Winnipeg Regional Health Authority
Office régional de la santé de Winnipeg

BREASTFEEDING PRACTICE GUIDELINES

For the Healthy Term Infant

April 2005

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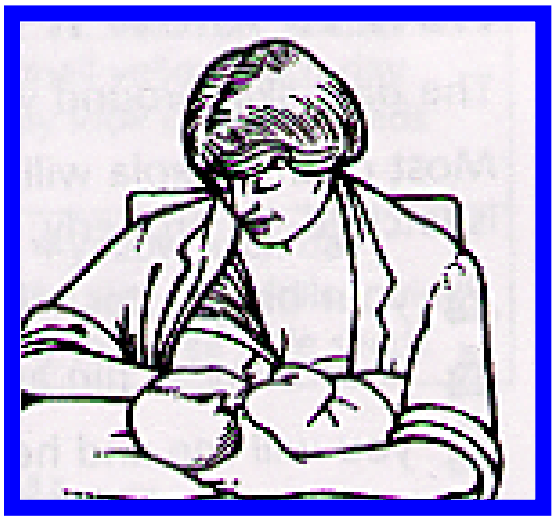

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Breastfeeding Practice Guidelines for the Healthy Term Infant

Table of Contents

INTRODUCTION: STATEMENT OF INTENT

Breast milk is recognized as optimal nutrition for infants with health benefits for women, families and communities. As a result, notable organizations including the Canadian Pediatric Society and Health Canada recommend exclusive breastfeeding for the first 6 months of life with continued breastfeeding for 2 years and beyond. Recommendations also include that nutrient-rich complementary foods, with particular attention to iron, should be introduced at six months and that breastfed babies should also receive a daily vitamin D supplement until their diet provides a reliable source or until they reach one year of age.

The World Health Organization (WHO) and the United Nations Children Fund (UNICEF) have implemented standards and initiatives to help promote breastfeeding worldwide. The Winnipeg Regional Health Authority (WRHA) Breastfeeding Practice Guidelines for the Healthy Term Infant are based on these respected documents. The purpose of this document is to provide evidence-based practice guidelines for the care of breastfeeding families that promote optimal initiation of breastfeeding in the postpartum period and continuation of exclusive breastfeeding for the first 6 months of life. This document is intended to guide practice in collaboration with primary care providers, nursing partners and family members.

Principles for the Care of Breastfeeding Families across the Care Continuum
Source: Baby Friendly Initiative: Integrated Ten Steps to for Hospital and Community Settings, Breastfeeding Committee of Canada 2011

1. Have a written breastfeeding guideline that is routinely communicated to all health care staff and volunteers.
2. Ensure all health care providers have the in the knowledge and skills necessary to implement breastfeeding policy.
3. Inform pregnant women and their families about the importance and process of breastfeeding.
4. Place babies in uninterrupted skin-to-skin contact with their mothers immediately following birth for at least one hour or until completion of the first feeding or for as long as the mother wishes; encourage mothers to recognize when their babies are ready to feed, offering help as needed.
5. Assist mothers to breastfeed and maintain lactation should they face challenges including separation from their infants.
6. Support mothers to exclusively breastfeeding for the first 6 months, unless supplements are *medically* indicated.
7. Facilitate 24 hour rooming-in for all mother-infant dyads; mothers and infants remain together.
8. Encourage baby-led or cue-based breastfeeding. Encourage sustained breastfeeding beyond six months with appropriate introduction of complementary foods.
9. Support mothers to feed and care for their breastfeeding babies without the use of artificial teats or pacifiers.
10. Provide a seamless transition between the services provided by the hospital, community health services and peer support programs. Apply principles of Primary health care and Population health to support the continuum of care and implement strategies that affect broad determinants that will improve breastfeeding outcomes.

Suggestions to operationalize these principles:

1. **Have a written breastfeeding guideline that is routinely communicated to all health care staff and volunteers.**
   - is created in collaboration with multiple stakeholders including community members,
   - is reviewed on a regular basis in collaboration with multiple stakeholders. including community members, and includes a mechanism for evaluating the effectiveness of policy implementation
   - is posted in all areas open to families in summary form in the language(s) most commonly understood by families. The summary form clearly indicates how the policy is reflected in practice
   - is available to consumers or anyone who wishes a copy
   - is supported by clinical and community health practices reflecting current evidence-based standards
   - identifies policies and practices that support non-breastfeeding mothers
2. **Ensure all health care providers have the in the knowledge and skills necessary to implement breastfeeding policy.**
   - All staff who provide hands-on breastfeeding care for mothers, newborns and infants receive breastfeeding education consistent with WRHA Breastfeeding Guidelines within 6 months of their employment, with updates provided on a regular basis.
   - Education includes at least 20 hours of teaching related to the advantages of breastfeeding, anatomy and physiology of breastfeeding, how to solve common breastfeeding problems, and the impact of introducing formula and artificial nipples or pacifiers before breastfeeding is established
   - Education also includes at least 3 hours of supervised clinical instruction, a system of referral to breastfeeding specialists after hospital discharge, and a list of community resources.
   - Staff who work with perinatal families but do not provide hands-on breastfeeding care require 3 hours of breastfeeding education that is appropriate to their practice; this may include the 3 hour on-line Breastfeeding Curriculum.
   - Breastfeeding education will assist staff to help mothers to make informed decisions regarding infant feeding. Support and education will be provided for non-breastfeeding mothers to choose alternate sources of infant nutrition that is acceptable, feasible, affordable, sustainable and safe in her circumstances. Staff will provide individual instruction on the choice and preparation of infant formula for non-breastfeeding mothers.
   - Breastfeeding education will also ensure that all WRHA staff are aware of how to support breastfeeding and that breastfeeding is welcome at all WRHA sites. Private breastfeeding areas will be provided for mothers who prefer this option. Signage will be available to ensure mothers are aware of these two options.
3. **Inform pregnant women and their families about the importance and process of breastfeeding.**
   - During the prenatal visits to the physician/midwife/public health nurse as well as prenatal classes, women will be provided with pertinent information about breastfeeding. This will include the importance of breastfeeding, the potential health risks of formula feeding, and anticipatory guidance related to breastfeeding initiation.
   - Prenatal education will be aimed at reducing inequities in breastfeeding rates among populations.
   - All resource materials and teaching will reflect the WHO/UNICEF Baby Friendly best

practice standards.

4. Place babies in uninterrupted skin-to-skin contact with their mothers immediately following birth for at least one hour or until completion of the first feeding or for as long as the mother wishes; encourage mothers to recognize when their babies are ready to feed, offering help as needed.

- Expectant mothers will be informed about the importance of skin to skin care, cue based feeds, delay of routine procedures and uninterrupted contact until completion of the first feeding, unless there is a medical indication for separation
- The baby will be immediately placed on the mother's abdomen regardless of the intended feeding method.
- The mother will be encouraged to breastfeed when the infant demonstrates early feeding cues.
- Breastfeeding will be encouraged without interruption, in an unhurried environment, except if there is a medical contraindication.
- In the case of a cesarean birth, the partner/support person will be offered the opportunity for skin-to-skin contact with the infant; skin-to-skin contact between the mother and infant will start as soon as possible.
- In case of other medical emergency, skin-to-skin contact and breastfeeding will be started as soon as possible.
- Mothers will be given the opportunity to remain close to their newborn regardless of type of delivery, as long as the health of the mother and newborn remain uncompromised.
- Skin-to-skin contact and first breastfeeding are an opportunity for maternal-newborn interaction and bonding. Assess the effectiveness of the first breastfeeding through observation and LATCHR score. Optimal latch is not expected with first breastfeeding; comprehensive teaching related to latch and position should begin with the second breastfeeding. Early, frequent effective breastfeeding has been associated with increased milk production, improved infant growth and enhanced lactation outcomes

5. Assist mothers to breastfeed and maintain lactation should they face challenges including separation from their infants.

- Mothers and infants remain together 24 hours a day; this supports maternal learning about infant behavior and breastfeeding
- Skin-to-skin contact is encouraged during the postpartum period. This enhances the recognition of early feeding cues and results in more frequent and effective breastfeeding.
- The instruction and support given during the hospital stay allows mothers to acquire the knowledge and the necessary skills to breastfeed their babies, including instruction on cues for feeding, positioning and latching onto the breast.
- All breastfeeding mothers will be shown how to hand express their milk.
- Within the first 24-48 hours post-birth, if feedings at the breast are incomplete, ineffective, or the mother is separated from her infant, the mother will be instructed to hand express and then pump her breasts eight times in a twenty-four hour period, with continued assistance by an experienced staff member.
- Mothers will receive assistance with breastfeeding concerns within 24 hours of discharged from hospital or birthing centre; routine follow up will be available within 48 hours after discharge.
- Mothers will receive written information on available community based breastfeeding support groups.

6. Support mothers to exclusively breastfeeding for the first 6 months, unless supplements are *medically* indicated.

- Care providers will communicate the importance of exclusive breastfeeding for the mother and child.
- Supplements of water or artificial baby milk will not be given to breastfeeding infants unless required for a medical condition or upon parental request.
- If supplementation is required, the method chosen should not interfere with the initiation of breastfeeding; mothers will make an informed choice regarding a supplementation method.
- All weaning information should reflect the aim of exclusive breastfeeding to six months and continued breastfeeding to 2 years and beyond"

- No gift packs including formula or formula advertisements will be given to the mother upon discharge whether breastfeeding or bottle feeding.
- Breastfeeding Support Groups/Clinics in the community will provide one-on-one consultation and peer support with the goal of supporting exclusive breastfeeding and breastfeeding duration.

7. Facilitate 24 hour rooming-in for all mother-infant dyads; mothers and infants remain together.

- Mothers and newborns will be encouraged to remain together night and day unless separation is medically indicated.
- The will help the mother and family plan for periods of rest/sleep, both day and night.
- Mothers will receive anticipatory guidance regarding safe sleep practices

8. Encourage baby-led or cue-based breastfeeding. Encourage sustained breastfeeding beyond six months with appropriate introduction of complementary foods.

- Mothers will be taught to recognize early feeding cues and breastfeed their newborns on cue. Crying is a late feeding cue and interferes with latch.
- Breastfeeding during the hospital stay will take priority over non-emergent events such as newborn procedures, bath, pictures and visitors.
- Mothers will be taught to position and latch her infant, assess the effectiveness of breastfeeding, and monitor wet and soiled diapers as signs of sufficient intake.
- Care providers will communicate the **importance** of continued breastfeeding to 2 years and beyond.
- Care providers will provide information on the introduction of safe appropriate complementary foods at 6 months with continued breastfeeding.
- Care providers will provide information about continued breastfeeding in the workplace
- Care providers will provide information and promote discussion about contraceptive methods that are compatible with breastfeeding".

9. Support mothers to feed and care for their breastfeeding babies without the use of artificial teats or pacifiers

- The use of artificial nipples is discouraged. Pacifiers will not be given to breastfeeding infants.
- Health care staff will advise the mother and family to avoid artificial nipples that may interfere with the establishment of breastfeeding. The use of a pacifier can replace or delay a feeding, which interferes with stimulating and increasing the breast milk supply.

- If supplementation is necessary, appropriate alternate methods should be used, using expressed breast milk (EBM) as first choice.
- Nipple shields may be considered in exceptional circumstances when other appropriate interventions have not been successful; ongoing breastfeeding support is required.

10. Provide a seamless transition between the services provided by the hospital, community health services and peer support programs. Apply principles of primary health care and population health to support the continuum of care and implement strategies that affect broad determinants that will improve breastfeeding outcomes.

- Upon hospital discharge mothers will be verbally informed and given a list of breastfeeding support resources and telephone numbers. This includes professional and non-professional (peer) resources.
- A postpartum referral is sent to Public Health by the discharging facility. The referral form will include documentation of breastfeeding difficulties, assessment, intervention and discharge plan.
- The Pubic Health Nurse will make contact with the client the day after receipt of the referral and provide continued support and education related to breastfeeding initiation.
- The PHN will provide follow-up based on client need either in-home/drop-in to monitor feeding patterns, infant weight and provide remedial assistance as required. The PHN will continue to follow until identified issues are resolved and the mother can latch and feed baby independently
- Health providers, community groups, businesses, schools and the media will collaborate to work toward a breastfeeding culture in the community.

11. The WHO Code

- WRHA staff protect all babies through compliance with the provisions of the *WHO International Code of Marketing of Breast-Milk Substitutes*, and subsequent, relevant WHA resolutions prohibiting
- Educational materials are impartial and do not endorse company brand names

DEFINITIONS

AC/PC weights:	Weight calculated before and after feeding to determine intake at the breast
BF:	Breastfeeding
EBM:	Expressed breast milk
Exclusive breastfeeding:	No food or liquid other than breast milk, not even water, is given to the infant from birth by the mother, health care provider, or family member/supporter.
FF:	Finger feeding
FTT:	Failure to thrive: Infant fails to gain expected weight or loses weight and drops below the 3rd percentile or 2 standard deviations below the mean weight for the reference population.
IUGR:	Intrauterine growth restriction
LGA:	Large for gestational age
MER:	Milk ejection reflex
OTC:	Over the counter
PHN:	Public Health Nurse
SGA:	Small for gestational age
SNS:	Supplemental nursing system (feeding tube at the breast)
Supplementation:	When an infant requires nourishment from a source other than direct breastfeeding, including receiving food (expressed breast milk and/or formula) during, after, or in place of breastfeeding.

Practice Guideline:

1.0 BREASTFEEDING INITIATION

PURPOSE:

1 Breastfeeding families will receive consistent and appropriate care when initiating breastfeeding.
2 Care will be provided according to the following guidelines.

PROCEDURE:

1. **Normal newborn behaviour and sleep patterns**

Age	Behaviour	
Birth to 2 hours	Alert	
2-20 hours	Light and deep sleep	
20+ hours	Increasing wakefulness Often includes a cluster of very frequent feedings (every 1 to 2 hours) over an extended period of time. A longer period of deep sleep will eventually follow this normal feeding pattern.	

2. **Normal feeding patterns/frequency**
   Birth to 24 hours: 4 or more feedings
   After 24 hours: $\geq$ 8 feedings in 24 hours
3. **Feeding cues**
   Teach mothers to recognize early feeding cues such as:
   - Rapid eye movement
   - Sucking motion(s) in sleep
   - Flexed arm, clenched fist, hand-to-mouth and active rooting in the quiet alert state

   Crying is a late feeding cue. A crying infant may have difficulty latching.
   Latch is more easily achieved when the infant is exhibiting early feeding cues.
4. **Breastfeeding initiation**
   Whenever possible, the healthy term and late preterm infant is immediately place skin-to-skin for the first hour of life or until first breastfeeding. This not only supports transition to extrauterine life but also encourages early non-nutritive behaviors and effective breastfeeding. When the infant exhibits early feeding cues, the infant is encouraged /assisted to self attach. If there are risk factors that interfere with early latch, the infant should receive assistance to latch as required. Skin-to-skin contact and the first breastfeeding is an opportunity for the mother and newborn to get acquainted and bond. The infant should be permitted to breastfeed until satisfied; if swallows are not seen, gentle breast compressions can increase the nutritive nature of first breastfeeding.

   Assess the effectiveness of the first breastfeeding through observation and LATCHR score. Optimal latch is not expected with first breastfeeding; comprehensive teaching related to latch and position should begin with the second breastfeeding. Early, frequent effective breastfeeding has been associated with increased milk production, improved infant growth and enhanced lactation outcomes
5. **SATIETY**

Satiety is indicated by the infant spontaneously letting go of the breast, relaxed arms and body, and closed mouth. During the early days of breastfeeding, the infant should feed actively from first breast, be offered the second breast, and feed until satiated. Later on (milk supply established and the infant growing well), the infant may still breastfeed from both breasts or be satiated / satisfied after one.

