appropriately labelled.
- To defrost EBM place the bottle in a jug or bowl of warm (never boiling) water and swirl frequently. The bottle should not be shaken.
- A toothbrush for cleaning purposes is to be provided & stored in personal Milton container.
- For further information and support: contact [at CHW] the Child and Family CNC or Lactation Consultants and [at SCH] the ward-based breastfeeding champions. Dietitians from either site may be contacted. In addition a variety of reading materials are listed in the References.
- **This document must be read in conjunction with NSW Health Policy Directive (PD)**
  - [Maternity - Breast Milk: Safe Management \(PD2010\\_019\)](#): outlines the safe management of breast milk and managing a neonatal/infant exposure to breast milk from a non-biological mother.
  - [Maternity – Safe Sleeping Practices for Babies in NSW Public Health Organisations \(PD2012\\_062\)](#): provides direction on how to reduce the risks of Sudden Unexpected Death in Infancy in situations where mothers & babies are accommodated together.

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

<b>Approved by:</b>	SCHN Policy, Procedure and Guideline Committee	
<b>Date Effective:</b>	1 <sup>st</sup> May 2016	<b>Review Period:</b> 3 years
<b>Team Leader:</b>	Lactation Specialist	<b>Area/Dept:</b> Grace Centre for Newborn Care

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This Guideline may be varied, withdrawn or replaced at any time.

## CHANGE SUMMARY

- Changes have been made to this document as per NSW Maternity - Breast Milk: Safe Management: [http://www.health.nsw.gov.au/policies/pd/2010/pdf/PD2010\\_019.pdf](http://www.health.nsw.gov.au/policies/pd/2010/pdf/PD2010_019.pdf)  
These include the requirement to:
  - safely label, manage and store EBM
  - ensure babies are breastfed by their birth mother
  - ensure that all appropriate clinical areas implement strategies to reduce the risk of babies receiving incorrect breast milk
  - develop local operational arrangements to manage incidents if they occur
  - ensure that all screening, management plans, results and counselling are contemporaneously documented in the relevant medical record.
- This document includes a guideline for safe bed sharing for feeding and settling healthy babies under 28 days of age whilst in hospital
- Changes have been made to this document as per National Health and Medical Research Council (NHMRC) Infant Feeding Guidelines 2012

## READ ACKNOWLEDGEMENT

- This document is relevant for any NSW Health staff members who care for breast feeding babies and their mothers, or who may be called on to do so. It is also relevant to any NSW Health staff members who may handle expressed breast milk.
- The above mentioned staff should read and acknowledge they understand the contents of this document.

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

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## 1 Introduction

Health Professionals at the Sydney Children's Hospitals Network (SCHN) encourage, support, promote breastfeeding to around 6 months of age and are committed to providing optimal health care to promote normal growth and development in all infants. This document relates to feeding an infant aged from birth to one year during hospitalisation. For further information and support, please contact the following staff at The Children's Hospital at Westmead (CHW) – Child & Family Health Clinical Nurse Consultant or Lactation Consultants and at CHW or at Sydney Children's Hospital (SCH), Dietitians via the hospital switchboard.

The World Health Organisation (WHO) recommends that pregnant women and new mothers be informed of the benefits and superiority of breastfeeding - in particular, the fact that it provides the best nutrition and protection from illness for babies<sup>1</sup>.

Mothers should be given guidance as required on the maintenance of lactation, with emphasis on the importance of maintaining a well-balanced diet during breast feeding<sup>2</sup>. Unnecessary introduction of complementary feeds or other drinks for the infant should be discouraged because these will have a negative effect on breastfeeding.

Before advising a mother to use an infant formula, she should be advised of the benefits of breastfeeding and advised to express to maintain a milk supply.

Each ward should have a copy of the National Health & Medical Research Council (NHMRC) references for easy access to information<sup>2</sup>. These are available at CHW, either for purchase from Kids Health or they can be viewed in the CHW library and on the NHMRC web site. Additional information can be obtained via the [World Health Organisation](http://www.who.int) website.

### **Terminology**

**Suckle** – to take milk from the breast

**Suck** – to apply the lips to the breast for the purpose of extracting milk with the mouth

**Complementary feeding** – infant is receiving both breast milk and formula or breast milk and semi-solid or solid food

**Supplementary feeding** – fluids given to replace a breastfeed

**EBM** – Expressed breast milk

**Bed sharing** - parent and baby share the bed for purpose of breastfeeding, cuddling and settling

**Co-sleeping** - parent and baby share a bed with the intention of sleeping

## 2 Contact List for assistance

If assistance or advice is required, contact the following staff:

- **At CHW:**
  - CNC Child & Family Health
  - Lactation Consultant/Specialist GCNC or Intensive Care Unit
  - Dietitians
- **At SCH:**
  - NUM Child & Family Health
  - Ward lactation champions
  - Dietitians

## 3 General Principles of Infant Feeding

- Breastfeeding is the biological norm and most beneficial method of feeding infants with positive (immediate and long term) health outcomes for both mother and infant.
- Virtually all women can breastfeed. Provided they have appropriate support and accurate information from their families, communities and health services.
- Breastfeeding is the most ecologically sustainable way to feed infants and provides substantial cost savings to families, the health care system employers and government.
- Staff members working in SCHN actively support breastfeeding, acknowledge the unique properties of breast milk and the positive effects on the nutritional, physical and psychological wellbeing of the infant.
- Feeding should be encouraged on demand both day and night unless the infant's medical condition dictates otherwise.
- If the infant is fasting, the mother should be encouraged to and given the equipment to express.
- If a baby is unable to feed at the breast due to medical issues or is separated from the mother expressed breast milk should be given where ever possible.
- **If infant formula must be used informed consent should be sought from the breastfeeding mother and recorded in the infant's medical record.** Mothers should be advised appropriately and/or linked to lactation support if breast milk supply is decreased, breast feeds are not being given or if expressed breast milk is not provided.
- Mothers should have access to a private, quiet room with comfortable chairs when breastfeeding or expressing milk. Lactating mothers should be encouraged to have three meals a day, plus snacks and an adequate fluid intake as well as plenty of rest<sup>2, 3</sup>.
- Mothers should also have to option to express by the bedside of their child and have equipment available for this purpose

- After weaning from breast milk, infant formula is recommended as the main drink until one year of age<sup>2</sup>.
- Microwave heating is not permitted for heating expressed breast milk<sup>4, 5</sup>.
- At present in NSW Expressed Breast milk is not pooled and used for other infants

### 3.1 Appetite and Introduction of Solids

- Demand feeding is preferred when breast milk is the predominant food (i.e. for infants less than 6 months). Normally appetite is the guide for intake in infants if there is no medical reason to alter frequency or volume of feeds<sup>1, 2</sup>.
- For the first six months of life, breast milk provides adequate nutrition<sup>1, 2</sup>.
- Introduction of solids is appropriate by around 6 months of age depending on the child's development. <sup>1</sup>. Once the eating of solids has been established, sometime around 8 - 9 months of age parents are encouraged to give solids prior to breastfeeds.
- Other than recommending the use of iron-rich first foods , there are no recommendations on the order in which foods should be introduced, or the number of foods that can be introduced at a time.<sup>2, 3</sup>

## 4 Breastfeeding

### 4.1 Benefits of Breast Milk

#### Breastfeeding

- Is the preferred method of infant feeding because of the unique beneficial effects for infant, mother and society.
- Has positive effects on the nutritional, physical and physiological wellbeing of the infant.<sup>3</sup>
- Provides nutrition for growth and development and immunological protection for the infant.<sup>1, 2, 3 6, 7, 8</sup>
- Confers a range of benefits to the developing infant including improved visual acuity, psychomotor and cognitive development and reduced malocclusion as a result of better jaw shape and development.<sup>3</sup>
- Reduces the risk or severity of a number of conditions in infancy and later life including<sup>3</sup>:
  - Physiological reflux
  - Pyloric stenosis
  - Infections such as gastrointestinal infections, otitis media, urinary tract infections, bacteraemia – meningitis
  - Sudden infant death syndrome (SIDS)
  - Atopic disease, Asthma
  - Some childhood cancers

- Type 1 and 2 diabetes
- Cardiovascular disease risk factors including blood pressure and total and low-density lipoprotein (LDL) cholesterol
- Reduced risk of developing cow's milk allergy
- Protection against necrotising enterocolitis, inflammatory bowel disease, coeliac disease.
- Reduction of the risks of obesity in later childhood.

**Benefits for the mother<sup>3</sup> include:**

- Health benefits:
  - Reduced risks of ovarian and pre-menopausal breast cancer.
  - Hastens uterine involution after birth and reduces the risks of haemorrhage.
- Contraceptive effect:
  - The likelihood of further pregnancy may be reduced whilst exclusively breastfeeding.

All infants and mothers benefit from breastfeeding. In remote communities where Aboriginal and Torres Strait Islander people may live, there are frequently poor environmental conditions, housing and hygiene. Breastfeeding provides optimum protection against infection and under-nutrition in these conditions.<sup>3</sup>

The World Health Organisation recommends exclusive breastfeeding for the first six months, that no other food or fluid is required unless medically indicated and that breastfeeding should continue into the second year of life<sup>3</sup>.

## 5 Contra-indications to Breastfeeding

Breastfeeding may be contra-indicated in the following situations and special formulas may be required<sup>2,3, 6,7,8</sup>.

***Absolute contra-indications to breastfeeding include:***

- Active Tuberculosis that has not yet been treated and until their sputum culture is negative. Any close contact with the infant, including breastfeeding, is not permitted, to prevent respiratory transmission (regardless of mode of infant feeding) until the mother has finished 2 weeks of treatment<sup>3</sup>.
- Brucellosis – a very rare diagnosis in Australia
- Recently acquired maternal syphilis. Mother-infant contact /breastfeeding may begin 24 hours after treatment commences, if there are no lesions on or around the breasts or nipples. If lesions are present feeding can begin or resume once treatment is complete and the lesions are healed.
- Women who are Human-Immuno Deficiency Virus (HIV) positive or HTLV-1 or 2 seropositive<sup>3,9</sup>

***(All of the above require an Infectious Diseases consultation).***



- Breast cancer detected during pregnancy if mother is having chemotherapy. If no chemotherapy is being given continuation of breastfeeding should be evaluated on an individual basis<sup>3</sup>.
- Galactosaemia and Maple Syrup urine disease - severely limit or render impossible the infant's use of certain milk components and special formula is required<sup>3</sup>
- Some rare genetic metabolic disorders. It is important to note that for some of these disorders breastfeeding can be continued in combination with a prescribed supplement under the supervision of a paediatric metabolic physician <sup>3,10-12</sup>.

**Relative contra-indications to breastfeeding may include:**

- The infant of a mother who is **Hepatitis B positive** can only be breastfed once the infant has been immunised although this is rarely an issue as most babies are immunised soon after birth. Should this situation arise where a parent who is Hepatitis B positive has refused the initial immunisation an Infectious Disease consultation should be sought <sup>3,9-12</sup>.
- Hepatitis C <sup>3,9-12</sup>
- Some maternal medications. Most medications are excreted into the breast milk, usually in concentrations similar to blood levels. Typically this amounts to less than 1–2% of the maternal dose, which rarely poses a danger to the infant<sup>3</sup>. These can be checked by consulting with:
  - a pharmacist
  - the medical team caring for the baby
  - the C&FH CNC or the LC from Grace Centre for Newborn Care at CHW.
  - **Medications and Mothers' Milk**<sup>13</sup> by Thomas Hale may also be of assistance, and can be accessed via Kids Health or the CHW Library. Copies are also kept in Grace Centre for Newborn Care and by the C&FH CNC.
  - **MotherSafe** - the Statewide Medications in Pregnancy and Lactation Advisory Service can also provide information. They can be contacted on 02 9382 6539 or if calling from NSW country areas 1800647 848.
  - The lactmed website (<http://toxnet.nlm.nih.gov/cgi-bin/sis/search>) is a peer-reviewed and fully referenced database of drugs to which breastfeeding mothers may be exposed.
- Specific illnesses in the infant – e.g. Phenylketonuria
- Maternal illness or malignancy, dependent on maternal health, her desire to continue breastfeeding and the medications used.
- Maternal psychiatric illness, particularly if there may be physical danger to the infant. Psychiatric advice should be sought.
- Other medical conditions may need to be considered on their merits before use of infant formula is advised <sup>3,6,7</sup>.

## 6 Frequency and Duration of Breastfeeding

The infant feeding pattern is influenced by the:

- Infant's age: a newborn can demand breast feed every 2-4hrs and have 8-12 (or more) feeds a day. An older infant who is more efficient at feeding or who is receiving other means of nutrition such as complementary foods (formula or solids) may not require as many breast feeds a day i.e. 3-5.
- Volume of milk intake by the infant.
- Rate of milk transfer.
- Good positioning and correct attachment of the infant at the breast.
- Changes in the milk composition of each feed.
- Hospitalisation: hospitalised infant may feed more or less frequently due to a disruption in normal routine or due to discomfort or medical requirements<sup>6-8,14</sup>.

### 6.1 Frequency of Breast Feeds

- Infant formula takes longer for a baby to digest and therefore the breastfed infant may feed more frequently than a baby that is formula fed. Milk production is influenced by effective transfer of milk, frequent feeding, and the intensity and duration of suckling.
- Infants show many variations with frequency of feeds. An infant requires a minimum of 6 feeds in 24 hours but most will have more than this with a wide variation in spacing of feeds. Studies show that for a healthy baby there is a large individual variation in the length of nutritive feeding, milk flow and milk intake whilst indicating that 90% of the milk volume intake occurs in the first 4-7 minutes of feeding<sup>6,7,8,14</sup>. To receive essential amounts of high fat, high kilojoule milk, the feed should not be terminated or the baby changed to the second breast at an arbitrary time. Infant-led feeding provides feeds of whatever length the infant wants and as often as demanded. This will ensure infant satiety and adequacy of intake. It can take 6-8 weeks for breastfeeding to be well established<sup>6,7,8,14</sup>. It is important to watch the baby not the clock. Feeds are assessed for nutritive sucking.

### 6.2 Duration of Breast Feeds

- Breast milk composition and volume changes during each feed. The first milk drawn from a full breast has a low fat content with the fat content rising more rapidly after the removal of about 40% of the breasts storage capacity.
- The mother should allow the infant to finish the first breast before offering the second. The infant may feed from one breast only or feed from both breasts according to his or her appetite.
- Individual patterns of feeding develop between the mother and infant to meet the needs of the infant.
- If there are concerns regarding a baby's intake a qualified professional should observe and assess a full feed.

Refer to the [contact list](#) for more information or if assistance is required.

## 7 Management of Breast Feeding Techniques

The observation of a feed is useful in checking for correct positioning, attachment, effective suckling and transfer of milk while providing education as required. If the infant is correctly positioned and attached and is feeding effectively, the mother should not experience nipple pain.

Provision of factual information and support, as well as a demonstration of practical skills and strategies for problem solving, are all beneficial in establishing maternal confidence. It is important to respect mothers' suggestions, concerns and cultural background.

If the mother is experiencing a problem, if the infant is fussy at the breast, or is breastfeeding ineffectively, and ward staff have been unable to assist, refer to the [contact list](#) for help.

### 7.1 Positioning Mother and Infant for a Breast Feed

- Access to privacy in a quiet room/area, with supportive comfortable chairs to enable to mother to maintain an upright or semi reclined position with her feet flat on the floor is essential if the mother chooses to feed in a sitting situation. Other mothers may prefer to feed in a slightly reclined position on the bed with her back supported by pillows.
- Many mothers find it difficult to leave their infant in the ward so enabling the mother to express at the bedside is important
- There is no one correct way for a mother to hold her baby for a breastfeed. Positions may include the traditional or Madonna hold where the infant is positioned across mother's chest and the football hold where the baby's body is held under the mother's underarm. In each position the infant's body should be in one line, held close to and facing the mother, chest to chest with the head higher than the bottom and with the nose/ opposite the nipple.
- Baby led feeding or laid back nursing may see the baby in a more upright position but their chin will still be to the breast and their chest against the mother's chest.
- The infant should be unwrapped and supported behind the neck and shoulders. The head should be slightly extended with the chin being closer to the breast than the nose and the body flexed around the mother's body.
- An infant placed skin to skin with the mother will use their innate reflexes to help them to attach effectively.