6. Normal Infant Output:

DAY	VOIDS	STOOLS
1	At least 1 wet Concentrated	At least 1 meconium Color is black or dark green
2	At least 2 wet Concentrated	At least 2 meconium Color is black or dark green
3	At least 3 wet (pale & no odor) Measure of hydration	At least 2 Lighter in color Brown, green or yellow Soft, may look like little seeds
4	At least 4 heavy wet	At least 3 large Color is yellow Soft, may looks like little seeds
5	At least 5 heavy wet • Urates should not be present	At least 3 breast milk large (seedy yellow) • Indicator of adequate caloric intake • Meconium should not be present
6 +	At least 6 heavy wet	At least 3 large breast milk (seedy yellow)
4 wks	At least 6 heavy wet	Stooling patterns change at about 1 month of age at which time some healthy growing infants may stool as infrequently every 1-7 days. These stools are usually large; stool colour should be yellow.

7. Normal weight loss and gain:

- Most babies will lose 5-7% of birth weight in first 3 – 4 days
- Begins to gain weight at 5 days
- Gains 4-8 ounces (115- 230 grams) a week in the first 3 months
- Never loses more than 10% of birth weight. If loses >10 % birth weight, consult with the primary care provider is required. (If no primary care provider is assigned, consult Children's Hospital Ambulatory Care Group: Social & Northern Ambulatory Pediatrics (SNAP) through HSC paging at (204)787-2071) or call CH ED).
- Regains birth weight in 2 weeks
- Birth weight is doubled at 4 – 5 months
- Birth weight is tripled at 12 months
- Breastfed infants grow more rapidly in the first 2 months than formula fed infants
- Breastfed infants weight gain slows from 3 – 12 months
- Weight should never drop below 3rd percentile or 2 Standard Deviations below the mean on standardized growth charts
- Length and head circumference does not differ from breastfed to formula fed infant
- Breastfed infants self regulate energy intake

NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

Practice Guideline: **2.0: MANAGEMENT OF COMMON PROBLEMS IN FIRST FEW DAYS**	Page 1 of 3

PURPOSE:

1 Breastfeeding families will receive consistent and appropriate care when experiencing early breastfeeding problems.

2 Care will be provided according to the following guidelines.

PROCEDURE:

1. **Contributing factors to problems in the first few days may include:**
    - Anatomical nipple variations which interfere with latch
    - Effects of labour and labour interventions
    - Effects of birth
    - Neonatal jaundice
    - Care giving routines including:
        - Separation, bundling, soothers
        - Over stimulation by visitors, family
        - "Forcing" baby to breast
        - Prolonged breastfeeding attempts
        - Inefficient latch/feeding; insufficient intake at breast; hypocaloric state
    - Maternal fatigue and/or pain
    - Engorgement

2. **Latch issues due to anatomical nipple variations:**

2.1 Most normal healthy newborns have the ability to attach/latch to the breast regardless of nipple and/or breast variations. Optimizing the initiation of breastfeeding will promote early learning related to latch and milk transfer.

2.2 Nipples that are everted are "easier" for a newborn to position at the junction of the hard and soft palate where the suck reflex is stimulated.

2.3 If nipples are flat or inverted, ensure the initial feeding experience occurs at the breast to ensure that the newborn "learns" how to position his/her mother's nipple in his/her mouth to optimize latch and milk transfer.

2.4 Mothers can "shape" the breast and nipple between their thumb and fingers to optimize latch if necessary.

3. Use of latch strategies and devices:

If latch is not achieved due to nipple variations or other maternal/newborn issues, the following strategies/devices may assist latch

3.1 **Hand stimulation** of nipple / areola prior to latching; can stimulate nipple to evert and elongate.

3.2 **Breast pump c**an also be used to apply gentle pressure before feedings. May assist with nipple eversion and latch-on.

3.3 **Nipple everter** is a syringe-like device that is placed over the nipple. It can assist in forming a nipple that is easier for the infant to latch onto. A 20mL syringe can be quickly made into a nipple everter. Remove plunger, cut off syringe tip, and insert plunger into this part/opposite end of syringe. To use:

- Mother applies the syringe flange over nipple and gently pulls back plunger to create suction
- Suction is held for approximately 30 seconds
- Can be used prior to each feeding or repeated between feedings as required
- Mother can apply colostrum or pure lanolin product pre and post use to minimize nipple trauma

3.4 **Breast shells** are a two-piece plastic device consisting of a dome/cup and a concave backing contoured to fit the breast. They are designed to evert a flat nipple; pressure on the areola may break adhesions that anchor the nipple to the areola. To use:

- Apply concave backing of shell over nipple / areolar area between feedings or ½ hour before feeding to help the nipple evert / protrude
- The breast shell is held in place over nipple/areola by mother's bra
- Remove just before the baby is ready to latch / breastfeed

3.5 **A nipple shield is an option to using an alternate feeding method or discontinuing breastfeeding**.

- Other strategies to encourage latch should be attempted before introducing a nipple shield.
- If the baby continues to have difficulty latching, this device can be a short-term strategy to encourage nutritive breastfeeding
- **See Guideline for use in #4.0 No Latch/Ineffective Breastfeeding.**

4. Most infants will learn to latch effectively despite early latch issues. Frequent skin-to-skin contact should be encouraged during the postpartum period to promote recognition of early infant feeding cues and frequent latch attempts.

5. If infants are not latching effectively in the first 24 hours of age, mothers should be encouraged to hand express their colostrum and feed it to their infant every three hours. (See educational resource)

6. If infants are not latching effectively by 24 hours of age, mothers should be encouraged to hand express and then to express their milk every 3 hours with a hospital grade electric breast pump.

7. Mothers/infants with continued latch difficulties at discharge should be discharged with a comprehensive plan to promote infant nutrition, milk production and ongoing breastfeeding. Early and ongoing community follow up should be arranged.

8 **Managing a frantic infant:**

8.1 Characteristics include:

- Feeds constantly
- Does not settle
- Mother is exhausted
- Confidence to feed is affected

8.2 To intervene:

- Leave mother and baby together skin-to-skin
- Reinforce early feeding cues and respond by immediately moving baby to breast
- Feed before over hungry; crying increases disorganized behaviour
- Ensure optimal position and latch
- Express colostrum to entice baby to latch/feed
- Spoon or cup feed small amount of colostrum to settle if necessary
- Consider pumping to stimulate earlier milk production

- Reassure mother that baby will settle when milk volume increases

9. Managing a sleepy infant:

9.1 Characteristics include:

- Difficult to awake for feeds
- Latches but does not feed vigorously or nutritively
- May result in inadequate intake and a hypocaloric state
- If continues, will result in weight loss
- May result in inadequate voids and stools

9.2 To intervene:

- Leave mother and baby together skin-to-skin
- Do not overbundle baby; leave hands free
- Reinforce early feeding cues and respond to early subtle feeding cues by immediately moving baby to breast
- Ensure optimal position and latch
- Encourage mother to stimulate baby to stay awake at breast with the use of touching, stroking
- Encourage mother to wake the baby to feed at least every 3 hours after 24 hours of age
- Feed before over hungry; crying increases disorganized behaviour
- Hand express colostrum onto nipple to provide incentives to latch
- Cup feed small amount of colostrum to provide calories and prevent hypocaloric state
- Supplement with expressed colostrum (or alternate source of nutrition) if required
- Consider pumping to stimulate earlier milk production
- If baby is very sleepy and not feeding well despite the above measures, infant should be seen by care provider

10. Managing a jaundiced infant:

10.1 Predisposing factors:

- Source of bilirubin is the normal breakdown of red blood cells
- Immature newborn liver is unable to quickly metabolize this red blood cell load
- Bruising (from birth process), prematurity, blood incompatibility contributes to newborn jaundice
- Peaks between day 3 and 5
- Bilirubin is excreted through stooling
- Insufficient intake of breast milk is a contributing factor; results in delayed / infrequent stooling and reabsorption of bilirubin

10.2 To intervene:

- Increase frequency of effective breastfeeding as above (9.2)
- Hand express and provide additional colostrum to stimulate the passage of stools and prevent reabsorption of bililrubin

NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

Practice Guideline:	Page 1 of 5
3.0: SUPPLEMENTATION OF THE BREASTFED BABY	

PURPOSE:

1. Breastfeeding families will receive consistent and appropriate care when considering supplementation of the breastfed infant

2. Care will be provided according to the following guidelines

PROCEDURE:

Supplementation: If an infant requires nourishment from a source other than direct breastfeeding, EBM is the feeding of choice. If EBM is not available, an alternate fluid may be used.

Supplemental feedings are not necessary in most situations.

1. Indications for supplementation

- Maternal infant separation
- Maternal illness/need for contraindicated medications
- Infant demonstrating clinical signs of dehydration
- Hypoglycemia or at high risk for hypoglycemia **and** not feeding effectively
- Infant who has not fed effectively at 12 hours of age
- Infant who has not fed the recommended number of feeds in a 24-hour period
    - At least 4 times in first 24 hours
    - At least 8 times per 24 hours thereafter
- Baby has lost ≥ 8 % of birth weight **and** is not feeding effectively
    - **Weight loss by itself is not an acceptable reason for supplementation**
    - Infant with weight loss requires a thorough physical examination and assessment of sleep/wake patterns, milk transfer, voids, stools and blood glucose level as appropriate
    - If these parameters are acceptable, mother should be encouraged to feed frequently and effectively (swallows evident) for next 12 hours and then reassessment of intake, output and weight is done. Decisions re supplementation are made based on this criteria
        - **Note:** Infants at 9-10% below birth weight who are hydrated and drinking well **may not** require supplementation, whereas the infant at 5% below weight loss who is NOT drinking **may** require supplementation
    - Early frequent assessment of latch and intake can support infant nutrition and prevent infant weight loss.
- Parental decision. If parental decision:
    - Determine reason for the request
    - Provide reassurance and teaching that supplement is not necessary except in a few circumstances
    - Work with parents to alleviate any potential or existing breastfeeding problem
    - Discuss the negative effects of supplemental feeds to enable parents to make an informed decision

There are few contraindications to breastfeeding. In these situations, the infant may require supplementation. See Appendix F.

2. **Negative effects of routine supplemental feedings:**
   - **Nipple Preference**
     - Breastfeeding and bottle-feeding require different mechanisms for sucking. It is best to prevent artificial nipple preference in a breastfed infant by not giving an artificial nipple for the first 4 - 6 weeks while the infant is learning to breastfeed.
   - **Insufficient Milk Supply**
     - Infant suckling at the breast results in the release of prolactin, the hormone that stimulates breast milk production. Breastfed infants who receive artificial feedings will breastfeed less frequently and for shorter time periods, thus decreasing nipple stimulation and milk production.
   - **Engorgement**
     - Breastfed infants who receive artificial feedings breastfeed less frequently and for shorter periods. This can result in inadequate drainage of the breast, engorgement, and decreased milk supply.
   - **Psychological Effects**
     - When a woman's infant appears to require frequent supplementary feedings, she may perceive that her body is not capable of producing sufficient breast milk to sustain the infant. **Perceived** insufficient milk supply is the most common reason for weaning before the mother's breastfeeding goals are met.

3. **Care plan related to supplementation of a breastfed infant:**

These principles ensure a foundation upon which to base a **mutually negotiated plan** for intervention.

3.1 A thorough assessment of mother and infant and breastfeeding is required before supplementation is begun. This includes:
   - A thorough physical examination and assessment of sleep/wake patterns, voids, stools, and blood glucose level as appropriate
   - LATCH-R assessment, in particular milk transfer
   - Review of history and predisposing factors for ineffective breastfeeding
     - narcotic use in labour, instrumental delivery, visitors which delay / restrict breastfeeding
     - Infant weight loss (Note: See section 1. Infant weight loss by itself is not an acceptable reason for supplementation)

3.2 Attempt to optimize breastfeeding whenever possible prior to beginning supplementation. This includes encouraging skin-to-skin contact, frequent breastfeeding and hand expression of colostrum.

3.3 Sleepy infants should be held skin-to-skin to awaken; gentle waking techniques should also be used.

3.4 Frantic infants should be held skin-to-skin to "settle" for feeding. If extreme hunger tension interferes with breastfeed, calm the infant with hand expressed colostrum or 5-10 ml of appropriate fluid so that effective breastfeeding can follow.

3.5 When attempts to improve "ineffective breastfeeding" have failed, supplementation is required. Expressed breast milk is always the preferred supplement.

3.6 Discuss the need to supplement with family; this includes method of supplementation, fluid use and volume required. Most alternative feeding methods are time consuming; therefore it is an advantage to provide supplementation at the breast whenever possible

See Sections: **Alternate Feeding Methods and Physiologic Feeding Amounts**

3.7 Whenever possible supplement with colostrum or EBM. Mother should be encouraged to hand express colostrum every 2 to 3 hours in the first 24 hours and to further stimulate milk production with hand expression and pumping after 24 hours.

3.8 If colostrum or EBM is not available in adequate volumes, consider adding to or supplementing with 5% Glucose Water <u>if baby is less than 24 hours of age</u>. Although there is no evidence to support this practice, it is effective in preventing the introduction of early and short-term use of formula in the first 24 hours of life. The healthy term infant who is less than 24 hours of age requires only 2 to 5 ml of colostrum for adequate supplementation; adding a small amount of 5% Glucose Water to colostrum can "wash" the colostrum out of the cup and provide a very small amount of additional volume to the infant. Formula is required for supplementation if the baby is over 24 hours of age.

3.9 Encourage skin-to-skin contact to support frequent breastfeeding.

3.10 Wake baby to feed every 3 hours if not exhibiting feeding cues. Small frequent feedings will support infants nutritional requirements, minimize weight loss and ensure energy to breastfeed effectively.

3.11 When the infant is able to latch, offer the breast first at each feeding.

3.12 The amount of supplement will vary dependent on the size of the infant, age of the baby, type of supplement and the presenting situation.

3.13 Increase or decrease supplement according to infant response, signs of milk transfer, satiation, infant weight and infant hydration. Supplements can be stopped when infant stooling, voiding and weight gain is consistent with expected outcomes for the breastfed infant.

3.14 Continue to encourage frequent breastfeeding at least 8 times in 24 hrs

3.15 Assess discharge readiness, including mother's independence in the use of alternate feeding methods prior to leaving hospital.

3.16 Develop and discuss a "feeding plan" that supports infant nutrition, maternal milk supply and the breastfeeding process.

3.17 Liaise with Public Health to promote early and ongoing follow up in the community.

3.18 Infant weight gain is monitored according to birth weight and baseline weight at first visit. Baby should be weighed naked and on the same scale to ensure accuracy.

3.19 AC/PC weights are rarely required. The PHN should seek advice from a lactation consultant if AC/PC weights are needed.

3.20 Close monitoring by phone/home visits and ongoing weight checks are essential until the PHN, the family and the infant's care provider are satisfied that the infant is stable, well hydrated and growing.

3.21 When supplementation is provided for purposes other than maternal decision, primary care provider communication is required.

3.22 When acute dehydration is identified, immediate re-hydration and referral to infant's care provider is required. See Guideline #11.

4. Supplementation with alternate feeding methods:

Feeding System	Strengths	Limitations
Cup Feeding/ Teaspoon	• Optimal method for early or short-term supplementation • Does not contribute to nipple confusion • Mother can hand express small (normal) volumes of colostrum into cup or spoon and feed to infant • Allows baby to pace his/her feeding • Helps tongue move down and forward • Does not cause breathing problems or oxygen de-saturation • Provides positive feeding experiences • Can be used with an already nipple confused baby • Can be used as an alternate feeding method when breastfeeding temporarily interrupted	• Does not teach latch / sucking at breast • Does not increase milk supply • Term babies can become accustomed to the cup and not go to breast
Syringe/ Dropper	• Can be used to entice baby to latch at breast • Can reinforce proper sucking • Can create milk flow to establish and regulate sucking • Rewards sucking attempts	• May require second person • Is a foreign object • Milk can be improperly injected into mouth • Is a slow way to feed baby
Feeding Tube at Breast/ SNS	• All feeding experience is at the breast – less opportunity for faulty imprinting • Consistent practice and reinforcement for appropriate latch and sucking at breast • Frequent breast stimulation for enhanced milk production • Establishes milk flow to encourage and regulate nutritive sucking pattern	• Only useful if baby can "latch" • May be cumbersome and unappealing • Improper tube placement can exacerbate infant sucking issue • Baby may suck on the tube like a straw
Finger Feeding	• Can "train" disorganized baby for sucking at breast • Can be used when breastfeeding temporarily interrupted • Keeps tongue down, forward, and cupped • Delivers milk only with correct sucking action	• Baby may become reliant on firm nature of finger • Baby may not learn to draw nipple into mouth if finger is simply inserted through closed lips • No breast stimulation • Potential for irritation of palate from tubing
Bottle Feeding	• Faster and easier for baby to obtain milk • Does not require large time or calorie expenditure	• May create nipple confusion • Artificial nipple may change/weaken infant suck • Fast flow may induce bradycardia, apnea, and oxygen de-saturation

5. Supplementation guidelines for the <u>healthy term infant</u>: Physiologic feeding volumes:

Age of baby	Type of fluid	Amount of fluid per feeding
0-24 hours	Colostrum 5% Glucose Formula	2-5 ml (no more than 10ml) Reflects small stomach size
24-48 hours	EBM Formula (if EBM not available)	10-15 ml 10-15 ml
48-72 hours	EBM Formula (if EBM not available)	15-30 ml 15-30 ml
Day 3 – 5 *	EBM Formula (if EBM not available)	100 ml/kg /day divided by # of feedings per day (Based on birth weight)

6. Supplementation guidelines for the infant with weight loss (>8% of BW) and/or who is <u>not breastfeeding effectively</u>:

Age of baby	Type of fluid	Amount of fluid per feeding (Based on birth weight)
0-24 hours	Colostrum 5% Glucose Formula	65ml/Kg/day divided by # of feedings per day
24-48 hours	EBM Formula (if EBM not available)	80ml/Kg/day divided by # of feedings per day
48-72 hours	EBM Formula (if EBM not available)	100 ml/Kg/day divided by # of feedings per day
Day 4	EBM Formula (if EBM not available)	120 ml/Kg/day divided by # of feedings per day
Day 5*	EBM Formula (if EBM not available)	**150 ml/Kg/day** divided by # of feedings per day

*** Over Day 5, see Guideline #11: Dehydration**

NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

Practice Guideline:	Page 1of 4
4.0 NO LATCH/INEFFECTIVE BREASTFEEDING	

PURPOSE:

1. Breastfeeding families will receive consistent and appropriate care when breastfeeding is ineffective.
2. Care will be provided according to the following guidelines.

PROCEDURE:

1. **Assess infant for the following precipitating factors:**
   - 1.1 **Feedings:**
     - Breastfeeds less that 4 times in the first 24 hours
     - Breastfeeds less than 8 times per 24 hours after 24 hours of age
     - Long feeds (longer than 30 minutes per side or 60 minutes total feed)
     - Short feeds (less than 5 minutes per side)
     - Breastfeeds on one side only; this **may** result in inadequate intake
     - Refusal to latch/difficulties latching
     - Unable to maintain latch; on and off breast frequently.
     - Baby is "mucousy"/gags frequently
     - No audible swallowing; absence of open-pause-close type of suck
     - Rapid, nibbling, shallow type of suck
     - Indrawing of cheeks/smacking or clicking sounds
     - Difficulty eliciting milk ejection reflex (MER)/let-down
   - 1.2 **Behaviours:**
     - Falls asleep at breast after non-nutritive feeding
     - Sleeps long period (4-6 hours at a time) and hard to waken
     - Infant is sleepy when wake and refuses to feed
     - Fussy after feeds, chews hands, uses pacifier, sucks fist or blanket
     - Infant is irritable and restless; moves head from "side to side" rapidly
     - Acts "hungry" all the time
   - 1.3 **Output:**
     - Infrequent voids in the first few days of life (see "normals" in PG #1)
     - Less than 6 wet diapers in 24 hours after day 6
     - Urates after day 4
     - No stools in 24 hours
     - Meconium stools after day 4
     - Infrequent stools in the first month and/or stools that are "green" in color; this **may** indicate ineffective breastfeeding and insufficient caloric intake
     - Stooling patterns change at approximately 1month of age at which time some infants may have a large stool only every 1-7 days; these stools should be yellow in colour.

   Note: The earliest sign of inadequate breast milk intake is <u>infrequent passage of stools.</u>
2. **Assess mother for the following symptoms:**
   - Lack of breast fullness or apparent milk supply

- Breasts do not soften after feed: engorgement/fullness unrelieved by feeding
- Persistent or increasingly painful nipples
- No discernible change in milk volume and composition by 3-5 day

3. **Consider precipitating factors in the maternal/infant history which may include:**
    - Primigravida
    - Medicated birth (narcotic analgesic or epidural)
    - Caesarean birth
    - History of maternal infant separation
    - Delay in first breastfeed experience
    - History of "forcing" infant to breast
    - Early supplementation
    - Jaundice
    - Maternal depression
    - Maternal exhaustion
    - Maternal responsibilities; other young children
    - Not offering both breasts at each feeding; this may interfere with optimal milk production
    - Inadequate teaching/support
4. **Provide care to**:
    - 4.1 Support infant nutrition and maternal milk supply through optimizing breastfeeding management:
        - If ineffective latch is the issue, assist to correct latch and optimize position
        - Consider “laid back breastfeeding” as an option to “relearn” latch and support infant attachment at breast. (See educational resource)
        - Increase frequency of effective breastfeeding. Wake to feed at least 8 times a day and offer both breasts at each feeding. These strategies optimize infant nutrition and maternal milk production
        - Provide education related to assessment of nutritive breastfeeding and additional strategies to increase infant intake (breast compressions, switch nursing etc)
    - 4.2 Support family’s efforts, including teaching signs of hydration and how to know baby is receiving adequate nutrition.
5. **Support infant nutrition**
    - 5.1 The goal of the feeding plan is to maximize infant calories with minimal energy expenditure.
    - 5.2 Assess ability to latch/breastfeed; calorie deprivation can lead to an infant who has insufficient energy to effectively breastfeed/transfer milk.
    - 5.3 If poor/no latch and infective breastfeeding, discuss feeding options with family, including increasing the frequency of effective breastfeeding. If no latch, discuss alternate feeding methods with family. Inform the family that infant may not effectively breastfeed until back to birth weight and/or gaining well.
    - 5.4 If infant is latching well, consider SNS. Encourage the mother to continue with feeding at the breast, limit time at the breast, and maximize caloric intake with SNS. If family is not comfortable with SNS, the mother can offer the breast for a short period and then supplement with alternate feeding method.

5.5 A nipple shield may be considered if the baby continues to have difficulty latching, despite optimal position.

- A nipple shield is a thin silicone (not rubber) shield, which is placed over the nipple and areola. When the infant is positioned at the breast, the firm tip of the shield stimulates the infant's suck reflex.
- Choice of nipple shield length and width should be based on maternal and infant assessment; mothers should be instructed to use the smallest sized shield that does not cause nipple trauma/pain.
- A nipple shield can assist with latch-on due to flat or inverted nipples
- A nipple shield can also assist latch when the infant is sleepy, immature or low energy.
- Although evidence indicates that the use of a silicone nipple shield is associated with adequate milk production, WRHA practitioners recommend that early use of a nipple shield (in the first week of breastfeeding) is followed by milk expression to optimize breast stimulation and milk production.

5.6 To use nipple shield:

- Turn flange of shield inside out (roll back) and then apply to nipple/areola. The infant will often pull the nipple into shield after several minutes of sucking.
- A nipple shield will often increase milk transfer through the negative pressure exerted by the baby and the shield; once in place, swallows should be seen and heard. When the baby comes off the breast, milk should be present in the tip of the shield.
- Allow the baby to feed nutritively on **both breasts** to maximize intake
- A nipple shield is intended as a short-term strategy to stimulate a latch. Weaning from the nipple shield can include:
    - Latch attempts without shield several times a day
    - Removal of the shield after a brief time of sucking; this is followed by quickly placing the baby on the breast before nipple/areola loses its shape.
    - Infants who are immature and low energy may require a nipple shield until they are more mature / energetic.
    - Infants of mothers with non-everted nipples may continue to use a nipple shield for longer periods of time.

Note: the nipple shield should be washed in hot soapy water after each feed and sterilized once a day

5.6 If supplementation required, colostrum / EBM should be given. If not available, supplement with formula to ensure adequate calorie intake.

5.7 Infant should be fed at least 4 times in the first 24 hours and at least 8 times in 24 hours after 24 hours of age

5.8 Instruct family to wake the infant to feed every 3 hours; hypocaloric infants will sleep through hunger.

5.9 Decision should be made regarding whether to offer breast before feeding or just supplement for 24 to 48 hours; this depends on energy level of baby and mother.

5.10 Entire feeding session should take no longer than 45 minutes: 20-30 minutes to feed (max), 10 minutes to settle, 10 minutes to pump. This will give mother and baby 2 hours to sleep before next feeding.

5.11 Encourage skin-to-skin contact before and after feedings; consider "laid back breastfeeding" if appropriate. (See educational resource)

6. Support maternal milk supply

6.1 Assess maternal milk supply; a hypocaloric baby or a baby with ineffective latch may not stimulate maternal milk production. Discuss the goal of providing enough breast milk to eliminate need for artificial babymilk with mother.

6.2 Mother should begin hand expressing her milk if baby has not fed well by 12 hours of age; a combination of skin-to-skin contact and early hand expression has the potential to double maternal milk supply in the first 48 hours postpartum.

6.3 If baby is not breastfeeding effectively at 24 hours of age, mothers should add pumping with a hospital grade electric breast pump to hand expression to stimulate ongoing milk production. Hand expression should continue to collect the colostrum.

6.4 If breastfeeding issues persist at discharge, encourage family to rent or purchase an appropriate breast pump and express breast milk in conjunction with infant's feeding times.

6.5 Reassess milk supply after 24 to 48 hours of pumping and on an ongoing basis

6.6 Discuss the potential use of galactogogues if milk supply less than baby's daily oral requirements. (See PG # 15: Use of galactogogues in BF women)

6.7 Natural galactogogues are available OTC; mothers require guidance related to existing research and knowledge correlated with the efficacy of this strategy.

7. **Wean from supplementation**

7.1 If the supplement was not at breast (SNS), introduce infant back to breast when alert, demanding feedings, and gaining weight appropriately

7.2 Ensure position and latch are optimal.

7.3 Assess intake at breast through observation of nutritive feeding, audible swallows, difference in breast fullness post feeding. If an appropriate scale is available, AC/PC weight can provide information related to milk transfer / intake at the breast. However, an AC/PC weight indicates milk transfer at one feeding only. Mothers need to be able to recognize signs of adequate intake at all feedings.

7.4 Put plan in place for increasing frequency of breastfeeding; inform mother that baby may continue to require supplementation in addition to breastfeeding sessions

7.5 If baby fussy/impatient at breast while waiting for MER, try SNS or small amount of supplement by alternate feeding method prior to breastfeeding

7.6 When baby is breastfeeding for almost full oral requirements, encourage mother to offer frequent BF and further decrease supplementation.

7.7 Mother should continue to pump after each breastfeed until infant is exclusively breastfeeding.

7.8 Galactogogues should be weaned slowly when baby exclusively breastfed and mother no longer pumping.

8. **Follow-up by the care provider**

8.1 Frequent follow-up should include assessment of:

- Infant weight gain
- Infant energy level
- Infant hydration status
- Milk supply
- Volume of supplement

8.2 Support mother's efforts

8.3 Discuss care plan and progress of mother and baby with primary care provider PRN.

NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

Practice Guideline:	Page 1 of 2
5.0 SORE NIPPLES	

PURPOSE:

1. To provide support and a consistent approach to breastfeeding mothers experiencing sore nipples.
2. Care will be provided according to the following guidelines.

PROCEDURE:

1. **Assess infant factors:**
   - Poor latch/improper placement of tongue
   - Aggressive or strong suck
   - Clamping/clenching response
   - Short frenulum
2. **Assess maternal factors:**
   - Nipple size, shape and protractibility
   - Engorgement
   - Plugged nipple pore
   - Candidiasis
   - Nipple vasospasm/blanching of nipples
3. **Discuss the following strategies with the family:**
   - Optimal latch and positioning
   - Strategies to relieve nipple soreness
4. **Discuss the following comfort measures with the mother:**
   - Apply warm compress to nipples before and after feeding
   - Dry nipples for short periods after each feeding, using a hair dryer on low setting
   - Apply colostrum/breast milk to nipples after feedings
   - Apply OTC pure lanolin product intended for breastfeeding if nipple soreness continues; these products are compatible with continued breastfeeding
   - Do not wash nipples frequently; daily bathing with warm water is sufficient
   - For moderate to severe pain, presence of cracks or blisters, discuss prescription ointments with mother and advocate with primary caregiver for a prescription if appropriate
     - Apply a small amount after each breastfeed
     - There is no need to wash off before the next feeding
     - Mothers should be advised to wean from these prescription ointments or creams as soon as they are no longer required and in consultation with their primary caregiver if applicable.
5. **For severe nipple trauma / pain:**
   - Refer to primary caregiver to consider antibiotics if signs and symptoms of nipple infection are present (i.e. greenish exudate/pus)
   - consider pumping for 24-48 hours to “heal/rest” nipples
   - feed baby breast milk by alternative feeding methods

   Note: See Breastfeeding Yeast PG for additional strategies

5.0 **Follow-up by the care provider**

5.1 Frequent follow-up should include assessment of:

- Nipple condition and healing
- Breastfeeding progress
- Infant latch
- Infant weight gain

5.2 Support mother's efforts

6.0 **Discuss care plan and progress of mother and baby with primary caregiver prn.**

NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

Practice Guideline:	Page 1 of 3
6.0 BREASTFEEDING YEAST	

PURPOSE:

1. Breastfeeding families will receive consistent and appropriate care for signs and symptoms associated with breastfeeding yeast.
2. Care will be provided according to the following guidelines.

PROCEDURE:

1. **Assess mother for the following symptoms of breastfeeding yeast:**
   - Sore nipples after a time of pain-free nursing
   - Burning or shooting pain during and/or after nursing
   - Itchy nipples or flaking skin on nipples
   - Pink or red nipples with shiny taut areola
   - Crescent shaped cracks at nipple/areolar junction
   - Cracks that do not heal with a good latch/thriving baby
   - Blanching of the nipple during or after feeding (vasospasm)
   - ** Can have no symptoms at all
2. **Assess infant for the following symptoms of breastfeeding yeast:**
   - A white tongue or oral mucous membrane
   - Diaper rash that does not clear
   - Change in behaviour - fussiness while feeding, refuses to feed
   - Pulls off breast or "clicks" while feeding
   - ** Can have no symptoms at all
3. **Assess for other factors:**
   - Maternal history of vaginal yeast infection
   - Maternal diabetes
   - Maternal and/or infant history of antibiotic use
   - Previous sore nipples due to position/latch
   - Maternal diet
4. **Treatment for breastfeeding yeast**
   - 4.1 Breastfeeding can and should continue during treatment
   - 4.2 It is important to treat both mother and baby, even if only one has signs of a yeast infection
   - 4.3 Treatment should continue until both symptom-free for at least 1 week and then weaned slowly. Treat only if causing breastfeeding difficulties.

   Note: There are many different approaches to treating breastfeeding yeast. Primary care providers may suggest alternate strategies.
5. **Infant treatment**
   - 5.1 **If infant exhibits mild or no symptoms of oral thrush, discuss:**
     - Nystatin oral suspension can be applied to baby's mouth **after every** breastfeeding.
     - To apply, pour ½ dropper into a small cup. Dip a Q-tip into this liquid and paint the inside of baby's mouth (inside cheeks, under tongue, around gum line). Baby can swallow any leftover medicine. Rub into yeasty areas.
     - Although yeast is becoming resistant to Nystatin, this liquid may decrease the

growth of yeast between feedings, even if baby has no symptoms.
- Oral fluconazole preparation

5.2 **If infant has moderate to severe symptoms and/or these symptoms are not getting better, discuss**
- Gentian Violet (0.5 %) can be applied once a day for 4 – 7 days. This can also be used as initial treatment
- Gentian Violet has been found to be effective applied in the following ways:
  - Paint the infant's mouth and then breastfeed. If the baby feeds on one side only, paint the other nipple directly with Gentian Violet for one complete daily treatment of mother and baby. It is thought that the sucking of the baby allows the Gentian Violet to get in all the crevices of the nipples and the baby's mouth for more effective treatment.
  - OR - paint the infant's mouth and mother's nipple after the feeding.
- Although this is rare, Gentian Violet may cause mouth "ulcers". Therefore, check baby's mouth daily
- Gentian Violet should be used in addition to the treatments already listed.
- For persistent oral thrush, oral flucanozole suspension may be considered
- Continue using Nystatin suspension in conjunction with oral medication

6. **If infant exhibits symptoms of yeast in groin/buttocks:**
- Consider use of OTC antifungal ointments on diaper rash. Apply a thin layer to diaper area and then cover with a thick layer of diaper cream.
- Treat oral and diaper area until all signs and symptoms of yeast are gone.
- Continue to treat until all signs and symptoms are gone.