### 7.2 Safer Sleeping Practices

- To promote a safer sleeping environment, all staff need to **advise mothers that sleeping with their baby is strongly discouraged and is not recommended under any circumstances in NSW Public Health Organisations**<sup>18</sup>.
- Breastfeeding is the best form of nutrition for infants therefore any recommendations for infant care that impedes its initiation and duration need to be carefully weighed against the known benefits to infants, their mothers and society.<sup>17,18</sup> For many mothers it is common practice for their babies to share their adult bed particularly for breastfeeding and settling during the first year of life.

- There appears to be no increased risk of SIDS whilst sharing a sleep surface with a baby during feeding, cuddling, and settling providing the baby is returned to their own safe cot/sleeping surface prior to the adult falling asleep<sup>18</sup>.
- All staff must follow the safer sleeping practices outlined in the NSW Health Policy Directive "[Maternity – Safe Sleeping Practices for Babies in NSW Public Health Organisations](#)" (PD2012\_062). This policy states that there appears to be no increased risk of SIDS whilst sharing a sleep surface with a baby during feeding, cuddling, and settling providing the baby is returned to their own safe cot/sleeping surface prior to the adult falling asleep.

**Parents should be educated by nursing /medical staff about the benefits and risks of bed sharing to enable them to make informed choices**<sup>15-18</sup>

### ***Guidelines for bed sharing***

This information on how to create a safe environment for a baby should be discussed with any mother requesting to bed share to feed and settle the baby<sup>18-20</sup>:

- Ensure that the mother is fully conscious prior to contemplating bed sharing. If the baby requires breastfeeding or settling whilst the mother is receiving medication of a sedative nature more regular monitoring and support by staff is required.
- In addition staff should consider the following:
  - Lowering the bed as far as possible
  - Encourage the mother to lie on her side on one pillow facing her baby.
  - Ensure the buzzer is within the mother's reach.
  - Tuck the bed clothes firmly around mother/parents and baby.
  - Keep the pillows away from the baby and remove loose bedding from the mother's bed to ensure the baby's head cannot become covered by bed linen.
  - If bed rails are used they must be of a design that does not present a danger of entrapment to the baby
  - Ensure the baby is returned to their own safe cot prior to the mother falling asleep.

### ***Risks of bed sharing***

Taking a baby into an adult bed may be unsafe<sup>17-20</sup> if baby:

- Gets caught under adult bedding or pillows.
- Is trapped between the wall and the bed.
- Falls out of bed.
- Is rolled on by someone who sleeps deeply or is affected by drugs or alcohol.

### ***Contra-indications***

From Ministry of Health PD2012\_062 staff should be aware that the following group of mothers are at greater risk of unintentionally falling asleep when feeding or settling their baby in their adult bed which increases the risk of SUDI to their babies. Mothers who are:

- Under the effects of general anaesthetic (first 24 hours).
- Immobile due to spinal or epidural anaesthetic (until fully mobile).

- Under the influence of drugs/medications that may cause drowsiness e.g. alcohol, illicit drugs, medications including sedatives, analgesia especially narcotics and other opioids, methadone etc.
- Maternal illness that may affect consciousness or ability to respond normally to the baby e.g. fever, excessive blood loss, severe hypertension etc.
- Maternal fatigue or tiredness to the point that would affect their ability to respond to the baby e.g. laboured through the night and awake >24 hours.

### **Clinical Risk Assessment**

All NSW Public Health Organisations must establish protocols or controls incorporating clinical risk assessment to facilitate a safer environment for the above group of mothers. The clinical risk assessment must be made by nursing/medical staff in conjunction with the mother and/or partner to determine potential risks and identify appropriate interventions including the level of monitoring and support required during feeding and settling a baby in the maternal/adult bed<sup>18</sup>.

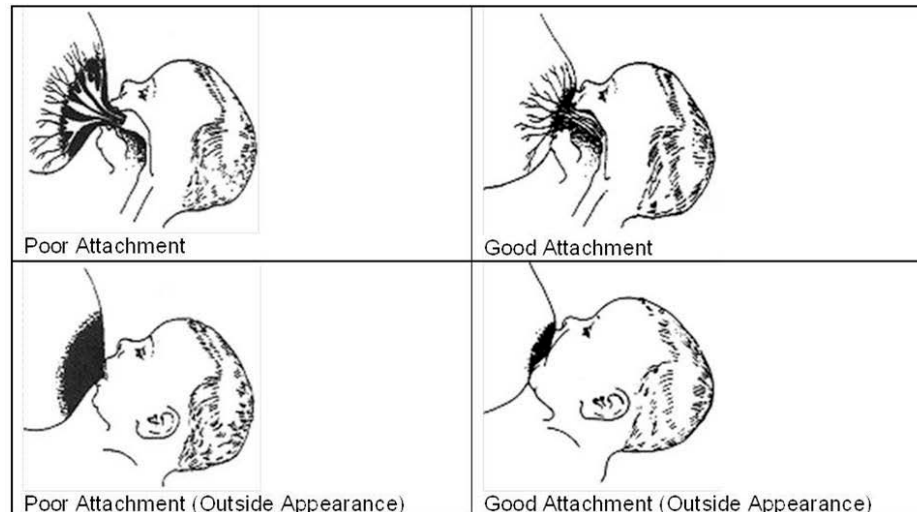
The clinical risk assessment should consider<sup>18</sup>:

- Mother's clinical condition
- Baby's clinical condition
- Safety of the environment

There may be instances where a mother refuses to follow advice about returning her baby to their own safe cot prior to falling asleep. If this is the case a note of the advice received and the mother's refusal to follow this advice needs to be documented in the clinical notes<sup>18</sup>.

## **7.3 Infant's attachment at the Breast**

- A baby who attaches well to the breast can help prevent many breastfeeding problems. Observing for the infant's feeding cues is very helpful however crying is a late feeding cue. Earlier feeding cues include:
  - turning head from side to side
  - sticking tongue out
  - wriggling
  - hands to mouth.
- The infant roots for the breast and opens his/her mouth wide with the tongue moving over the lower lip to 'lap up' the nipple and surrounding areola. If the gape is not wide enough the mother can encourage the rooting reflex by bringing the nipple from the infant's cheek towards his/her mouth.
- Bring the infant to the breast quickly with the wide gape whilst aiming the nipple towards the roof of the mouth. The infant's chin should come in contact with the breast with slight extension of the head. The infant latches on by taking breast tissue containing the areola.
- The mother feels a painless 'drawing' sensation with suckling. More areola should only be visible above the top lip with the infant's nose hardly touching the breast.
- When positioned correctly, it is not necessary to hold the breast away from the infant's nose.



WHO (1993) "Breastfeeding counselling - a training course" UNICEF New York<sup>21</sup>

## 7.4 Effective Sucking

- Initially short bursts of sucking occur at a rate of 2 sucks per second and are followed by a slow and even rhythm with deep jaw movements at a rate of about 1 suckle per second in a suck, pause, swallow cycle. Pauses may become more frequent towards the end of the feed.
- The infant should finish the feed of his own accord by coming off the breast spontaneously. The mother should ensure that the breast is well drained (to minimise the risk of mastitis) before offering the second. The infant may feed from one or both breasts according to appetite.
- At the end of the feed, the nipple may appear slightly elongated, but should not show any evidence of trauma.

## 7.5 Signs of adequate milk intake at the breast

- An infant is well fed if he/she has around 6-8 very wet cloth nappies or 4-5 wet (heavy) disposable nappies in 24 hours. The urine should be odourless and clear/very pale in colour. They will be reasonably content remembering that babies may be unsettled for a variety of reasons. Weight, head circumference and length should be monitored monthly<sup>6,7</sup> or as dictated by the infant's condition.
- A well fed very young baby will usually have 3 or more soft or runny stools each day for several weeks. An older baby is likely to have fewer stools and may go up to 10 days without one.

## 7.6 Incorrect Attachment and Sucking

Signs indicating poor attachment may include:

- cheeks that are sucked in
- audible 'clicking' noises
- frantic sucking

- mother experiencing discomfort or nipple pain
- distortion or stretching of the breast with sucking
- the mother's nipple may appear blanched or compressed after the feed<sup>6-8,14</sup>

If the mother is experiencing problems and ward staff are unable to assist, refer to the [contact list](#) for help.

## 7.7 Let-Down Reflex - Milk Ejection Reflex

There are noticeable changes in the infant's sucking and swallowing patterns with the let-down reflex - the short quick suckles proceed to long, deep, rhythmical suckling<sup>6-8,14</sup> with a suck, pause, swallow

Milk ejection can be inhibited by stress and also by breast expression alone.

## 8 Expressing Breast Milk

There are several reasons for expressing breast milk:

- for initiation and maintenance lactation
- for an infant who is unable to feed
- for an infant who is premature or unwell
- when mother and baby are separated
- to increase a low milk supply if more frequent feeding is not possible<sup>6-8,14,22</sup>
- engorgement or to relieve overfullness
- if the mother has mastitis and the baby does not remove enough breast milk

Mothers often require assistance when expressing milk and it is important for nurses to provide support, guidance and correct information to these mothers.

Expressing breast milk must be an hygienic procedure - clean hands, sterile containers and equipment are essential. Breast milk can be expressed by hand, by hand pump or by electric pump:

- **At CHW:**
  - Hand pumps may be available in the wards and most wards have an electric breast pump.
  - Equipment for use with the electric breast pump is available from the CHW store (listed on the imprest).
- **At SCH** pumps are borrowed/shared between wards and equipment is available through outside order.

Parents can buy or hire breast pumps from many chemists, private companies or from the Australian Breastfeeding Association for use in the home.

Hand expression is recommended in the first few days after delivery; however pumps with variable suction pressures may be used. Expression can be continued by hand or by pump once the milk flows easily.

### **Expressing should occur:**

- 6-8 times a day (about every 3 hours) for about 10 minutes initially then increased to 15-20 minutes or until the breast is emptied or softer.
- Dependant on the age of the baby, if the mother is unable to feed the baby at the breast expressing at least once during the night is important for ongoing milk supply.
- Expressing should continue until the infant is taking full breastfeeds.

### ***Storage and labelling of expressed breast milk***

- The method of labelling of expressed breast milk is as follows:
  - **At CHW**, all wards will be provided with a supply of removable labels. These labels will have space to write the date EBM is expressed and a space in which to place a MRN sticker without address. This MRN sticker must be placed on this removable label. The removable label will have a bright pink, orange and yellow sections to differentiate the contents of the bottle.
  - **At SCH**, white labels will be used for labelling purposes.
- Mothers, who are expressing, should be provided with a regular supply labels and their baby's MRN stickers.
- The combined label and MRN sticker should be attached to each bottle of EBM.
- The usual storage and handling processes at ward level outlined in this policy should be followed.
- The method of storage of expressed milk is dictated by the infant's feeding needs with freshly expressed milk being used in preference to frozen.
- Advise the mother if possible to express the amounts required for each feed into a sterile bottle, label the bottle as per above guideline then place into the labelled container in the breast milk/formula refrigerator with any excess milk being labelled in the same manner then frozen.
- If the infant is *nil by mouth*, then all expressed breast milk should be placed in labelled bottles in the labelled container in the freezer.
- When expressing, mothers should have access to privacy in a quiet room/area with supportive, comfortable chairs.
- Advise the mother in preparation for expressing to:
  - wash hands prior to expressing
  - use sterilised equipment
- Maternal let-down may be assisted by mother expressing at the bedside or having a photo of the baby nearby, or by drinking water while expressing.
- **At CHW:**
  - Any bottle containing EBM must have the multi-coloured removable label directly adhered to the bottle.
  - This label must also have the MRN label (without address) placed onto it



- The ward, date and time of expressing must be recorded on the label
- Store in breast milk/formula fridge or freezer in a container labelled with the child's name and other details.
- **At SCH**, advise the mother in the proper labelling of her expressed milk:
  - Containers of EBM will be labelled using white labels.
- Advise the mother on the appropriate cleaning and sterilising of the equipment used.
- **At CHW**, once EBM has been processed in the Formula Room (FR) another label will be placed on the removable label. The FR labels are larger than MRN stickers however the bright pink colour will still be visible.

The well infant is more efficient at emptying the breast than a pump and the breast is capable of producing more milk when the infant suckles, however expressing breast milk is beneficial in the appropriate situation<sup>6-8,14</sup>.

## 8.1 Hand Expressing

This method provides skin to skin contact, which can stimulate milk production:

- Wash hands
- Gently massage the whole breast with the palms of the hands moving in a circular motion from the outside of the breast towards the nipple.
- Repeat this several times and then gently roll the nipple between thumb and index finger.
- Hold a clean container or a capped 10mL syringe under the breast to catch the milk.
- Place thumb and the fingers diagonally on the edge of the areola (dark tissue surrounding the nipple).
- Gently press inwards towards the centre of the breast squeezing the finger and thumb together gently.
- Continue in a rhythmical rolling motion until the milk starts dripping. This should not be painful. It may take a little time for the ejection reflex to occur and the milk to drip.
- Change the position of the fingers as the milk stops dripping from the area of compression and start again.
- Express until the breast is empty or for about 10-15 minutes until the flow stops and then repeat the process on the other breast.
- Advise the mother in the proper labelling and storage of her expressed milk as above.
- Advise the mother on the cleaning and sterilising of the equipment used.

## 8.2 Use of Hand Pumps

Hand pumps are portable and best used for short term or infrequent usage. They can be purchased/rented from many pharmacies and from some private companies. The style of

pump recommended is one that can produce a controllable suction with easy action, does not cause pain, is easy to take apart, clean and resterilise after use.

- Wash hands
- Similar preparation as for hand expressing
- Use clean, sterilised equipment
- Massage the breast
- Ensure the nipple is centred in the breast shield
- Use the pump according to the instructions
- This process should be pain free with correct usage. If pain occurs, cease expressing & seek advice (refer to hand expressing above)
- Express until the breast is softer or for about 10-15 minutes until the flow stops. Express the other breast in the same way.
- Advise the mother in the proper labelling and storage of her expressed milk as above
- Advise the mother on the cleaning and sterilising of the equipment used.

### 8.3 Using Electric Breast Pumps (EBP)

This pumping method is practical for longer-term use and for double pumping (i.e. expressing from both breasts simultaneously).

- Most wards **at CHW** have an electric breast pump available or can access these from Bio Medical Engineering Department. After hours breast pumps can be accessed from the Biomed After-Hours Store. **At SCH** pumps can be borrowed from another ward.
- Equipment such as Lactasets (breast shields) and attachment tubing for the electric breast pumps are available from the CHW store and are listed on the imprest. **At SCH** the lactasets are available as an outside order.
- A toothbrush must be provided for each set for cleaning purposes.
- Each mother who is expressing should be provided with expressing equipment for her use as needed (see sterilising of equipment section).
- Any pumps borrowed by ward areas from Bio Medical Engineering at CHW are to be returned to Bio Medical Engineering when the infant is discharged.
- **At CHW** the attachment tubing is discarded and all breast shields are sent to CSSD for re-sterilising. These are then returned to the ward.
- **At SCH** the lactasets are disposable and are changed every 24 hours.

#### Preparation

- Wash hands
- Use sterilised equipment.
- Massage breast and hand express for 5 mins before using the EBP to optimize milk volume

- Ensure the nipple is centred in the breast shield.
- Start the pump with low suction pressure initially, increasing as tolerated by the mother without causing discomfort.
- Continue on each breast until it is emptied and feels softer, usually up to 10-15 minutes on each side.
- Double pumping (expressing from both breasts at the same time) or alternating breasts during the pumping time may assist with emptying.
- Advise the mother in the proper labelling and storage of her expressed milk as above.
- Advise the mother on the appropriate cleaning and sterilising of the equipment.

## 9 Hospital Storage of Expressed Breast Milk (EBM)

### 9.1 EBM in the Refrigerator

Read the NSW Ministry of Health Policy Directive (PD2010\_019) in conjunction with this guideline: [http://www.health.nsw.gov.au/policies/pd/2010/pdf/PD2010\\_019.pdf](http://www.health.nsw.gov.au/policies/pd/2010/pdf/PD2010_019.pdf)<sup>22</sup>

- Each ward where infants are cared for should have an appropriately sized refrigerator/freezer specifically for storage of breast milk and formula to avoid overcrowding
- Expressed Breast Milk (EBM) should be refrigerated at 4°C and only up to 48 hours<sup>3, 6,7</sup><sup>22</sup> within a **hospital** ward. At **home** evidence suggests the maximum storage time of breast milk under clean conditions in a refrigerator at 0–4°C is 3-5 days.<sup>3</sup>
- If all the expressed milk will not be consumed within 48 hours it should be frozen. Once it has **thawed** EBM must be used within 24 hours.
- If EBM is to be transported (for example, from the mother's home), frozen EBM must be maintained in a completely frozen state and refrigerated EBM must be kept at 4°C by using appropriate equipment (such as an esky and freezer bricks frozen gel packs)<sup>3,6,7,22</sup>. It should be placed in the refrigerator (or in the freezer if it is still frozen) immediately upon arrival.