7. **Maternal treatment**

If mother exhibits symptoms of nipple candidiasis, discuss ointments/medication
- If symptoms are **mild**, OTC ointments can be used on nipples. These ointments can be purchased without a prescription.
- If **nipples are cracked and sore**, prescription ointments are more effective. All purpose nipple ointment (APNO) and Viaderm KC ointment require a prescription.
- Mothers should be advised to wean from these prescription ointments or creams as soon as they are no longer required based on their primary care providers assessment.
- If symptoms **persist or worsen** despite this treatment, discuss the use of ointment containing Canestan and Fucidin 1:1; this requires a prescription.
- Apply a thin layer of ointments to nipple and areola after every breastfeed. These ointments do not need to be washed off before the next feeding.
- Gentian Violet (0.5% to 1%) can be applied to nipples once a day for 4 – 7 days. This can also be used as initial treatment. See instructions for use in previous section.

For persistent systemic nipple/breast candidiasis:
- Consider treating with oral medication (Diflucan).
- Treat until all symptoms of yeast are gone – continue treatment for another 7 days and then wean off of oral and topical treatment slowly.

8. **Discuss natural treatments to control yeast:**

Naturopathic strategies include:
- Acidophyllus 1 capsule 3 times a day
- Grapefruit Seed Extract capsules: 250 mg 3 times a day
- Grapefruit Seed Extract liquid: Swab baby's mouth and mother's nipples with 5-10 drops of grapefruit seed extract liquid in 1 ounce of water. Apply after each feeding for 3-4 days.

- Probiotic preparations
- Limit sweet foods and yeast containing foods (breads) in diet
- Eat yogurt containing active bacterial culture several times a day
- Rinse nipples after feeding with an acidic solution of 1 Tbsp. of vinegar in 1 cup of water

9. **Discuss other considerations:**
    - Good hand washing for entire family with non anti-bacterial soap is important
    - Consider using paper towels to prevent spreading yeast
    - Daily boiling of any items that are in contact with breasts or baby's mouth (i.e., soothers, nipples, bottles, breast pads, bras, and pumping equipment)
    - Take medicine for pain relief before or after breastfeeding if necessary
    - Other family members mayrequire topical or oral treatment if yeast does not clear
10. **Discuss care plan and progress of mother and baby with primary care provider PRN.**

NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

Practice Guideline:	Page 1 of 2
7. 0 PLUGGED NIPPLE PORE	

PURPOSE:

1. To ensure breastfeeding mothers will receive consistent and appropriate care when dealing with a plugged nipple pore.
2. To ensure care will be provided according to the following guidelines.

PROCEDURE:

1. **Assess mother for the following symptoms:**
   - White dot or "whitehead" on tip of nipple - usually smooth, shiny and less than 1 millimeter in diameter. It blocks the terminal opening of one of the lobes of the breast. It may be associated with milk stasis/plugged area in a larger portion of the breast.
   - Pinpoint pain described as throbbing.
   - Pain increases during feeding as pressure behind plugged pore increases with let-down of milk.
   - White dot may increase in size during feeding.
2. **Assess infant for the following symptoms:**
   - Infant may be "fussy" during feeding because of slower flow of milk from plugged area.
3. **Provide care to:**
   - Support infant's nutrition
   - Manage maternal milk supply
   - Support family's efforts

4. **Discuss the following care strategies with family:**
   - 4.1 Apply warm compress to plugged nipple pore before feeding; this may soften skin over plugged area.
   - 4.2 Another approach is to wear a cotton ball soaked in olive oil in the bra to soften the skin and then attempt to peel away the thickened layer of skin; then express any remaining material by compressing the nipple behind the plug.
   - 4.3 Start breastfeeding on affected breast first; baby's suck may be more vigorous resulting in plugged nipple pore "popping" with feeding
   - 4.4 If plugged nipple pore persists, mother should be referred to care provider for "opening" with a sterile needle.
   - 4.5 Procedure may require repetition as plugged pore often reforms and requires re-opening.
   - 4.6 Mother requires directions for preventative nipple care to ensure healing without infection; prescription ointments may prevent bacterial and/or yeast infection and include All purpose nipple ointment (APNO) or Viaderm KC ointment. Mothers should be advised to wean from these prescription ointments or creams as soon as they are no longer required.
   - 4.7 If a mother has recurrent plugged ducts or nipple pores, reducing saturated fat in her diet and taking a lecithin supplement (one capsule 1200 mg 3 or 4 times a day) may help.
   - 4.8 Consider pain medication as directed on label or by pharmacist.

5. **Discuss care plan and progress of mother and baby with primary care provider PRN.**

NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

Practice Guideline:	Page 1of 2
8.0 ENGORGEMENT	

PURPOSE:

1. Breastfeeding families will receive consistent and appropriate care when experiencing engorgement.
2. Care will be provided according to the following guidelines.

PROCEDURE:

1. **Assess mother for the following symptoms:**
   - Bilateral breast swelling
   - Tenderness
   - Warmth
   - Redness
   - Throbbing pain
   - Low grade fever
2. **Assess infant for difficulty latching to the breast**
   - 2.1 Engorgement can interfere with latch; breast swelling may make nipple/areolar area taut and less everted
   - 2.2 Engorgement can interfere with milk transfer; breast swelling can compress milk ducts inhibiting flow
3. **Consider precipitating factors in the maternal/infant history:**
   - Previous breastfeeding experience
   - Medicated birth (narcotic analgesic or epidural)
   - Caesarean birth
   - Large amount of intravenous fluid during labour and delivery
   - History of maternal infant separation
   - Delay in first breastfeed experience
   - Early supplementation
   - Jaundice
   - Inadequate teaching/support
   - Breast augmentation
4. **Provide care to:**
   - 4.1 Support infant's nutrition and maternal milk supply through optimizing breastfeeding management (correct latch and position, increased frequency of feeds, assessment of swallows at breast, breast compressions, switch nursing).
   - 4.2 Support family's efforts including teaching optimal latch and assessment of adequate intake.
5. **Discuss the following strategies:**
   - 5.1 Brief (~ 5 minutes) use of heat and massage right before breastfeeding.
     - A warm shower or the application of warm moist heat immediately before breastfeeding will encourage milk flow.
     - Immersing breasts in a warm or tepid basin or sink full of water before feedings stimulates milk flow.

- Prolonged heat may increase swelling and inflammation.
- Pump or hand express to soften breasts prior to feeding
- Gentle circular massage from the chest wall toward the nipple area will stimulate let-down

5.2 For severe engorgement, combine heat and massage until breasts are emptied.
- Frequent breastfeeding, with baby "finishing the first breast first."
- Breastfeeding every 2 hours prevents congestion in the breast.
- Ensure breasts are emptied. Engorgement tends to be less severe if baby is allowed to nurse on the first breast until he/she comes off on his/her own rather than switching breasts sooner.
- If the baby feeds for a shorter period on the second breast at a feed, start the next feeding on the breast that the baby finished eating on.
- Massage and breast compression throughout the feeding ensures breasts are emptied.

5.3 If the baby does not breastfeed long enough on both breasts to soften them, hand-express or "pump to comfort" with an effective breast pump just long enough for the breasts to feel comfortable.
- Draining the breasts of milk is more effective at relieving discomfort than other methods (cabbage or cold treatments).

5.4 If baby is unable to feed frequently enough, then fully drain the breasts once or twice daily with an effective breast pump until engorgement is over.
- This increases breast drainage more quickly and contributes to maternal comfort.

5.5 Cold compresses between feedings will reduce swelling and relieve pain.
- Protect skin with a small towel and then apply ice packs for approximately 20 minutes, or until mother is comfortable.

5.6 Cabbage leaves are recommended as another home remedy for engorgement. **Only use until the engorgement subsides, breasts are softened, and baby is able to drink from the breast. To use:**
- Rinse either refrigerator or room temperature cabbage leaves.
- Apply the cabbage leaves directly to breasts, wearing them inside of bra
- Remove wilted leaves and reapply fresh leaves (about every 2-4 hours).
- Engorgement relief with the use of cabbage leaves usually occurs within 8 hours of application.

5.7 Consider medication for pain and fever as directed on label or by pharmacist.

6. **Discuss care plan and progress of mother and baby with primary caregiver prn.**

NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

Practice Guideline:	Page 1 of 3
9.0 PLUGGED DUCT	

PURPOSE:

1. To ensure breastfeeding mothers will receive consistent and appropriate care when dealing with a plugged duct.
2. To ensure care will be provided according to the following guidelines.

PROCEDURE:

1. **Discuss precipitating factors:**
   - 1.1 Physical obstruction to flow of milk, such as:
     - Tight fitting bra
     - Straps on baby carrier
     - Mother's fingers or baby's fist during feeding
     - Sleeping on one side
     - Carrying baby on one side
   - 1.2 Incomplete or irregular emptying of breasts, due to:
     - Increasing time between feeding (baby starts to sleep through night)
     - Weaning
     - Poor latch and breastfeeding
     - Oversupply of milk

2. **Assess mother for the following symptoms:**
   - Palpable lump
   - Warmth in the area
   - Redness
   - Mild to severe localized pain
   - Gradual onset
   - May shift in location
   - The mother feels generally well
   - May be accompanied by a plugged nipple pore ("bleb") or white dot on tip of the nipple

3. **Assess infant for the following symptoms of plugged duct:**
   - Infant maybe "fussy" during feeding because of slower flow of milk from plugged area.

4. **Provide care to:**
   - Support infant's nutrition
   - Manage maternal milk supply
   - Support family's efforts

5. **Discuss the following strategies:**
   - 5.1 Apply wet or dry **heat** to the affected area – gently massaging the area while it is warm. Suggest the mother lean over a basin of warm water or lie on her side in a

warm bathtub and soak her breasts for ten minutes or so 3 times a day. Also recommend the mother take warm showers, use hot wet packs, a heating pad, or a hot water bottle between feedings.

5.2 Suggest the mother **massage** the affected area gently while it is warm, working over the lump using the palm of her hand and all her fingers in a gentle but firm circular motion. If she can do it comfortably, also suggest the mother use her fingertips to knead her breast as part of the massage, starting at the armpit and working toward the nipple.

5.3 Encourage mother to **breastfeed** the baby or hand-express some milk immediately after treating the area with warmth and massage. Getting the milk to flow while the breast is still warm will help unplug the affected duct.

5.4 Breastfeed the baby on the **affected side**. Encourage the mother to breastfeed every two hours – including during the night – as long as the breast is tender or warm to touch, nursing on the affected side first at each feeding. Frequent breastfeeding will keep the breast from becoming overly full and keep the milk flowing freely.

5.5 **Loosen constrictive clothing**, especially her bra. The mother may benefit from not wearing a bra for a few days. If she is more comfortable with a bra, suggest she wear one that is a size larger or one that has a different cut or style. This should relieve any pressure that her usual bra may have been putting on the milk ducts.

5.6 Make sure the baby is **well latched**. Proper latch-on is essential to effective breastfeeding.

5.7 **Vary nursing positions**. Varying nursing positions may help relieve a plugged duct as long as the mother is able to latch the baby on well in all the positions she uses. At least once during each feeding the mother should position the baby at the breast so that his nose or chin points toward the plugged area

5.8 If the baby will not feed on the affected side and/or it is too painful to feed – **pump** to empty the breast every 3-4 hours.

5.9 **Rest.** Encourage the mother, if possible, to go to bed until she is feeling better. Baby should be within arms reach on a separate sleep surface. If she can't do this, suggest, at the very least, that she eliminate all extra activities and spend an extra hour or two with the baby at her breast and her feet off the floor. Rest is an important part of the treatment

5.10 A plugged duct may be associated with a plugged nipple pore. If there is a plugged nipple pore (white spot on the nipple) and it does not hurt, the mother can allow it to resolve on its own; this may take several weeks. If it is painful, apply moist heat with warm compresses or soak the nipple in warm water before feeding and try to manually express the plug. Another approach is to wear a cotton ball soaked in olive oil in the bra to soften the skin and then attempt to peel away the thickened layer of skin; then express any remaining material by compressing the nipple behind the plug.

5.11 If a blocked duct has not settled within 48 hours despite above strategies, consider therapeutic ultrasound. The dose is 2 watts/cm², continuous, for five minutes to the affected area, once daily for up to two doses. Ultrasound may also prevent recurrent

blocked ducts in the same part of the breast.

5.12 If a mother has recurrent plugged ducts or nipple pores, reducing saturated fat in her diet and taking a lecithin supplement (one capsule 1200 mg 3 or 4 times a day) may help.

5.13 Consider pain medication as directed on label or by pharmacist.

5.14 See Health Care Professional within 24-48 hours if symptoms persist or sign of infection develop.

6. **Frequent follow up by the PHN and/or PHN/Lactation Consultant**
   Assessment should include:
   - Maternal health
   - Infant weight gain

7. **Discuss care plan and progress of mother and baby with primary caregiver prn.**

NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

Practice Guideline:	Page 1 of 2
10. MASTITIS	

PURPOSE:

1. To ensure breastfeeding mothers will receive consistent and appropriate care when dealing with mastitis.
2. To ensure care will be provided according to the following guidelines.

PROCEDURE:

1. **Discuss precipitating factors:**

Milk stasis due to:

- Plugged duct
- Plugged nipple pore
- Engorgement
- Decreased or delayed feeding times
- Breast surgery
- Maternal life style – too many activities or functions
- Maternal illness, stress and/or fatigue
- Sore nipples
- Poor latch and ineffective breastfeeding

2. **Assess mother for the following symptoms:**

- Palpable lump
- Sudden onset
- Localized
- Breast is pink or red, hot, tender and swollen
- Redness may appear in a wedge shaped area on the breast
- Intense localized pain
- Mother has flu-like symptoms
- Temperature is 101° F or 38.4° C or higher

3. **Assess infant for the following symptoms:**

- Infant may be "fussy" during feeding because of slower flow of milk from affected area and change in milk flavour (more salty).

4. **Provide care to:**

- Support infant's nutrition
- Manage maternal milk supply
- Support family's efforts

5 **Discuss the following care strategies with family:**

5.1 Apply wet or dry **heat** to the affected area to promote breast drainage. Suggest the mother lean over a basin of warm water or lie on her side in a warm bathtub and soak her breasts for ten minutes or so 3 times a day. Also recommend she take warm showers, use hot wet packs, a heating pad, or a hot water bottle between

breastfeeding sessions.

5.2 Suggest mother **massage** the affected area gently while it is warm, working over the affected area using the palm of her hand and all her fingers in a gentle but firm circular motion. Encourage mother to **breastfeed** the baby or hand-express some milk immediately after treating the area with warmth and massage. Getting the milk to flow while the breast is still warm will help to thoroughly drain affected area.

5.3 Breastfeed the baby on the **affected side**. Encourage the mother to breastfeed every two hours – including during the night – as long as the breast is tender or warm to touch, nursing on the affected side first at each feeding. Frequent nursings will keep the breast from becoming overly full and keep the milk flowing freely

5.4 **Loosen constrictive clothing**, especially her bra. The mother may benefit from not wearing a bra for a few days. If she is more comfortable with a bra, suggest she wear one that is a size larger or one that has a different cut or style. This should relieve any pressure on the affected area.