EBM brought in from home should be checked in to the milk fridge/freezer by two staff or one staff member and the parent if appropriate. Each baby should have a labelled storage basket/container for the EBM in the fridge/freezer. The labelled bottles of expressed breast milk should be placed into the milk fridge (never in the door)<sup>3</sup>.

- **At CHW**, all bottles containing EBM should be labelled firstly using a coloured removable EBM label then by placing the infant's MRN label (without address) onto the space provided on the label. The label must also include the following information:
  - any additives
  - date and time expressed
  - date and time thawed

- ward name or abbreviation
- **At SCH**, white labels with the above information are placed into the containers of EBM.

The policy regarding labelling applies equally to breast milk expressed in the hospital and to expressed breast milk brought from home to the hospital.

Each breast milk/formula refrigerator has been fitted with a minimum & maximum thermometer and the temperature of the fridge should be *monitored on a daily basis*. This should be done by the ward assistant, with any problems reported to the NUM or nurse in charge.

**Any unlabelled or incorrectly labelled bottles MUST NOT be used.**

## 9.2 EBM in the Freezer

Expressed breast milk may be frozen at minus 18°C for a maximum of 3 months in a freezer with a separate door. The freezer should have a thermometer which is checked and recorded daily by the Ward Assistant. Each ward's breast milk/formula refrigerator and freezer are to have labelled containers allocated for each patient for storage of breast milk.

Freshly expressed breast milk can be chilled in the refrigerator for later use or may be frozen<sup>6,7,14,22,27</sup>. It should not be added to already chilled or frozen breast milk.

**At CHW**, a coloured removable label and the patient's MRN label (without address) as listed above, should be adhered to the bottle before placing the bottle into a labelled container in the freezer. Frozen expressed breast milk is kept in the milk freezer and approximate daily volumes needed are collected and taken to the Formula Room each day.

**At SCH**, the container of EBM has a white label with the above information placed on it. Breast milk is thawed and poured in Ward areas.

**Any unlabelled or incorrectly labelled bottles MUST NOT be used.**

## 10 Home Storage and Transporting EBM to Hospital

### 10.1 Storing Breast Milk at Home

Stringent precautions are necessary for storage of breast milk for sick infants in hospital.

The following is a simple guide for mothers storing expressed breast milk at home to be used for their infant in hospital.

#### Prior to expressing

- Wash hands thoroughly with soap and water and dry thoroughly.
- Use sterilised/disinfected equipment.
- After expressing milk should be labelled as above and refrigerated or frozen.
- Store in sterilised disposable, plastic containers or bottles.
- Mothers are advised to bring in freshly expressed milk each day.
- Milk that will not be used within 48 hours should be frozen.

**Note:** Freshly expressed milk that is being refrigerated or frozen should be stored in a new container rather than added to previously refrigerated or frozen milk<sup>3</sup>.

Storing Breast milk for Home Use			
Breast milk status	Storage at room temperature (26°C or lower)	Storage in refrigerator (5°C or lower)	Storage in Freezer
Freshly expressed into sterile container	6–8 hours If refrigeration is available store milk there.	No more than 72 hours. Store at back, where it is coldest	<b>2 weeks</b> in freezer compartment inside refrigerator (–15°C) <b>3 months</b> in freezer section of refrigerator with separate door (–18°C) <b>6–12 months</b> in deep freeze (–20°C)*
Previously frozen (thawed)	4 hours or less – that is, the next feeding	24 hours	Do not refreeze
Thawed outside refrigerator in warm water	For completion of feeding	4 hours or until next feeding	Do not refreeze
Infant has begun feeding	Only for completion of feeding. Discard after feed	Discard	Discard

(NH&MRC 2012<sup>3</sup>)

\* Chest or upright manual defrost deep freezer that is opened infrequently and maintains ideal temperature

## 10.2 Transporting Expressed Breast Milk

Transport of expressed breast milk in an insulated container (e.g. an Esky with freezer bricks) is recommended. If frozen milk has fully thawed it should be used within 4 hours and must not be refrozen. Place the labelled milk (see previous instructions re-labelling of EBM) in the labelled container in the breast milk/formula refrigerator (or in the freezer if it is still frozen) immediately upon arrival. If there is risk of frozen milk defrosting, then it may be advisable to refrigerate expressed milk and to transport it each day freezing it only after arrival at the hospital.

## 10.3 Use of expressed breast milk in wards

- **At CHW**, the Formula Room is open 7am to 5.30pm 7 days per week and will prepare feeds of expressed breast milk (EBM) for the wards as requested.
- **At SCH** the Formula Room is open 8:30-4 Monday-Friday and weekend mornings and does not prepare EBM for wards. Appropriately labelled EBM (see above) is stored at ward level in the EBM/Formula refrigerator.
- If expressed breast milk needs to be prepared in the Formula Room, the Dietitian or Dietary Supervisor will collect the volume of frozen milk required for the following 24 hours. The volume of EBM collected, sent to ward and left over for next day is documented. Only the minimum amount of breast milk required is thawed, any extra is kept frozen in the Formula Room. Any thawed EBM that is not sent to the ward must be labelled with the patient's name, and time and date of thawing. If not required, thawed EBM must be discarded after 24 hours.
- In the CHW Formula Room expressed breast milk is thawed in a safe, sterile environment as documented in the Food Safety Plan.
- If mothers are expressing at home to bring in to the hospital they should take home sterilized bottles/containers from the ward, pink or white removable labels and Identification labels (without address) to label their bottles of breast milk. Bottle labels should also note the name of the ward, and the date and time the milk was expressed.
- When transporting expressed breast milk to the hospital (and from the hospital on discharge), parents are advised to place the milk in an insulated container with freezer bricks inside (for example: an esky), to keep the milk as cool as possible.

On discharge ensure parents take home the expressed milk which is stored on the ward or in the Formula room. If parents do not want to take the milk home it must be discarded.

Please read this section in conjunction with NSW Health Policy Directive Maternity - Breast Milk: Safe Management<sup>22</sup>: [http://www.health.nsw.gov.au/policies/pd/2010/pdf/PD2010\\_019.pdf](http://www.health.nsw.gov.au/policies/pd/2010/pdf/PD2010_019.pdf)

This document defines the policy and procedures for safely managing breast milk and the process for management in the event of neonatal exposure to milk from a non-biological mother.

The appropriate handling and storage of expressed breast milk is important to ensure best practice is achieved. This is more critical for sick or premature babies in hospital than for healthy babies at home<sup>6,7,14,22</sup>.

When an infant needs EBM, fresh expressed milk should be used in preference to frozen. The mother should aim to provide fresh expressed milk daily for her infant. If breast milk is freshly expressed into suitable quantities in appropriately labelled bottles / containers and is stored in the refrigerator, it is to be used within 48 hours. When this is not possible expressed breast milk may be stored in sterilised appropriately labelled bottles /containers and then frozen. This can be done at ward level and does not involve the Formula Room.

## 11 Handling Expressed Breast Milk

**NOTE:** Staff should routinely use standard precautions when handling EBM. Refer to local Infection Control: Isolation policy.

- Check correct labelling of expressed milk before use.
- Any EBM being handled in the ward area (checked into and out of the fridge, or fed to the infant) must be double checked – by either a nurse and the mother or by 2 nurses
- **At CHW**, Formula Room procedures for handling expressed breast milk are documented in Formula Room Safety Plan No. 27.

### 11.1 Defrosting and Decanting Expressed Breast Milk (EBM) on the Ward

Frozen expressed breast milk should not be defrosted on the ward **at CHW**. Defrosting in general ward areas can occur only when the formula room is closed, or in an emergency situation. In this event if an inappropriate quantity of milk is in the bottle, then nursing staff may decant the milk into sterile bottles, or into 10mL sterile syringes in the ward kitchen. The EBM container should only be entered twice, so all the feeds should be decanted on these two occasions. Unused milk should be relabelled (as per guideline) and refrigerated as soon as possible.