5.5 Make sure the baby is **well latched**. Proper latch-on is essential to effective breastfeeding.

5.6 **Vary nursing positions**. Varying nursing positions may help drain the affected area as long as the mother is able to latch the baby on well in all the positions she uses. At least once during each feeding the mother should position the baby at the breast so that the baby's nose or chin points toward the affected area.

5.7 If the baby will not feed on the affected side and/or it is too painful to feed – **pump** to empty the breast every 3-4 hours.

5.8 **Rest.** Encourage the mother, if possible, to go to bed until she is feeling better. Baby should be within arms reach on a separate sleep surface. If she can't do this, suggest, at the very least, that she eliminate all extra activities and spend an extra hour or two with the baby at her breast and her feet off the floor. Rest is an important part of the treatment.

5.9 If the mother has symptoms **consistent with mastitis** for more than 24 hours and symptoms are worsening, she should see a health care professional for assessment and antibiotics for 10-14 days if required.

5.10 See **Health Care Professional** within 24-48 hours if symptoms persist or signs of increasing infection develop. Should be treated immediately to prevent worsening mastitis or abscess formation.

6. **Frequent follow-up by the PHN and/or PHN/Lactation Consultant**

Assessment should include:

- Maternal health
- Infant weight gain

7. **Discuss care plan and progress of mother and baby with primary caregiver prn.**

NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

Practice Guideline:

11. DEHYDRATION

PURPOSE:

1. To ensure consistent and appropriate care when infant is dehydrated.
2. To ensure care will be provided according to the following guidelines.

PROCEDURE:

1. Predisposing factors for dehydration

- Insufficient milk intake can lead to severe newborn malnutrition, dehydration or hypernatremia (increased sodium levels).
- Hypernatremia is an electrolyte imbalance that can result from severe dehydration and accompanying large weight loss. Dehydration and the risk of hypernatremia are serious conditions that require medical attention.
- There are a number of underlying risk factors to be considered when assessing for evidence of adequate hydration.

2. Maternal History/risk factors

Previous/Existing Medical History	Labour & Delivery/ Hospital Experience	Physical Factors
• Previous breastfeeding difficulty • Previous breast surgery (particularly periareolar incisions for breast reduction) • Previous breast abscess • Systemic illness (hypothyroidism, cystic fibrosis, diabetes, and heart disease) • Anemia/previous postpartum hemorrhage/severe hypotensive episode (can lead to pituitary insufficiency syndrome)	• 2-24 hour delay in initiating breastfeeding and/or milk expression • Perinatal complications such as hemorrhage, hypertension and/or infection • Retained placenta • Difficulty/unsuccessful breastfeeding attempts in hospital • Epidural and use of narcotics • Difficult delivery (depletion of energy reserves)	• Lack of breast growth during pregnancy • Nipple or breast abnormality • Asymmetric breasts • Flat or inverted nipples affecting infant latch-on or milk transfer • Severe breast engorgement • Large pendulous breasts • Sore nipples (cracked or bleeding) • No indication of increasing milk production by day 4 • No previous breastfeeding experience • Heavy flow with large clots (retained placental fragments may contribute to insufficient hormonal stimulation for milk production) • No postpartum breast fullness or engorgement noted

3. Infant Risk Factors

- Prematurity (<37 weeks)
- Birth trauma/neuromotor problems

- Acute or chronic illness
- Infants who are SGA, LGA, IUGR are more at risk
- Tight frenulum
- Inconsistency/difficulty with positioning and latch
- Evidence of inadequate milk transfer
- Inappropriate frequency and duration of feedings
- Passive, sleepy baby
- Jaundice
- Weight loss; birth weight not regained by 2 weeks
- Challenges to infant suck, swallow, or breathing (e.g., prematurity, cleft lip/palate, Down's syndrome, etc.)
- Irritable infant described as "excessively crying, demanding personality"

4. **Other Risk Factors**
   - Lack of knowledge re: breastfeeding
   - Inadequate support in home/exhaustion
   - Not enough time at breast
   - Not offering both breasts at each feeding; this **may** decrease intake
   - Timed or scheduled feeds
   - Perceived insufficient milk supply
   - Cultural/language issues
   - Maternal age older than 37 years
   - Smoking
   - Stress/lack of confidence
   - Slow to respond to infant
   - Multiple births

5. **Early signs of dehydration requiring immediate and ongoing monitoring until situation is resolved**
   - Dry and sticky mucous membranes
   - Decreased skin elasticity
   - Inadequate output
   - Concentrated urine
   - Urates after day 4
   - Inadequate stools
   - Meconium after day 4
   - A 'worried looking ' baby
   - 10% weight loss
   - Exacerbated in the presence of jaundice
   - Sleepy baby

6. **Acute later signs of dehydration requiring immediate medical assessment**
   - Listlessness
   - High pitch cry
   - Clammy or mottled extremities
   - Sunken eyes
   - Abnormal temperature, most often elevated
   - Depressed fontanel
   - Tenting of pinched skin

- Tachypnea (> 60 respirations/min)
- Tachycardia (> 160 beats/min)
- Elevated serum NA (> 150 umol/l)

7. **Care plan related for supplementation of the dehydrated baby**

7.1 In the presence of acute dehydration (late signs of dehydration) immediate re-hydration and referral to a physician or midwife is required.

7.2 In the presence of **early** signs of dehydration, take history, complete LATCH-R assessment and attempt to optimize breastfeeding whenever possible before beginning supplementation.

7.3 Encourage frequent breastfeeding and skin-to-skin contact. Dehydrated babies tend to be sleepy. Gentle waking techniques should be attempted for 5 to 10 minutes

7.4 If infant latches well and milk transfer (swallow) is evident, encourage the mother to use breast compression, and to pump after every feeding (minimum of 8 times a day) to maximize breast stimulation and milk production. Educate parents about signs of dehydration and when to seek intervention. A home visit is required the next day and the infant should be monitored closely until well hydrated and gaining normally. If the infant is able to latch, but supplementation deemed necessary (insufficient swallows), offer the breast first at each feeding.

7.5 Mothers should be encouraged to **offer** both breasts at every feeding. The infant who is dehydrated or losing weight is not receiving adequate breast milk volume. Offering both breasts may increase intake.

7.6 If infant does not latch well and/or milk transfer (swallow) is not evident then immediate supplementation is necessary.

7.7 Use expressed breast milk whenever possible. If mother does not have a pump, she should be encouraged to hand express. A warm shower or compresses may help mother hand express milk for her baby.

7.8 Whenever possible supplement with EBM. If EBM is not available, supplement with formula. When baby is fed EBM and formula, feed EBM first (to ensure it is not wasted) and then formula to requirements. EBM and formula however may be safely mixed.

7.9 Parents will need information and appropriate teaching about their preferred method of supplementation (Guideline #3).

7.10 When baby requires supplementation, mothers should be encouraged to pump every 3 hours with a full sized electric breast pump to ensure stimulation and maintenance of a full milk supply. Mothers may require assistance/guidance and/or advocacy to obtain appropriate pump/equipment and information.

7.11 Consider communication with primary care provider prior to supplementation. When supplementation is provided for infants with $\geq$10% weight loss and/or severe symptoms, communication with primary care provider is required. If there is no primary care provider is assigned, can consult Children's Hospital Ambulatory Care Group: Social and Northern Ambulatory Pediatrics (SNAP) through HSC paging at (204) 787-2071 or call CH ED.

7.12 Increase or decrease supplement according to infant response, signs of milk transfer, satiation and adequate hydration and continue to monitor closely as to weight, intake and output.

7.13 When dehydration is present, supplementation is required until hydration and weight gain is evident. Supplements should be stopped when infant well-being is consistent with expected outcomes for the breastfed infant. Continue to encourage frequent breastfeeding at least 8 times in 24 hrs.

7.14 Close monitoring by phone / home visits and/or weight checks are essential **every 2 days** until the PHN, the family and the primary care provider are satisfied that the infant is stable, well hydrated, growing and the family expresses confidence to manage independently.

8. **Determining the amount of supplement – factors to consider:**
   - Age
   - Evidence of milk production, transfer and intake at breast
   - Whether supplementation is feeding replacement (no latch, breast refusal)
   - Type of supplementation (EBM or formula)
   - Mother's commitment to mutually negotiated plan i.e., comfort with recommended technologies
   - Approximate "stomach capacity" per age and approximate amount of "usual milk/ colostrum production" per age (See Guideline #3.0)
   - Acuity of the situation (signs and symptoms of hypoglycemia/hydration status/late signs of dehydration/weight loss if baby is over 48 hours of age.)

9. **Calculating infant supplementation for infants < 5 days of age**
   - See Guideline #3

10. **Calculating infant supplementation for infants > 5 days of age**
    - Requirements should be based on birth weight until this growth indicator is met.
    - The following guidelines should be used:

If growth adequate	o 120-150 ml/kg of body weight/# of feeds per day
If growth faltering and "catch-up" weight required	o 150-180 ml/kg of body weight/# of feeds per day
If baby exhibits characteristics of failure to thrive (FTT)	o 180-200 ml/kg of body weight/# of feeds per day

11. **Frequent follow-up by the PHN and/or PHN/Lactation Consultant**
    Assess:
    - Infant weight gain
    - Maternal milk supply
    - Support of mother's efforts

12. **Discuss care plan and progress of mother and baby with primary care provider PRN.**

NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

Practice Guideline:

12. INSUFFICIENT MILK SUPPLY

PURPOSE:

1. To provide breastfeeding families with consistent and appropriate care when maternal milk production is insufficient to meet the infant's nutritional requirement.
2. To ensure care will be provided according to the following guidelines.

PROCEDURE:

1. **Assess infant for the following symptoms:**
   - Losing weight after the first week
   - Infant does not regain birth weight by two weeks
   - Weight loss greater than 10% of birth weight
   - Evidence of malnutrition/dehydration – sunken fontanel, greyish pallor, lethargy, loss of fat layer under the skin, strong urine, inadequate stools
   - Weight loss below 10th percentile at one month
   - Fussy at the breast; refusal to feed
2. **Assess mother for the following symptoms:**
   - History of factors that impact on maternal milk production:
     - Breast surgery
     - History of hormonal related illness or infertility
     - Sub-optimal initiation of breastfeeding
     - Early supplementation
     - Maternal medication (oral contraceptives; antihypertensives)
     - No report of initial "engorgement" or fullness in the early postpartum period
3. **Provide care to:**
   - Support infant's nutrition and maternal milk supply through optimizing breastfeeding management (latch, positioning, breast compressions, switch nursing, increased feeding frequency)
   - Support family's efforts
4. **Support infant nutrition:**

   Goal of feeding plan is to maximize infant intake with minimal calorie/energy expenditure.

   4.1 Assess ability to latch/breastfeed. Calorie deprivation may lead to an infant who has insufficient energy to effectively breastfeed.

   4.2 If infant continues to breastfeed, mothers should be encouraged to offer both breasts at every feeding. The infant who is dehydrated or not gaining weight is not receiving adequate breast milk volume. Offering both breasts may increase intake.

   4.3 If poor or no latch, discuss feeding options with family, including spoon feeding, finger feeding, cup feeding, bottle-feeding (See Guideline #3).

   4.4 Family should choose method that they are comfortable with and can manage. They should realize that baby may not effectively breastfeed until back to birth weight or growing well. Close follow-up is important to monitor weight and continued need for

supplements.

4.5 Supplementation should be with either breast milk or iron fortified infant formula, to ensure adequate calorie intake.

4.6 Volume of supplementation should reflect infant age and condition. See Supplementation Guidelines #3 and/or Dehydration Guideline #11

4.7 Infant should be fed at least 8 times in 24 hours.

4.8 Family needs to waken infant to feed since hypocaloric babies in particular will sleep through hunger - awaken to feed q3h for first 48 hours.

4.9 Decision should be made regarding whether to offer breast before feeding or just supplement for 24 to 48 hours (depends on energy level of baby and mother).

4.10 Entire feeding session should take no longer than 1 hour, i.e. 40 minutes to feed (max), 10 minutes to settle, 10 minutes to pump – this will give mother and baby 2 hours to sleep before next feeding.

4.11 Encourage skin-to-skin contact before and after feedings.

5. **Support maternal milk supply:**

5.1 Assess maternal milk supply – a hypocaloric infant may not stimulate maternal milk production. Mom should be encouraged to pump every 3 hours with double electric pump if possible. If a hospital grade pump is not available a personal electric, hand pump or hand expression are less effective alternatives.

5.2 If baby cannot breastfeed effectively, milk production should be stimulated, increased, or maintained with a hospital grade electric breast pump.
Encourage family to rent or purchase appropriate equipment and express breast milk in conjunction with infant's feeding times (Goal is to provide enough breast milk to eliminate need for formula).

5.3 Reassess milk supply after several days of pumping.

5.4 Consider a galactogogue if milk supply is less than infant's daily oral requirements, despite pumping every 3 hours with double electric pump. See PG #15: Use of galactogogues in breastfeeding women)

5.5 When baby is fully BF and gaining 4 to 7 ounces a week for at least 1 week, gradual weaning from pumping and galactogogue should be considered.

6. **Frequent follow-up by the PHN and/or PHN/Lactation Consultant**

Assess:

- Infant weight gain
- Maternal milk supply
- Support of mother's efforts

7. **Discuss care plan and progress of mother and baby with primary care provider PRN.**

NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

Practice Guideline: **13. OVER-ABUNDANT MILK SUPPLY AND/OR FORCEFUL LET-DOWN**	Page 1 of 3

PURPOSE:

1. To ensure breastfeeding families will receive consistent and appropriate care when dealing with over-abundant milk supply and/or forceful let-down.
2. To ensure care will be provided according to the following guidelines.

PROCEDURE:

1. **Assess infant for the following symptoms:**
   - 1.1 Baby regains birth weight rapidly and continues to gain weight rapidly in the early weeks and months
   - 1.2 Baby is alert, active with good muscle tone and a strong suck and has been found by the doctor to be healthy.
   - 1.3 Baby has frequent wet diapers and several bowel movements per day. These bowel movements may be very loose (like diarrhea) and "green" (from high content of lactose in the foremilk). It is important to make sure that "green" stools are not from insufficient intake; these infants will not be growing well.
   - 1.4 Baby demands to be fed very frequently (foremilk is digested quickly).
   - 1.5 When latching to the breast, as the let-down occurs, the baby may squirm, sputter, choke, arch his/her back and pull off the breast.
   - 1.6 You may be able to hear the baby swallowing, or hear a sound like milk hitting the bottom of the baby's stomach (lots of air being swallowed).
   - 1.7 Baby may have fussy periods – often in the evening, lasting several hours or baby may fall asleep and wake up after a short period, acting as if he/she is hungry.
   - 1.8 Baby may spit up and pass gas frequently.

2. **Assess mother for the following symptoms:**
   - 2.1 Mother may notice that let-down reflex is painful and that more than one can be felt during a feeding.
   - 2.2 When the baby pulls off the breast as the let-down happens, mother may notice that milk sprays from the nipple.
   - 2.3 Mother may find that it is very easy to express milk
   - 2.4 Mother may notice that as the baby feeds at one breast the other one leaks, however this can be a normal finding
   - 2.5 Mother may be experiencing sleep deprivation and/or be overwhelmed
3. **Provide care to:**
   - 3.1 Support infant's nutrition
   - 3.2 Manage maternal milk supply
   - 3.3 Support family's effort

4. **Discuss the following care strategies with family:**
   - 4.1 Increase the frequency of nursing times. Nurse the baby whenever he/she wishes. Feeding infrequently increases the flow of milk because the pressure builds up

between feedings. The more frequent the nursing, the slower the flow of milk.

4.2 Use one breast at each feeding as long as the baby keeps swallowing; use the same breast each time in a 2-3 hour period (block feeding) as long as the baby keeps swallowing. This reduces breast stimulation and increases "hind milk" intake.

4.3 During fussy periods, the baby may wish to nurse frequently. Doing so on **one** breast can be a source of comfort to the baby. If the other breast becomes too full, express just enough to relieve the milk pressure in that breast. Expressing milk for storage and later use is **not** a good idea at this time. If the baby needs another feed in less than 2 – 3 hours from the beginning of the last feed, use the same breast. In extreme cases, the time of block feeding on one breast per feeding can increase.

4.4 Breastfeed the baby immediately upon waking. Watch for signs that the baby is beginning to wake up and nurse baby then. This makes the baby suckle more gently than if he/she was fully awake and very hungry. Babies often gulp less air when fed as they wake up. If baby wakes shortly after falling asleep, offer the least full breast as a little more suckling may assist him/her in settling.

4.5 Try different breastfeeding positions, including "laid back" breastfeeding. Be careful to keep the baby's head level or even above the breast. One of the most successful positions in terms of controlling the flow of milk, especially when the breast is full, is to have the baby latch in the cross-cradle, then the mom lies down with her head on a pillow, and baby is essentially feeding against gravity. This position especially works in more severe situations. This directs the flow of milk away from the back of the baby's throat and decreases gulping. Try a variety of positions to see which ones help baby to cope with the flow of milk. Side lying positions often work, as do positions where the baby is in more of an upright or sitting position (football hold).

4.6 Burp the baby frequently. Frequent burping brings air out of the stomach before it travels to the intestine where it can cause cramps. Effective burping techniques put pressure on the baby's stomach while patting the baby's back. If the baby begins squirming at the breast, take him/her off and burp him/her.

4.7 Prior to latching baby to the breast, stimulate the let-down reflex, allowing the milk to drip into a cup or towel. Then latch the baby. Or latch the baby and as mother begins to feel the let-down, unlatch the baby and allow the milk to run into a towel. Then latch the baby again

4.8 Avoid the use of pacifiers or supplements. Overuse of pacifiers can delay feedings and increase the milk volume at the next feeding. However, babies that drink very fast may need a soother after feedings to satisfy their sucking needs. Sucking / soothing the baby on the least full breast is another way to meet this need.

4.9 Supplements are **not** appropriate for babies under six months of age. Some mothers report that although their babies seem to improve initially on formula, they often encountered other problems associated with early introduction of bottles to breastfeeding babies.

4.10 Decrease maternal milk supply by applying cold compresses or cabbage leaves to the breasts. When mothers start feeding the baby on one side for several hours, the other breast may become very full. Cold compresses or cabbage leaves on the breasts (changed every 2 to 4 hours) can help to decrease this fullness. If mothers feel very full (lumps in the breast), the mother may need to express a small amount of milk from her breast(s) to prevent plugged ducts or a breast infection. This can be done in the shower, by hand or with a breast pump.

4.11 In some situations, as milk supply decreases, the baby may start to get frustrated at the breast and pull off (the baby now gets frustrated with dealing with a "normal" flow). Mother needs to continue feeding on one breast for the allotted time that

was working for her and the baby. Breast compressions and distractions will help the baby adjust to the lesser milk supply and slower flow. This challenge can be frustrating for mom as she fluctuates between thinking she is drowning her baby with milk to starving the baby. It is important to educate the parents to expect this potential change.

5. **Frequent follow-up by the PHN and/or PHN/Lactation Consultant**

Assess:

- Infant fussiness
- Maternal milk supply
- Family health
- Infant's weight gain weekly

Note: The above strategies can significantly decrease maternal milk supply. Ongoing assessment of milk production and infant's growth is required. Although some mothers will continue to "block feed" for many months, others will require returning to breastfeeding on both breasts to support ongoing infant growth.

6. **Discuss care plan and progress of mother and baby with primary care provider PRN.**

NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

14. GROWTH ISSUES

PURPOSE:

1. To provide breastfeeding families with consistent and appropriate care when the infant is not gaining weight appropriately.
2. When breastfeeding mismanagement is the cause of growth issues in the breastfed baby, care will be provided according to the following guidelines.

PROCEDURE:

1. Assess infant who is not growing well for the following feeding patterns or risk factors:

1.1 **Feeding:**

- Breastfeeds less than 8 times in 24 hours
- Long feeds (> 30 minutes per side)
- Very short feeds (< 5 minutes per side)
- Feeds on one breast only; this **may** result in inadequate intake
- Refusal to latch/difficulties latching
- No audible swallowing
- Absence of open-pause-close type of suck (nutritive sucking pattern)
- Rapid, nibbling, shallow type of suck
- In-drawing of cheeks/smacking or clicking sounds
- Difficulty eliciting milk ejection reflex (MER)/let-down
- Unable to maintain latch
- On and off breast frequently

1.2 **Behaviours:**

- Sleeps 4-6 hours at a time/hard to waken
- Sleepy and refusing to feed
- Fussy after feeds, chews hands, always "hungry"
- Uses pacifier for very long periods of time
- Infant who is irritable and restless

1.3 **Output:**

- Inadequate infant output
- No stools in 24 hours or decreasing stool pattern
- Meconium stools after day 4
- "Green" stools (can be indicative of a hypocaloric state)
- Infrequent wet diapers (< 6/day after day 6)
- Diapers are not "heavy" wet
- Urates in urine after day 4

Note: The earliest sign of inadequate breast milk intake is infrequent passage of stools. "Green" stools can be an indicator of insufficient caloric intake.

2. **Assess mother for the following symptoms:**

- Breasts do not soften after feed
- Persistent or increasingly painful nipples
- Engorgement unrelieved by feeding
- Lack of breast fullness or apparent milk supply
- No discernible change in milk volume and composition by 3-5 days

3. **Assess infant growth**

If infant *younger than one month* assess infant for the following symptoms:

- Weight loss greater than 10% of birth weight
- Still losing weight after the first week
- Infant does not regain birth weight by two weeks
- Little or no growth in length and head circumference
- Evidence of malnutrition, dehydration – sunken fontanel, greyish pallor, lethargy, loss of fat layer under the skin, strong odour to urine, inadequate stools
- Infrequent and/or ineffective feeds

If infant *older than one month* assess infant for the following symptoms:

- Erratic or non-existent weight gain
- Weight below 3rd percentile
- Drop in rate of growth, including length and head circumference
- Infant falls two standard deviations on the growth chart (definition of FTT)
- Evidence of malnutrition, dehydration – sunken fontanel, greyish pallor, lethargy, loss of fat layer under the skin, strong urine, inadequate stools
- Infant does not meet developmental milestones
- Infrequent and/or ineffective feeds

4. **Review maternal infant history for:**

- History of maternal infant separation
- History of factors that impact on maternal milk production
- Previous breastfeeding difficulty
- Previous breast surgery (particularly periareolar incisions for breast reduction)
- Previous breast abscess
- Systemic illness (hypothyroidism, cystic fibrosis, diabetes, and heart disease)
- Anemia/postpartum hemorrhage/severe hypotensive episode (can lead to pituitary insufficiency syndrome)
- Delay in first breastfeed experience
- Not offering both breasts at each feeding
- Mother has many other responsibilities
- Infant illness
- Maternal medication (oral contraceptives)
- Early supplementation

5. **Provide care to:**

- Support infant's nutrition and maternal milk supply through optimizing breastfeeding management (latch, position, breast compressions, switch nursing, increased feeding frequency).
- Support family's efforts.

6. **Support infant nutrition:**

The goal of feeding plan is to maximize infant calories with minimal energy expenditure:

6.1 Assess ability to latch/breastfeed:
- Calorie deprivation can lead to an infant who has insufficient energy to effectively breastfeed
- If the baby latches and breastfeeds well, increasing the frequency of effective breastfeeding may be adequate to support infant growth
- If breastfeeding is ineffective, supplementation is required

6.2 If poor or no latch, discuss alternate feeding options with family (Guideline #3). Family should choose method that they are comfortable with and can manage. Baby may not effectively breastfeed until back to birth weight and/or gaining well (close follow-up is important to monitor weight and continued need for supplements).

6.3 Supplementation should be with either breast milk or iron fortified infant formula, to ensure adequate calorie intake.

6.4 Volume of supplementation should reflect Guideline #3 or #11.

6.5 Recommend a 3-hour feeding schedule if the infant requires supplementation and the mother is pumping. This contributes to infant nutrition, breast stimulation and maternal rest.

6.6 Mom should be encouraged to pump with double electric pump every three hours if possible.

6.7 Family needs to waken infant feed q3h for first 48 hours since hypocaloric infants in particular will sleep through hunger.

6.8 Decision should be made regarding whether to offer breast before feeding or just supplement for 24 to 48 hours (depends on energy level of baby and mother).

6.9 Entire feeding session should take no longer than 45 minutes, i.e. 30 minutes to feed and settle infant, 15 minutes to pump. This provides a 2 hour rest period for mother and baby.

6.9 Encourage skin-to-skin contact before and/or after feedings.

7. **Support maternal milk supply:**

7.1 Assess maternal milk supply – hypocaloric baby may not stimulate maternal milk production.

7.2 If baby cannot breastfeed effectively, milk production should be stimulated, increased or maintained with a hospital grade electric breast pump.

7.3 Encourage family to rent or purchase appropriate equipment and express breast milk in conjunction with infant's feeding times (goal is to provide enough breast milk to eliminate need for formula).

7.4 Reassess milk supply after several days of pumping.

7.5 Discuss use of galactogogue if milk supply less than baby's daily requirements. See PG#15: Use of galactogogues in breastfeeding women)

8. **Wean from supplementation:**

8.1 Introduce infant back to breast when alert, demanding feedings, and showing positive weight gain.

8.2 Ensure position and latch optimal.

8.3 Assess intake at breast: audible swallows, nutritive sucking and AC/PC weight if indicated.

8.4 Infant may not have energy for entire feeding or consecutive feedings - mother needs to know that baby may still require supplementation in addition to attempts at breast.

8.5 Increase frequency of breastfeeding as infant’s energy increases. When baby breastfeeding for almost full oral requirements, encourage mother to offer

frequent BF and slowly decrease supplementation.

8.6 Discuss weaning from pumping and galactogogue when supplementation no longer required.

9. **Frequent follow-up by the care provider**

Assess:

- Infant weight gain
- Infant energy level
- Hydration status
- Maternal milk supply
- Volume of supplement
- Support of mother's efforts

10. **Discuss care plan and progress of mother and baby with primary care provider PRN.**

NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

15. USE OF GALACTOGOGUES IN BREASTFEEDING WOMEN

1.0 PURPOSE:

1.1 To provide breastfeeding families with consistent and evidence-based care when maternal milk supply is insufficient to meet infant's nutritional needs.

1.2 When decreased milk supply is interfering with breastfeeding progress, care will be provided according to the following guidelines

1.3 If indicated, recommendations for a galactogogue include:

1. Domperidone as first option, if not contraindicated
2. Metoclopramide as second option, if domperidone contraindicated
3. Herbal products as an alternative to prescription agents

2.0 PRACTICE GUIDELINES:

2.1 Identify women at risk for insufficient milk production through consideration of the following factors:

Maternal factors:

- Breast surgery:
  - Reduction mammoplasty severs nerves which interferes with stimulation of hormones of breastfeeding.
  - Augmentation mammoplasty may be done for underdeveloped / hypoplastic breasts with limited potential for milk production.
- History of hormonal related illness or infertility.
- Retained placental tissue.
- Chronic conditions:
  - Lupus, diabetes, auto immune disease, polycystic ovarian syndrome, thyroid dysfunction.
- Obesity: can blunt prolactin response in mothers.
- Hypertension, HELLP syndrome.
- Birth experience:
  - Emergency caesarean birth.
  - Severe postpartum hemorrhage.
- Maternal medication (oral contraceptives, dopamine agonists, antihypertensives, diuretics, pseudoephedrine).
- Sub-optimal initiation of breastfeeding.
- Pathological engorgement.
- Maternal age over 35 years.
- Long term pumping (i.e. for preterm or ill infant)
- Social: smoking, moderate alcohol consumption.

Infant factors:

- Gestational age:
  - Late preterm and preterm infant may be unable to stimulate milk supply.
- Oral / facial anatomy:
  - High / bubble palate, tongue-tie, sub-mucousal cleft palate, receding chin.

2.2 Optimize early milk production through:
- Early frequent effective breastfeeding.
- Encourage mother to hold baby skin-to-skin for as many hours a day as possible.
- Hand expression after feedings; feed colostrum to infant by cup or spoon.
- Milk expression with a hospital grade breast pump.

2.3 Make sure infant is receiving adequate breast milk volumes through frequent breastfeeding assessment, review of output, and evaluation of weight loss.

2.4 If infant demonstrates signs of insufficient intake, supplement infant to ensure adequate nutrition. Supplement at breast if possible to stimulate milk production.

2.5 If appropriate, monitor milk production through assessment of breastfeeding and amount of milk expressed. Provide mother with anticipatory guidance to support ongoing production in the post discharge period. Research evidence suggests that milk volumes that are predictive of adequate long term milk production are:
- greater than 140 mL/day on Day 4.
- greater than 500 mL/day on Day 7.
- greater than 700 mL/day on Day 14.

2.6 If milk production is slow to increase or is decreasing, review indications for galactogogues. Research and clinical practice suggest that these indications include:
- Milk production is not fully established despite optimal breast stimulation.
- Milk production has decreased by 50% after optimal initiation.
- Alternative measures to increase milk production have been employed unsuccessfully for at least 7 days, including:
    - Increasing the frequency of effective breastfeeding if possible.
    - Frequent milk expression with a hospital-grade breast pump.

2.7 Refer mothers to information about galactogogues if indicated and assist women to make an informed choice related to these strategies.

2.8 If mother is receptive to this option and has no contraindications to pharmacological support, encourage mother to discuss this strategy with care provider or advocate with care provider if necessary.

3.0 Pharmacological galactogogues:

3.1 There are no medications manufactured specifically for the purpose of increasing milk production; all galactogogues are “off-label” uses of medications.

3.2 The side effect of galatogogues is an increase in the serum concentration of prolactin, the hormone responsible for milk production.

3.3 Galactogogue administration concurrent with stimulation of the sensory nerves of the breast (during breastfeeding or milk expression) increases prolactin levels and milk production.

3.4 All galactogogues are more effective when used in conjunction with optimal breastfeeding management.

4.0 Domperidone (Motilium):

4.1 Domperidone is the only galactogogue that has been scientifically evaluated through randomized controlled trials.

4.2 The evidence-based dose of domperidone for stimulating prolactin levels and milk production is **10 to 20 mg PO TID for 3 weeks.** An additional 3 weeks of domperidone may be required for the weaning process.

4.3 Screen breastfeeding women for potential contraindications to domperidone. These include:

- History of heart disease or cardiac issues, including:
  - arrhythmias.
  - history of QT prolongation.
  - Torsade de Pointes (ventricular tacchycardia).
  - heart failure
  - Note: controlled hypertension is not a contraindication.
- Use of concurrent medications, including:
  - azole antifungals (fluconazole, ketoconazole, intraconazole).
  - macrolide antibiotics (erythromycin, azithromycin, clarithromycin).
  - protease inhibitors (for HIV)
  - other medications can interact with domperidone. Consult a pharmacist or physician for potential medication interactions.
- History of certain gastrointestinal issues

4.4 For patients with potential contraindications to domperidone, refer patient to primary care provider to discuss therapeutic options

4.5 If the woman has **no contraindications** to domperidone, encourage mother to discuss this strategy with care provider or advocate with care provider to provide a prescription for **domperidone 10 mg PO TID.**

4.6 Counsel women to report any potential cardiac side effects (such as dizziness, heart palpitations, syncope, seizures) to their care provider.

4.7 Inform women that other medications can interact with domperidone and that they should check with their pharmacist, physician or nurse before taking at the same time as domperidone. Medications with potential medication interactions include azole antifungals, macrolide antibiotics or protease inhibitors.

4.8 Reassess response to domperidone within 7 to 14 days; if milk production has not increased, discuss the option of increasing this dose to **20 mg PO TID** with the woman's care provider.

4.9 Continue to monitor milk production (through assessment of breastfeeding, infant weight gain and amount of milk expressed) on an ongoing basis until goal volume achieved.

4.10 Discuss weaning from domperidone and other strategies when appropriate. See 7.0.

5.0 **Metoclopramide (Reglan / Maxeran):**

5.1 There is no scientific evidence related to the efficacy of metocloparmide as a galactogogue. However metoclopramide has been used successfully by many breastfeeding women to increase milk production.