- Wash hands thoroughly, ensure the bench is clean, and use only sterile equipment.
- For personal protection gloves should be worn for handling expressed breast milk.
- Choose the oldest, frozen EBM or a bottle with the amount required for a feed to reduce wastage.
- Ensure only correctly labelled milk is used.
- Defrost EBM by placing the bottle in a jug or bowl of cool water.
- Check and swirl the bottle frequently to distribute the heat evenly and to mix the milk. Do not shake the breast milk.
- To warm bottles of EBM it is important to use only tepid water.
- Swirl gently again before the feed.
- The use of a microwave to defrost or heat EBM is not permitted due to the risk of uneven heating and the potential for scalds and the destruction of some milk components<sup>9, 12</sup>.
- Never refreeze or reheat defrosted EBM.

- Remove required amounts for feeds and label all containers as per the guideline and including the date and time of defrosting.
- Thawed expressed breast milk should be used within 24 hours <sup>1, 8-11</sup>.

Any decanting, defrosting or preparation of EBM for feeding must be checked by 2 people as above.

## 12 Common Problems with Breast Feeding

### 12.1 Poor Milk Supply

Most mothers are able to produce enough milk to meet their baby's needs however if the infant has not started to feed well by the 2<sup>nd</sup> or 3<sup>rd</sup> week of life the mother's milk supply may fall. The mother's milk supply may be low due to several reasons:

- Incorrect positioning or attachment at the breast.
- Infrequent feeding or expressing.
- Poor removal of the milk.
- Infant being removed from the breast before infant's satiety is reached.
- Diminished or ineffective sucking by the infant.
- Infant orofacial abnormalities including tongue tie
- Hypotonia in the infant
- Damaged nipples.
- Use of dummies instead of offering the breast.
- Use of complementary or supplementary feeds.
- Maternal stress, illness or fatigue.
- Reduction mammoplasty <sup>8, 10, 11</sup>.

### 12.2 Managing a Low Breast Milk Supply

- Advise the mother to eat a healthy diet, to drink to quench her thirst, and to try to rest or sleep as much as possible to alleviate her tiredness.
- A full feed needs to be observed including noting of attachment, rhythmicity and milk transfer
- Check positioning and attachment of the infant at the breast.
- Allow the infant to finish feeding from the first breast before offering the second breast.
- Encourage the mother to express shortly after breastfeeding, 6-8 times per day with good emptying of her breasts.
- Medication may be prescribed for the mother to improve her milk supply, usually after an assessment by the lactation consultant or Child and Family Health CNC. This may be suggested if the earlier measures have been attempted with poor effect. (At CHW, see: <http://chw.schn.health.nsw.gov.au/o/documents/policies/guidelines/2009-8012.pdf>)



- Supplementation may be provided by finger feeding, cup feeding or the use of a supply line.

### **For further assistance**

- Refer to the [contact list](#) for more information or if assistance is required.
- Refer to [Australian Breast Feeding Association](#)<sup>23</sup> website for further information.

## **13 Large Supply of Breast Milk**

An oversupply of milk may be suspected:

- if the mother feels that her breasts are still hard or lumpy after the feed
- if the infant:
  - has difficulty with the milk flow and is gulping
  - has short, frequent feeds
  - is unsettled after feeds
  - vomits after feeds
- if the infant does not drain the breast adequately with feeding
- if the infant has had little weight loss initially and then large weight gains<sup>8, 10, 11</sup>

Some of these symptoms may also be occur with a normal milk supply.

Refer to the [contact list](#) for more information or if assistance is required for assessment and advice for the mother.

### **13.1 Managing an oversupply of Breast Milk**

An oversupply of milk can be common in the first four weeks and usually settles without intervention. After four weeks, avoiding expressing and trying to position the infant more upright whilst feeding may assist in managing the oversupply.

Other methods of managing an oversupply may include:

- Expressing some milk before the feed if the breast is very full.
- Checking the baby's positioning and attachment to ensure optimal breast drainage.
- Checking that the infant is feeding effectively.
- Allowing the second breast to drip whilst feeding from the other breast.
- Ensuring complete emptying of the first breast before offering the second breast.
- Trying to breastfeed with a minimum three hours between feeds.
- If the infant detaches when let-down occurs allow the flow to ease before recommencing the breastfeed.
- Careful assessment/examination for signs of mastitis<sup>8, 10, 11</sup>.

## 14 Painful Nipples

Breastfeeding should not cause pain or damage to the nipple. Some women may experience an uncomfortable feeling at the beginning of a breast feed, however usually sore nipples are due to the infant's poor attachment at the breast.

### 14.1 Managing Painful Nipples

- Ensure correct positioning and attachment.
- Express some milk at the beginning of the feed if the breasts are over full.
- If pain does not subside with a feed, detach baby and then reattach<sup>8, 10, 11</sup>.

If pain persists or if further trauma occurs, refer to the [contact list](#) for more information or if assistance is required.

## 15 Breast Engorgement

If the breast milk is not removed effectively the breast will feel engorged, very firm, lumpy and full and may be quite painful. The alveoli become distended, lymphatic and venous stasis occurs and milk flow is restricted. This primarily occurs in the first days of lactation if the infant is not fed to demand, does not feed effectively, or if a feed is delayed or missed.

Prevention and Management of Engorgement:

- Unrestricted sucking at the breast by the infant.
- Ensure correct positioning and attachment at the breast.
- Express some milk prior to feed to assist attachment.
- Remove bra and let the second breast drip whilst feeding.
- Restricted use of a dummy and complementary feeds.
- Relief can be gained with the use of:
  - mild analgesia
  - cold packs between feeds
  - wearing of a comfortable supportive bra or a crop top.

If relief is not obtained after several feeds, or if symptoms do not improve then consult the appropriate staff from the [contact list](#).

### 15.1 Mastitis

Non-infective mastitis is the result of a blocked duct due to a build-up of milk causing local distension. The area becomes inflamed, tender and hard. Several factors can lead to a blocked duct:

- Poor drainage of the breast due to poor positioning and attachment or incorrect sucking.

- Sudden engorgement due to a missed or delayed feed.
- Tight bra or clothing.
- Pressure on the breast from a lying position or from pressing the breast too firmly during feeding.

Appropriate management may resolve this. However if fever, joint aches and other symptoms occur, this can indicate a progression to infective mastitis requiring antibiotic treatment.

## 15.2 Managing Non-infective Mastitis

The following techniques may assist in managing non- infective mastitis:

- Checking the infant's positioning and attachment to ensure good drainage of the breast.
- Checking that the infant's sucking is effective and nutritive.
- Varying feeding position - pointing the infant's chin towards the affected part of the breast.
- Feeding the infant frequently, starting with the affected side for several feeds.
- Expressing unused breast for comfort.
- Applying moist heat to affected area prior to feeding to assist the let-down.
- Gently massaging the affected area towards the nipple during feeding or expressing.
- Applying cold packs between feeds for comfort.
- Taking a simple analgesia as needed (according to product directions).
- Continuing to breastfeed in preference to expressing.
- Checking carefully and frequently for damaged nipples.

If nipples are cracked, there is no improvement with treatment as above, or if the mother becomes unwell with fever and general muscle aches, antibiotics should be commenced and breastfeeding or regular expressing continued<sup>2, 7, 8, 12</sup>.

Refer to the [contact list](#) for advice or if assistance is required.

## 15.3 Managing Infective Mastitis

If the above techniques have not resolved the problem, the mother should be advised to seek medical advice for treatment. Suitable antibiotics are to be taken for 10 days<sup>6, 7</sup>. The most common causative organism is *Staphylococcus aureus*, however less commonly it can be caused by *Streptococcus*<sup>8, 10</sup>

Infective mastitis can be managed as for non-infective mastitis as above. Other techniques which can assist include:

- continuing to breastfeed or express
- ensuring complete emptying of the affected breast
- encouraging maternal self-care : rest, extra fluids and a nutritious diet
- analgesia as required

Refer to the [contact list](#) for advice on the management of cracked nipples.

## 16 Maternal Nutrition and Lactation

Good nutrition is very important for the health and wellbeing of all women and particularly for lactating women, who have additional nutritional requirements. Breastfeeding increases the mother's need for nutrients including calcium, protein, fluid and energy.