5.2 The dose for metoclopramide is **10 mg PO TID for 3 weeks**. An additional 3 weeks of metoclopramide may be required for the weaning process.

5.3 Screen breastfeeding women for potential contraindications to metoclopramide. These include:

- history of certain gastrointestinal issues
- concurrent use of medication which may increase the occurrence of extrapyramidal reactions (antipsychotics, metyrosine), in addition to concurrent use of MAOIs, tricyclic antidepressants, or SSRIs (risk of serotonin syndrome)
- history of depression or anxiety; women in the early postpartum period are more likely to experience these side effects.
- Note: Metoclopromide can also be associated with a serious and potentially irreversible side effect called tardive dyskinesia, especially if it is given long term.

5.4 For patients with potential contraindications to metoclopramide, refer patient to primary care provider to discuss therapeutic options

5.5 If the woman has **no contraindications** to metoclopramide, encourage mother to discuss this strategy with care provider or advocate with care provider to provide a prescription for **metoclopramide 10 mg PO TID.**

5.6 Educate parents regarding the signs and symptoms of depression and anxiety, the increased potential for these, the importance of reporting these signs and symptoms, and the need to discontinue metoclopramide if they occur.

5.7 Continue to monitor milk production (through assessment of breastfeeding and amount of milk expressed) on an ongoing basis until goal volume achieved.

5.8 Discuss weaning from metoclopramide and other strategies when appropriate. See 7.0.

6.0 Herbal galactogogues:

6.1 There is limited formal research / scientific evidence to validate the effectiveness of herbal preparations in increasing milk supply.

6.2 These preparations however have been used to increase milk production for millennia in the non-western world.

6.3 The recommended dose of herbal galactogogues is anecdotal; the quality and amount of herbs can vary among manufacturers.

6.4 Common reputed herbal galactogogues are fenugreek and blessed thistle. Response time to herbal galactogogues varies; most women take them until milk production maximized and then wean from herbal galactogogues slowly.

6.5 Continue to monitor milk production (through assessment of breastfeeding and amount of milk expressed) on an ongoing basis until goal volume achieved.

7.0 **Weaning from pharmacological galactogogues**

7.1 Monitor milk supply through assessment of breastfeeding, infant weight gain and amount of milk expressed on a weekly basis.

7.2 Wean infant supplementation and maternal pumping as milk supply increases. These strategies are weaned before galactogogues. Wean from galactogogues when milk supply has been maximized.

7.3 Wean dose of galactogogues slowly as baby takes over stimulation of prolactin levels through frequent effective breastfeeding. Suggested weaning schedule for pharmacological galatogogues is:

- Decrease dose by 10 mg every 4 to 7 days.
- Monitor effect on milk production.
- Continue with weaning process until off galactogogue or at lowest dose required to maintain milk production goal.

7.4 Provide ongoing care to:

- Support infant's nutrition.
- Support maternal milk.
- Support family's efforts.

7.5 Discuss care plan and progress of mother and baby with care provider as required.
NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

8.0 <u>REFERENCES</u>:

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8.2 Ayers JF. (2000). The use of alternative therapies in the support of breastfeeding. Journal of Human Lactation; 16: 52-56.

8.3 Brown TER, Fernandes A, Grant LJ, Hutsul J, McCoshen JA. Effect of parity of pituitary prolactin response to metoclopramide and domperidone: implications for the enhancement of lactation. *J Soc Gynecol Investig*. 2000. 7(1) 65-69.

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8.12 LactMed: Drugs and Lactation
Database: http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?LACT

8.13 Newman J. Domperidone 1 & 2. Handouts available at http://www.drjacknewman.com

8.14 Newman J, Pitman T. (2006). The ultimate breastfeeding book of answers. Three Rivers Press: CA.

8.15 van Noord C, Dielman JP, van Herpen G, Verhamme K, Sturkeboom M. (2010). Domperidone and ventricular arrhythmia or sudden cardiac death: A population-based case-control study in the Netherlands. Drug Safety, 33(11): 1003-1014.

8.16 Wan E, Davey K, Page-Sharp M et al. (2008). Dose effect study of domperidone as a galactagogue in preterm mothers with insufficient milk supply, and its transfer into milk. British Journal of Pharmacology, 66(2): 283-289.

8.17 Zapantis A, Steinberg G, Schilit L. (2012). Use of herbals as galactogogues. Journal of Pharmacy Practice, 25(2), 222-231.

9.0 RESOURCES:

9.1 Clinical Nurse Specialist, Women's Health Program, Health Sciences Centre.
9.2 Clinical Resource Pharmacist, Health Sciences Centre Department of Pharmacy

Practice Guideline:

16. BREASTFEEDING GUIDELINES FOR SUBSTANCE USING WOMEN

1.0 INTRODUCTION:

The physiological and psychological benefits of breastfeeding for infants and mothers are well documented. However, the decision to breastfeed the infant by a substance-using mother requires careful consideration. **While the benefits of breastfeeding far outweigh the disadvantages, even with continued drug use in many situations, a risk/benefit analysis needs to be assessed for each substance and advice provided based on particular situations so that mothers can make an informed choice. All care providers within the multidisciplinary team have responsibility to provide opportunity for discussion and decision-making with and related to individual clients.**

Substances used by pregnant and postpartum women that require careful assessment and recommendations include alcohol, tobacco, marijuana, methadone, cocaine, inhalants, heroin (opioids) and hallucinogens (PCP, LSD). For additional information about these substances, see Appendix A.

NOTE: The majority of prescription medications are considered compatible with breastfeeding. Some categories of pharmaceuticals however **may** pose infant risk, including chemotherapeutic medications, radiopharmaceutical products, narcotic analgesics and psychotropic drugs. In addition, advice given to breastfeeding mothers related to some medications (such as narcotic analgesics, general anesthetics) may not be evidence-based. Use of a "breastfeeding friendly" resource (such as "Medications and Mothers' Milk" by T. Hale, or LactMed: an on-line drugs and lactation database) is recommended to provide evidence-based guidelines for medication use during breastfeeding.

2.0 PURPOSE:

2.1 To provide care providers with information to promote best practice in breastfeeding for substance- using mothers.

2.2 To implement practices which contribute to breastfeeding success in substance-using women, when appropriate.

2.3 To increase the incidence and duration of breastfeeding in substance-using mothers for whom breastfeeding is not contraindicated.

3.0 DEFINITIONS:

3.1 **Substances:** Drugs that are taken for non-therapeutic reasons. This can include non-prescription drugs that are used illicitly or prescription (licit) drugs that are abused. Poly-substance use is common in this population, and often includes the licit use of tobacco and alcohol.

3.2 **Chronic use:** Daily or ongoing use of large amounts of illicit or licit substances; this interferes with the care-giving capabilities of women.

3.3 **Occasional use:** Infrequent use of licit or illicit substances in amounts which are less likely to interfere with the care-giving capabilities of women.

4.0 GENERAL PRACTICE GUIDELINE:

The care provider:

4.1 **Asks all women about tobacco, alcohol or other drug use during pregnancy**. This provides opportunity to educate women about the risks of substance use, to discuss harm reduction measures, and to promote healthier outcomes for the woman and her infant.

4.2 Encourages women in recovery from substance use to breastfeed (including women on methadone maintenance) as this contributes to maternal/infant health, promotes maternal attachment and assists in recovery from substance use / addiction.

4.3 Counsels women **not** to breastfeed if they are:

- chronic users of large quantities of stimulant drugs such as amphetamines or cocaine (because of their vasoconstrictive effect)
- chronic user of large amounts of alcohol (greater than 8 glasses of alcohol/day) or large amounts of heroin, other opioids or non-prescribed benzodiazepines (because of the sedative effects).

4.4 Provides advice to substance-using women who are breastfeeding as per the substance-specific infant harm reduction strategies below. When women are using substances that require withholding breastfeeding temporarily, it is important to ensure mothers recognize the importance of **frequent infant feeding**; this may necessitate using formula to supplement breastfeeding temporarily.

4.5 Documents discussion and decision-making in health record.

4.6 Information related to post-discharge recommendations related to substance use and breastfeeding are documented on Postpartum Referral Form (MHPP114E), Infant Referral Form (MHPP115E) (if appropriate) and Child and Family Services Discharge Planning Form (#NS01133). If mother and infant are discharged home and will be followed by Child and Family Services, this information is communicated to CFS, with mother's consent.

5.0 SUBSTANCE SPECIFIC PRACTICE GUIDELINES:

5.1 **Alcohol**

5.1.1 Advise women who are chronic, heavy or regular users of alcohol that they should not breastfeed.

5.1.2 Advise women who are breastfeeding and who use alcohol occasionally to:

- Breastfeed infant before alcohol consumption
- Consider expressing to collect milk before alcohol consumption if appropriate
- Avoid breastfeeding during alcohol consumption
- Withhold breastfeeding for 3 hours after consumption of 1 alcoholic beverage

- Withhold breastfeeding for at least 3 hours for every alcoholic beverage consumed
- Express breast milk during and after periods of alcohol consumption to maintain milk supply; discard expressed milk

5.2 **Amphetamines** (ecstasy, speed, crystal meth)

5.2.1 Advise women who are chronic, heavy or regular users of amphetamines that they should not breastfeed.

5.2.2 Advise women who are breastfeeding and who use amphetamines occasionally to:

- Breastfeed before substance use
- Withhold breastfeeding for at least 48 hours after amphetamine use.
- Express breast milk to maintain supply; discard pumped milk

5.3 **Benzodiazepines:**

5.3.1 Advise women that:

- Shorter-acting benzodiazepines (Lorazepam, Midazolam) are safe during breastfeeding provided their use is short-term, intermittent, low dose and after the first week of the infant's life.
- No waiting period or discarding of milk is necessary before resuming breastfeeding after a single dose of Midazolam or Lorazepam.

5.3.2 Advise breastfeeding women that longer-acting benzodiazepines (Clonazepam, Diazepam) are not recommended for breastfeeding mothers due to their long half-lives and the development of maternal dependence.

5.3.3 **NOTE:** this is a partial list of list of commonly used benzodiazepines. Other benzodiazepines that are less commonly used include bromazepam, oxazepam, Temazepam etc.

5.4 **Cocaine/Crack**

5.4.1 Advise women who are chronic, heavy or regular users of cocaine that they should not breastfeed

5.4.2 Advise women who are breastfeeding and who use cocaine occasionally to:

- Breastfeed before substance use
- Withhold breastfeeding for at least 24 hours after cocaine use.
- Express breast milk to maintain supply; discard pumped milk
- Not to apply cocaine topically to breast to treat nipple soreness

Codeine (see 5.12 Opioids other than heroin)

5.5 **General anesthetics** (propofol, succinylcholine, thiopental, etomidate)

5.5.1 Encourage / permit women to breastfeed after general anesthesia as soon as **ake and alert.**

5.5.2 Advise women that no waiting period or discarding of breastmilk is required before resuming breastfeeding.

5.5.3 When a combination of anesthetic agents is used for a procedure, follow breastfeeding recommendations for the most problematic medication.

5.6 **Inhalants (petrol, glue, aerosols)**

5.6.1 Advise women who are chronic, heavy users of inhalants that they should not breastfeed.

5.6.2 Advise women who are breastfeeding and who use inhalants occasionally to:

- Breastfeed before substance use
- Withhold breastfeeding for up to 48 hours after inhalant use (length of time depends on component compounds)
- Express breast milk to maintain supply; discard pumped milk

5.7 **Lysergic Acid Diethylamide (LSD)**

. 5.7.1 Advise women who are chronic, heavy or regular users of LSD that they should not breastfeed.

5.7.2 Advise women who are breastfeeding and who use LSD occasionally to:

- Breastfeed before substance use
- Withhold breastfeeding for 120 hours (5 days) after LSD use.
- Express breast milk to maintain supply; discard expressed milk

5.8 **Marijuana**

5.8.1 Advise women who are chronic, heavy or regular users of marijuana that they should not breastfeed.

5.8.2 Advise women who are breastfeeding and who use marijuana occasionally to:

- Breastfeed before marijuana use
- Since there is little evidence related to clearance of marijuana from breast milk, recommendations include withholding breastfeeding until the mother is no longer impacted by marijuana; i.e. several (~3) hours
- Smoke marijuana outside of the house or car to avoid exposing the infant to passive / side stream marijuana smoke

5.9 **Methadone**

5.9.1 Provide support and encouragement to mothers on methadone maintenance therapy (MMT), and who are separated from their infants, to establish and maintain breastfeeding and milk production.

5.9.2 Facilitate the collection and transfer of expressed breast milk to the infant. Expressed breast milk has many benefits for the infant and can limit neonatal abstinence syndrome.

5.9.3 Advise women on MMT to:

- Maintain methadone treatment regime as it is safe/compatible with breastfeeding
- Breastfeed prior to daily methadone dose if possible
- Observe the infant for signs and symptoms of neonatal abstinence syndrome / withdrawal

5.9.4 When a mother who is on high doses of MMT is ready to wean her infant from breastfeeding, advise her to wean the infant slowly to prevent infant withdrawal.

5.10 **Suboxone** (naloxone/buprenorphine) for management of opiate addiction

5.10.1 Provide support and encouragement to mothers on Suboxone therapy for opiate addition, and who are separated from their infants, to establish and maintain breastfeeding and milk production.

5.10.2 Facilitate the collection and transfer of expressed breast milk to the infant. Expressed breast milk has many benefits for the infant and can limit neonatal abstinence syndrome.

5.10.3 Advise women on Suboxone therapy to:

- Maintain Suboxone regime as it is safe/compatible with breastfeeding

- Breastfeed prior to daily Suboxone dose if possible
- Observe the infant for signs and symptoms of neonatal abstinence syndrome / withdrawal

5.10.4 When a mother who is on high doses of Suboxone therapy is ready to wean her infant from breastfeeding, advise her to wean the infant slowly to prevent infant withdrawal.

5.11 **Nicotine (Tobacco)**

. 5.11.1 Advise women who use tobacco to reduce or quit tobacco use. Nicotine replacement is considered safe during breastfeeding and may assist with tobacco reduction / cessation attempts.

5.11.2 Advise women who are breastfeeding and who use tobacco to:

- Breastfeed prior to tobacco use
- Smoke outside the home or car to limit infant exposure to side stream, second hand and third hand smoke
- Avoid smoky environments from other tobacco users
- Breastfeed exclusively for the first 6 months with continued breastfeeding thereafter to maximize the infant's protection against respiratory illness and Sudden Infant Death Syndrome

5.12 **Opioids:**

Heroin

5.12.1 Advise women who are chronic, heavy non-therapeutic users of heroin not to breastfeed.

5.12.2 Advise women that intravenous use of opioids/heroin increases the risk of transmission of blood born viruses to the infant through breastmilk.

5.12.3 Advise women who are breastfeeding and using heroin to:

- Breastfeeding prior to substance use
- Withhold breastfeeding for 24 to 48 hours
- Express breast milk to maintain supply; discard pumped milk

5.12.4 Advise women to consider treatment substitution regime if possible, e.g. methadone maintenance therapy.

Opioids other than heroin (**codeine,** oxycodone, morphine, hydromorphone, fentanyl , meperidine, pentazocine**)**

5.12.5 Advise women who are breastfeeding and who use opioids occasionally for pain management to:

- Breastfeed infant prior to dose if possible
- Avoid breastfeeding for approximately 3 hours after medication (timing depends on the half life of the substance used).
- Observe the infant for signs and symptoms of drowsiness / sedation

5.12.6 Advise women to transition to non-opioid pain management as soon as possible or to consider treatment substitution regime if necessary e.g. methadone maintenance therapy

5.12.7 Advise women with chronic, heavy, non-therapeutic use of opioids not to breastfeed.

5.13 **Phencyclidine (PCP)** (angel dust)

5.13.1 Advise women who use PCP not to breastfeed. A sufficient safe duration of time between PCP use and breastfeeding has not been defined. Therefore, women who use PCP should not breastfeed.