The principles of The Australian Guide to Healthy Eating remain the basis of an appropriate diet: <http://www.nhmrc.gov.au/files/nhmrc/file/publications/synopses/n31.pdf>.<sup>24</sup>

Mothers who are on very restrictive diets (e.g. vegans) – will need specific assessment to ensure that they are not deficient in nutrients such as vitamin B<sup>12</sup>. Please refer to the ward Dietitian or Department of Nutrition and Dietetics for further information.

## 17 Medications and Breast Feeding

Most medications are excreted into the breast milk, usually in concentrations similar to blood levels. Typically this amounts to less than 1–2% of the maternal dose, which rarely poses a danger to the infant<sup>3</sup>.

Any medication taken by a breast feeding woman should be checked for safe use in lactation by checking with the facility Pharmacy; with MotherSafe: NSW Medications in Pregnancy and Breastfeeding Service ph: (02) 9382 6539 or ph: 1800 647 848 (NSW country); or by checking in the text: Medications and Mother's milk by Thomas Hale (2012) 22 29 13. Up-to-date information can also be obtained from the National Library of Medicines (NLM) LactMed database, which catalogues medications and other chemicals to which breastfeeding mothers may be exposed<sup>3</sup>.

If a mother is taking a prescribed medication that is incompatible with breastfeeding, she may be able to express and discard her milk until the course of medication is finished and then resume breastfeeding. Alternatively she may be able to discuss this with her prescriber to determine if there is a safe substitute medication she can take.

Mothers should be advised to ensure their caffeine intake is low as the effects may include a wakeful, unusually fussy and irritable infant. It can take up to one week for the infant to clear the caffeine from its system once the caffeine intake is ceased. This may be more pronounced in an unwell or preterm infant.

## 18 Suppressing Lactation and/or Weaning

It is important to advise and support a mother during the process of weaning and suppression of lactation.

Suppression of lactation may be necessary in the following situations:

- i. death of the infant
- ii. specific illness of the infant
- iii. maternal illness
- iv. mother decides to wean

- It is best to suppress lactation slowly. Begin by deleting one breastfeed every few days and introduce an alternative method of offering formula dependant on the child's age and development (for example: bottle or cup).
- If the need to suppress is more urgent, decrease the frequency of breastfeeds and suggest the mother may need to express for comfort. The infant may be more receptive to a relative giving the formula if mother has breastfed for a long period.
- The use of medication to suppress lactation is not recommended <sup>25</sup>.
- Most infants gradually reduce the volume and frequency of their breastfeeds between 6-12 months, as they become accustomed to increased amounts of solids, and liquids from a cup or bottle, however breast feeding may continue for as long as mother and baby wish.

## 18.1 Ongoing Support

The decision to wean can often be a distressing time for mothers, who may require additional support and advice during this time. Some women may have mood swings or be very teary during and after the process of weaning due to hormonal changes in the body. Sometimes breasts may swell and become tender if weaning has occurred quickly. Analgesia may be helpful and expressing small amounts of milk may reduce pain. Wearing a firm bra is necessary for good support. A cold pack or warm shower can assist in reducing discomfort.

Specialists who may be able to offer support or resources are:

- Child & Family Health Clinical Nurse Consultant at CHW or breastfeeding champions at SCH
- Lactation Specialists in Grace Centre for Newborn Care and for the Paediatric Intensive Care Unit
- Early Childhood Centres/Child & Family Health Nurses within community areas or at local Community Health Centres
- Australian Breastfeeding Association (02) 96398686 or [www.breastfeeding.asn.au](http://www.breastfeeding.asn.au)
- Tresillian (02) 95695400 or 1800637357 or <http://www.tresillian.net/>
- Karitane (02) 97941852 or 1800 677961 or [www.karitane.com.au](http://www.karitane.com.au)
- General Practitioners

## 19 Mode of Feeding

Expressed breast milk may be given via:

- standard bottles – narrow or wide neck styles
- squeeze bottles
- special needs feeder
- Finger feeder
- Pipette
- Cup

- Enteral feeding systems such as nasogastric tube, orogastric tube
- Gastrostomy/Jejunostomy
- Supplementary Nursing System (Supply Line)

Refer to the [contact list](#) for more information or if assistance is required.

## 20 CHW only - Ordering Expressed Breast Milk from the Formula Room

Volumes of EBM for enteral feeds are to be ordered via the Formula Room. Expressed milk is collected from the ward and delivered to the Formula Room for decanting into appropriate volumes in a surgically clean environment. It is then delivered to the ward to be used within the next 24 hours.

To avoid wastage of expressed breast milk feed ensure volumes ordered are accurate. To guarantee that an adequate volume is attainable from each bottle, extra EBM is added, per the table below:

Volume EBM ordered per bottle	Extra EBM added to each bottle
< 10mL	+2mL
10mL – 50mL	+3mL
> 50mL	+5mL

## 21 Managing Bottle Feeding of Expressed Breast Milk

Infants who are well should be held for feeding in a similar manner to a breast fed baby. Suggested feed volumes may not meet the individual baby's needs, and a well-baby should be allowed to take what he/she wants. It is important to support and encourage parents with feeding their infant whilst in hospital.

### 21.1 Preparing the bottle for feeding in ward

- Wash hands well, put together the bottle and an appropriate teat in an hygienic manner.
- Use a teat which is suited to the infant's sucking ability (see [Appendix A](#)).
- Check that the correct EBM is selected and that feed is labelled with the correct infant's name, MRN and date.
- Safely warm the bottle of milk in a container of tepid water in the ward kitchen. Check milk temperature by dripping some milk from the teat onto the inside of your wrist. It should feel warm, not hot.
- The use of a microwave to defrost or heat EBM is not permitted due to the risk of uneven heating and the potential for scalds and the destruction of some milk components<sup>9, 12</sup>.

## 21.2 Feeding Position

- The infant should be fed when he/she shows signs of hunger, or according to medical need.
- Change nappy, wash your hands and then wrap infant appropriately.
- Sit comfortably in a quiet area, with the feed ready nearby.
- Hold the infant in a curled arm close to your body. Making eye contact and talking to the baby while feeding are important and appropriate techniques while feeding.
- Correct body posture will provide for optimal feeding performance. The infant's head, neck, trunk and extremities should be in proper alignment with the head, neck and the overall body slightly flexed with the trunk well supported.
- Encourage open gape of the infant's mouth and insert the teat.
- Allow the infant to determine the pace of feeding, stopping as and when needed.
- It may be necessary to change the teat if the flow is too fast or slow.

Refer to the [contact list](#) if an infant has feeding difficulties and to assess the need for Speech Pathology intervention.

### **For more information on infant feeding see the following:**

- Breastfeeding your Baby Booklet (2011).
- Australian Dietary Guidelines NHMRC (2013)
- Infant Feeding Guidelines for Health Professionals, NHMRC 2012
- The Feeding Guide (6<sup>th</sup> Ed, 2010) - CHW James Fairfax Institute of Paediatric Nutrition – available from Kid's Health.

## 21.3 Supplementary Feeds

A supplementary feed is a feed given to replace a breastfeed. This may be due to any of the following reasons:

- no expressed breast milk available
- mother is unwell and unable to feed
- mother has been prescribed a medication not compatible with breast feeding
- mother not available at the hospital to breastfeed or express
- mother returning to work and unable to feed
- mother is weaning
- mother needs a rest (it is important to advise the mother that expressing is recommended to avoid mastitis occurring).
- perceived convenience of bottle feeding

If supplementary feeds are necessary informed consent. Verbal permission is obtained from the parent as well as his/her decision regarding which formula to use. If a formula other than a standard infant formula is required, this is to be approved / recommended by a medical

officer, or the Dietitian. The commencement of supplementary feeds is to be documented in the infant's clinical progress notes to alert staff.

If there is no expressed breast milk available, it may be necessary to check mother's milk supply, and encourage her to express frequently to provide milk.

Refer to the [contact list](#) for advice or if assistance is required.

## 21.4 Complementary Feeds

A complementary feed is given in addition to the breastfeed. Complementary feeding can lead to decreased stimulation of the breast and is contraindicated in the early establishment of successful breast feeding, or, unless essential, when trying to increase supply<sup>6, 7, 8, 14</sup>.

Complementary feeds may be used for many reasons:

- failure to lactate or inadequate maternal supply
- damaged nipples, and painful breastfeeding
- poor weight gain in an infant
- diminished sucking and/or poor attachment by the infant at the breast
- infant's inability to suckle efficiently
- illness of the infant

If complementary feeds are necessary the parent should give verbal permission which is taken by nursing or medical staff and written in the baby's clinical progress notes. Advise on the type of formula for use should be given if there is insufficient EBM. The commencement of this practice must be documented in the clinical progress notes to alert staff.

If a formula other than a standard infant formula is required, this is to be approved or recommended by a Medical Officer or Dietitian.

## 22 Cleaning, Sterilising and Storing of Expressing Equipment in Wards

It is important to ensure all expressing equipment is cleaned and sterilised effectively. The breast pump attachment tubing is not cleaned unless milk is present inside.

### Cleaning of pump equipment at CHW

- Wash hands
- Immediately after use separate all the components of the breast pump set and rinse them in cold water
- Use the toothbrush and warm water with a mild detergent to clean the equipment
- If using a teat it must be washed in warm soapy water with the water being squeezed through the teat hole
- Thoroughly rinse all utensils in clean water
- Immerse all utensils completely in hypochlorite solution (Milton™)<sup>26</sup>, eliminating all bubbles and leave for a minimum of 15 minutes



## **Equipment at SCH**

- Equipment is disposable and is changed every 24 hours

### ***Preparing Hypochlorite Solution (Milton™)***

- Hypochlorite solution (Milton™) must be changed every 24 hours. The hypochlorite solution (Milton™) container should be washed every day with hot water and neutral detergent by the ward assistants or the nurse caring for the baby. The container should be thoroughly rinsed prior to refilling with solution made up with one hyperchlorite (Milton™) tablet dissolved in 2 litres of clean tap water. Abrasives must not be used on the container<sup>26</sup>.
- A separate disposable cleaning cloth should be used to clean each container.

### ***Using Hypochlorite Solution (Milton™) for Sterilisation in Wards***

- Ensure that the time and date of preparation are recorded on each container of Hypochlorite solution (Milton™).
- The equipment is required to remain in the solution for a minimum of **15 minutes**<sup>26</sup>.
- Equipment immersed for previous 15 minutes remains sterile.
- Wash hands before and after handling sterilised utensils.
- Drain the utensils prior to using them.
- **DO NOT RINSE** utensils prior to using as any residual solution is not harmful to the mother or infant<sup>26</sup>.

**HYPOCHLORITE SOLUTION (MILTON™) should be stored out of reach of children in the ward kitchen**<sup>26</sup>.

### ***Storing Feeding/Breast Pump Equipment (Lactaset)***

- Each mother's breast pump shield and toothbrush are stored in a separate container labelled with mother's name in the ward kitchen.
- On the infant's discharge, equipment is cleaned and the breast pump is returned to Biomedical Engineering (if on loan), or to the appropriate place in the ward.
- The breast pump shield and attachments are sent to CSSD for sterilising and then returned to the ward. The tubing and toothbrush are discarded.
- All unused hypochlorite solution (Milton™) containers should be washed in hot soapy water then when dry stored in the ward in a clean dry area.

After instruction by nursing staff, mothers are responsible for cleaning and sterilising of their breast pump sets and infant's bottles, caps (if using their own) and teats. These are cleaned then placed in hypochlorite solution (Milton™) solution.

## 23 Incident Management

**As per [NSW Ministry of Health Policy Directive - Breast Milk: Safe Management](#) all incidents must be recorded in IIMS following the [potential] exposure of a baby or neonate to breast milk from a non-birth mother.**

In addition the document must be read in conjunction with [NSW MoH Policy Directive Open Disclosure](#) [PD2014\_028] and related documents.

[Appendix B](#) contains the [Incident Management Flowchart](#) from NSW MoH [Breast Milk: Safe Management](#) [PD2010\_019].

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## Appendix A: Teats and Specialised Bottles – Information Guide



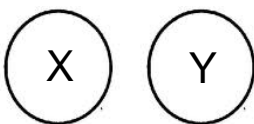

### When choosing a teat, consider:

#### Size, Shape, Material, Flow rate





Teat choice should depend on your child's needs and abilities. It is not necessarily the case that you progress through teats according to age ranges, particularly if your child has difficulty feeding. If the teat works for your child - stick with it!

If your child is having feeding difficulties, a Speech Pathologist or Child and Family Health Nurse can help to decide which teat best suits your child!

Here are a few examples of teats:

<p><b>Standard teat e.g. supermarket variety</b></p> <ul style="list-style-type: none"> <li>– Hole at tip of the teat</li> <li>– Some milk will drip out of teat, even when not sucked</li> <li>– Provides midline stimulation of tongue</li> <li>– Slow, medium, and fast flow rates</li> <li>– Suitable for babies with normal oral and swallowing skills</li> </ul>	
<p><b>Orthodontic teat e.g. Nuk and Pur brands</b></p> <ul style="list-style-type: none"> <li>– Hole at top of the teat</li> <li>– Place the hole against the palate</li> <li>– Some milk will drip out of teat, even when not sucked</li> <li>– Breast fed babies or hypersensitive babies may prefer the shape of this teat</li> <li>– Slow, medium, and fast flow rates</li> </ul>	
<p><b>Variable flow e.g. Bebelle</b></p> <ul style="list-style-type: none"> <li>– Larger cross-cut or Y-cut at tip of the teat</li> <li>– Flow rate depends on babies sucking</li> <li>– Requires less effort than chu chu cross cut teat</li> <li>– Milk can drip into mouth</li> <li>– Suitable when giving thickened feeds or for older children</li> </ul>	
<p><b>Peristaltic teat e.g. Pigeon</b></p> <ul style="list-style-type: none"> <li>– More elastic than a standard teat</li> <li>– Ridges in teat</li> <li>– Does not provide as much midline tongue stimulation as standard teat</li> <li>– Babies who normally breast feed may prefer it</li> <li>– Wide or standard base</li> <li>– Slow, medium, and fast flow rates, and Y cut</li> <li>– Wide based teat is available in super slow flow</li> </ul>	

## Specialised Teats

<p><b>Pigeon Cleft Palate teat</b></p> <ul style="list-style-type: none"> <li>– More rigid on upper surface, resting against the palate</li> <li>– The white valve prevents milk flowing back into the bottle from the teat during sucking and reduces the intake of air. This valve is an important component of the teat.</li> <li>– May be used in conjunction with a squeeze bottle or standard bottle</li> <li>– Available through CleftPALS (<a href="http://www.cleftpals.org.au">www.cleftpals.org.au</a>) and Havenhall (02 9316 9810)</li> </ul>	
<p><b>Cross-Cut teat e.g. Chu Chu</b></p> <ul style="list-style-type: none"> <li>– Small cross at tip of the teat</li> <li>– Milk does not drip into mouth</li> <li>– Flows only when baby sucks</li> <li>– Provides midline stimulation of tongue</li> <li>– Requires more effort during sucking than a standard or orthodontic teat</li> <li>– Suitable for babies with a good suck but with difficulties swallowing</li> </ul>	
<p><b>Medela Special Needs feeder (previously known as Haberman)</b></p> <ul style="list-style-type: none"> <li>– Designed for babies with weak sucking but good swallowing skills</li> <li>– Slit-cut teat allows the flow to be varied from slow to medium to fast. This is controlled by the feeder.</li> <li>– The white valve prevents milk flowing back into bottle. This valve is an important component of the teat.</li> <li>– The teat can be squeezed to assist infants with weak sucking to draw milk from the bottle.</li> <li>– Mini teat or standard teat size available</li> <li>– Available from Chemists or Purchase online (<a href="http://www.okme.com.au/medela-special-needs-feeder.html">www.okme.com.au/medela-special-needs-feeder.html</a>)</li> </ul>	
<p><b>Controlled Flow Baby Feeder</b></p> <ul style="list-style-type: none"> <li>– Specialised feeder for specific uses</li> <li>– Has 5 flow rates (levels 0-5) allowing for non-nutritive and nutritive sucking</li> <li>– Shake formula well prior to filling the feeder</li> <li>– Useful for babies with weak sucking, swallowing incoordination, or requiring slow introduction to feeds</li> <li>– Available online <a href="http://www.BionixMed.com">www.BionixMed.com</a></li> </ul>	

Developed by: Speech Pathology, Children's Hospital Westmead (2012)

## Appendix B: Incident Management Flowchart