6.0 DOCUMENTATION:

6.1 The nurse documents patient teaching and decision-making plan on Integrated Progress Notes (IPN) and respective discharge planning forms as required (see 4.6)

7.0 REFERENCES:

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7.2 Counseling Guidelines: Breastfeeding and maternal alcohol, tobacco and other drug use. The Sonoma County Breastfeeding Coalition. www.sonoma-county.org/mcah

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7.4 ABM Clinical Protocol # 18: Use of antidepressants in nursing mothers. (2008). Breastfeeding Medicine, 3(1): 44-52.

7.4 Hale, T.W. (2008). Medication and mother's milk. Amarillo, Texas: Hale Publishing.

7.5 LactMed: Drugs and lactation database. http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?LACT

8.0 RESOURCES:

8.1 Clinical Nurse Specialist, Women's Health Program

8.2 Clinical Pharmacists', Health Sciences Centre

APPENDIX A

Information related to substance use and breastfeeding

Alcohol:
Alcohol is rapidly absorbed into the blood and peaks within 30 to 60 minutes on an empty stomach and 60 to 90 minutes with food. The concentration of alcohol in breast milk reflects maternal blood concentration levels, which fall over time. Drinking water, resting or pumping will not accelerate the elimination of alcohol from breast milk.

Maternal effects of alcohol include sedation and decreased milk supply. The ability of the mother to respond to the needs of the infant may be compromised. Infant effects include potential for hypoglycemia, mild sedation, poor feeding and impaired motor development.

Breastfeeding is not advised for women who are chronic heavy users of alcohol. For women who use alcohol on an occasional basis, infant harm reduction strategies should be put in place. See Practice Guideline 5.1.

Amphetamines (Meth, speed, ecstasy):
Amphetamines are psychoactive drugs that can be dangerous and, on occasion, lethal. They are often used in combination with other substances (alcohol, marijuana) which exacerbates the risk. Amphetamines should not be used as a recreational drug by breastfeeding mothers because they impair their judgment and child care abilities.

Methamphetamine and its metabolite, amphetamine, are detectable in breastmilk and in infant serum after breastfeeding (breastmilk concentration may be 3–7 times higher than in maternal serum). Infant side effects include irritability, insomnia, agitation and crying.

The American College of Obstetrics and Gynecology recommends that mothers who use amphetamines should not breastfeed. In mothers who use amphetamine while breastfeeding, withholding breastfeeding for 24 to 48 hours after the maternal dose is recommended. See Practice Guideline 5.2.

Benzodiazepines (Clonazepam, Diazepam, Lorazepam, Midazolam):
Benzodiazepines are psychoactive drugs which are useful in treating anxiety, insomnia, agitation, seizures, muscle spasms and alcohol withdrawal. They are also useful as premedication for medical or dental procedures. The safety of benzodiazepines during breastfeeding depends on whether the respective drug is short-, intermediate- or long-acting. Shorter-acting benzodiazepines are safe during breastfeeding provided their use is short-term, intermittent, low dose and after the first week of life. Longer-acting benzodiazepines are not recommended for breastfeeding mothers due to their long half-lives and development of maternal dependence. Common benzodiazepines include:

- **Lorazepam** has a short half-life, is administered directly to infants when required, and is not associated with adverse effects in breastfed infants when usual maternal dosages are taken. No special precautions are required.
- **Clonazepam:** Clonazepam is considered compatible with breastfeeding. Monitor the infant for drowsiness, adequate weight gain, and developmental milestones, especially in younger, exclusively breastfed infants and when using combinations of psychotropic drugs.
- **Midazolam:** The small amounts of midazolam excreted into breastmilk would not be expected to cause adverse effects in most breastfed infants. No waiting period or discarding of milk is necessary before resuming breastfeeding after a single dose of midazolam in the

mothers of infants over 1 week of age. With prolonged use (days) of intravenous therapy, an active metabolite can accumulate in the mother and might affect the infant; caution is advised.

- **Diazepam**: Diazepam is excreted into breastmilk. Diazepam and the active metabolite, nordiazepam, accumulate in the serum of breastfed infants with repeated doses. Because the half-life of diazepam and nordiazepam are long, timing breastfeeding with respect to the dose is of little or no benefit in reducing infant exposure. Other agents are preferred, especially while nursing a newborn or preterm infant.
  Note: After a single dose of diazepam, as for sedation before a procedure, there is no need to wait to resume breastfeeding a healthy infant. If the infant is newborn or preterm, consider withholding breastfeeding for 6 to 8 hours.
- **Note**: this is a partial list of list of benzodiazepines only. Many other benzodiazepines that are less commonly used include bromazepam, oxazepam, temazepam etc.

For infant harm reduction strategies, see Practice Guideline 5.3.

Cocaine:

Cocaine is a local anesthetic and powerful central nervous system stimulant. It is well absorbed from all routes of administration including intravenous, oral, inhalation, transdermal and ophthalmic installation. **Crack** is a crystal form of cocaine that can be smoked; this route sends the drug to the brain very quickly and gives more of a "rush" than snorting. Although the pharmacological effects are brief (20 to 30 minutes), cocaine is slowly metabolized and excreted over a prolonged period. Therefore, even after the clinical effects have subsided, breast milk will contain significant quantities of cocaine metabolites. In addition, ingestion of small amounts of cocaine via environmental smoke by the infant is likely and may be hazardous.

Maternal effects of cocaine include agitation and central nervous system excitement which interfere with maternal responsiveness to infant needs. Infant effects include feeding difficulties (choking, vomiting), tremulousness and seizures. The effects of cocaine on the infant are extremely dangerous and infant death has resulted from cocaine exposure through breast milk.

Breastfeeding is not advised for women who are chronic heavy users of cocaine. For women who use cocaine on an occasional basis, infant harm reduction strategies are very important. See Practice Guideline 5.4.

Codeine (see Opioids - other)

General anesthetics: Medications used in general anesthesia do not remain in the mother's system and do not accumulate in her milk. Therefore no waiting period or discarding of breastmilk is required before resuming breastfeeding. Breastfeeding mothers should be encouraged to breastfeed as soon as they are "aware and alert" after general anesthesia. See Practice Guideline 5.5.

Inhalants:

Inhalants are breathable chemical vapors that are intentionally inhaled because of the psychoactive or mind-altering effects. These substances are often common household products and include solvents (paint thinner, petrol, glue), gases (butane lighter, aerosol containers) and nitrates (video head cleaners, room deodorizers, leather cleaners). Although many solvents pass readily into breast milk, most have a short half-life.

Because the infant's central nervous system continues to develop after birth, nursing infants may be sensitive to the neurotoxic effects of solvents. Mothers should avoid breastfeeding if they are intoxicated from solvent use**.** For women who use inhalants on an occasional basis, infant harm reduction strategies are important. See Practice Guideline 5.6.

LSD (Lysergic acid diethylamide):

LSD is a powerful hallucinogenic drug that is contraindicated during breastfeeding. Maternal effects of LSD interfere with maternal responsiveness to infant needs.

LSD is likely to enter into breastmilk due to a low molecular weight. At low levels, LSD produces adverse infant effects including hallucinations, dilated pupils, salivation and nausea.

Mothers should not breastfeed if they are chronic users of LSD. For women who use LSD on an occasional basis, infant harm reduction strategies are important. See Practice Guideline 5.7.

Marijuana:

Tetrahydrocannabinol (THC) in marijuana is rapidly distributed to the brain, adipose tissue and breast milk. Because THC is fat soluble, high concentrations can accumulate in the breast milk in heavy users (THC levels can be 8 times higher in breast milk than maternal plasma). Although limited research is available on the effects on infants with long term exposure through breast milk, one study found an association between THC in breast milk and decreased motor development.

Maternal effects include the potential for decreased milk production and heavy sedation which interferes with maternal responsiveness to infant needs. Infant effects include sedation, poor feeding and potential for a decrement in motor development at 1 year.

Breastfeeding is not advised for women who are chronic heavy users of marijuana. For women who use marijuana on an occasional basis, infant harm reduction strategies are important. See Practice Guideline 5.8.

Methadone:

Methadone maintenance therapy during pregnancy and the postpartum period is viewed as a positive strategy for women with addiction issues. For this high risk population, breastfeeding is clearly beneficial and should be encouraged. Transfer of methadone into human milk is minimal and not enough to prevent neonatal abstinence syndrome. Therefore additional support to establish breastfeeding and optimize milk production is required during newborn hospitalization, when mothers and infants are often separated due to infant Neonatal Abstinence Syndrome surveillance.

Maternal blood methadone levels and methadone excretion into breast milk varies between individuals and can be as high as 5% of maternal dose. Daily dispensing is recommended to keep blood levels consistent. Infant effects include reduction in the severity of neonatal abstinence syndrome in the immediate post birth period, risk of sedation if methadone dose is high, and symptoms of withdrawal during abrupt weaning. The advantages of breastfeeding to the infant and mother outweigh any risk from maternal methadone use.

Women on methadone maintenance should be provided with harm reduction strategies which encourage breastfeeding initiation and duration while minimizing infant risk. See Practice Guideline 5.9.

Suboxone (naloxone/buprenorphone):
Suboxone is gaining favor in the treatment of opioid addiction and may be more commonly used in the future to manage narcotic abstinence. Because it is not orally bioavailable, it is unlikely to affect the breastfed infant. Studies in nursing mothers have shown that suboxone does not affect lactation hormone levels. If Suboxone is required by the mother, it is not a reason to discontinue breastfeeding. See Practice Guideline 5.10.

Because of the low levels of Suboxone in breastmilk, its poor oral bioavailability in infants, and the low drug concentrations found in the serum and urine of breastfed infants, its use is acceptable in breastfeeding mothers. The amounts of Suboxone in milk may not be sufficient to prevent neonatal withdrawal, and treatment of infant may be required. Therefore additional support to establish breastfeeding and optimize milk production may be required during newborn hospitalization, when mothers and infants are often separated due to infant Neonatal Abstinence Syndrome surveillance.

Monitor the infant for drowsiness, adequate weight gain, and developmental milestones, especially in younger, exclusively breastfed infants. Although unlikely, if the baby shows signs of increased sleepiness (more than usual), difficulty breastfeeding, breathing difficulties, or limpness, a physician should be contacted immediately.

Nicotine (tobacco):
Nicotine is a central nervous system stimulant that is quickly excreted into the breast milk after maternal smoking, in amounts proportional to the number of cigarettes smoked. The concentration of nicotine in breast milk is between 1.5 to 3.0 times higher than maternal plasma concentrations. Elimination / half life of nicotine is 60 to 90 minutes in both breast milk and plasma.

The presence of hundreds of other compounds in tobacco smoke increases the risk of harm to the infant; studies indicate an increase in respiratory illness and otitis media in breastfed infants as a result of ingestion and environmental exposure to tobacco smoke.

Maternal effects include lower milk volumes, lower fat content, increased formula supplementation and earlier weaning. The use of nicotine replacement therapy is considered safe during breastfeeding; these products are less hazardous to the infant than maternal smoking and formula supplementation.

Infants of smokers have increased infantile colic as well as being more prone to Sudden Infant Death Syndrome and respiratory infection. Nicotine decreases breast milk supply, alters the taste of breast milk and contributes to slower weight gain in breast fed infants.

Women are advised to quit or reduce tobacco use during breastfeeding. For other infant harm reduction strategies, see Practice Guideline 5.11.

Opioids:
Heroin:
Recreational use of large doses of opioids, such as heroin, are not compatible with breastfeeding. Heroin is excreted into breast milk in sufficient quantities to precipitate newborn addiction.

Maternal effects of recreational use of heroin include respiratory depression, nausea, vomiting and euphoria/sedation which interfere with maternal responsiveness to infant needs. Infant

effects include sedation, tremors, restlessness and poor feeding. Levels in breast milk can be high enough to cause infant addiction and withdrawal.

Breastfeeding is not advised for women who are chronic heavy users of recreational heroin. For women who use heroin on an occasional basis, infant harm reduction strategies are very important. See Practice Guideline 5.12.

Other opiates:
At therapeutic doses, most opioids such as morphine, merperidine, fentanyl and **codeine** are considered compatible with breastfeeding. For infant harm reduction strategies, see Practice Guideline 5.12

- **Codeine** is a mild opiate analgesic whose action is due to metabolism into small amounts of morphine. The amount secreted into breast milk is low, dose dependent and in moderate use, safe during breastfeeding.
    - Note: a rare maternal genotype results in ultra-rapid metabolism of codeine into morphine which results in higher levels of morphine in maternal breastmilk. Observation for infant sedation and somnolence therefore is recommended.
    - For breastfeeding women who require Codeine in the post-discharge period, patient education is provided and reviewed (Codeine and Breastfeeding, Women's Health Program June 2009.)
- **Oxycodone** (Percocet, OxyContin, Roxicodone, Oxycocet, Percodan) is a narcotic analgesic and anti-tussive that is more potent that codeine. Addiction results from painkiller dependency and overprescribed / overused treatment. At high doses, oxycodone obstructs transmission of pain messages and increases dopamine levels which produce a similar elation evoked by street drugs. Small amounts of oxycodone are secreted into breastmilk. Data suggests that an exclusively breastfed infant would receive a maximum of 8% of maternal dose. Although no untoward infant effects have been reported, sedation is a possibility in some infants. Maternal effects include drowsiness and sedation which can interfere with caretaking ability, especially in chronic users.
- **Fentanyl** is a potent narcotic analgesic. When used parenterally, it's half–life is very short, transfer into breastmilk is low and clinically unimportant
- **Meperidine (Demerol)** is a potent opiate analgesic which is completely metabolized by the adult and neonatal liver. Significant but small amounts of meperidine are secreted into breastmilk. Potential infant concerns include sedation and poor suckling. Recommended alternatives include morphine and fentanyl.
- **Morphine** is a potent narcotic analgesic with low transfer into breastmilk and poor infant oral availability. Morphine is the preferred opiate in breastfeeding mothers. High doses over long period could lead to sedation and respiratory problems in the newborn.

APPENDIX B

Quick reference guide: Substance use and breastfeeding (BF)

Substance	General recommendations	Specific recommendations
Alcohol	BF before alcohol consumption. Express and discard milk to maintain milk supply	• 1 drink: wait 2-3 hours before BF • >1 drink: wait 2-3 hours for each alcoholic beverage consumed
Amphetamines (ecstasy, speed, crystal meth)	Breast milk will contain significant quantities of amphetamines. . Recreational use is not compatible	• BF before use • Withhold BF for at least 48 hours

	with BF.	after use**.**
Benzodiazepines	Short-acting benzodiazepines are safe during BF (Lorazepam, Midazolam). Longer-acting benzodiazepines not recommended during BF (Clonazepam, Diazepam).	• Lorazepam, Midazolam: no special precautions required • BF should be withheld for 6-8 hours after a single dose of longer-acting benzodiazepines
Cocaine/Crack	Breast milk will contain significant quantities of cocaine metabolites	• Withhold BF for at least 24 hours after use.
Codeine	See Opioids (other)	•
Inhalants	Mothers should avoid breastfeeding if they are intoxicated from solvent use since infants may be sensitive to their neurotoxic effects.	• Withhold BF for 48 hours after inhalant use.
General anesthetics:	Medications used in general anesthesia do not remain in the mother's system and are not transferred into maternal milk.	• Resume BF as soon as "awake and alert" • No waiting period or discarding of breastmilk required before resuming BF.
LSD	Potent hallucinogenic which is not compatible with BF	• Chronic or heavy users should not BF. • Withhold BF for 120 hours (5 days) after occasional use.
Marijuana:	High concentrations of THC can accumulate in the breast milk in heavy users.	• Chronic or heavy users should not BF • Withhold BF for several (~3) hours after occasional use.
Methadone	BF is clearly beneficial and should be encouraged in women on methadone maintenance therapy Transfer of methadone into milk is minimal.	• Compatible with BF • BF prior to daily dose if possible
Suboxone	Alternate treatment of opioid addiction. Is not orally bioavailable; unlikely to affect the BF infant.	• Compatible with BF • BF prior to daily dose if possible.
Nicotine (tobacco):	Central nervous system stimulant that is quickly excreted into the breast milk. Elimination / half life of nicotine is 60 to 90 minutes in both breast milk and plasma.	• BF prior to tobacco use. • Limit infant exposure to second hand smoke. • BF to maximize infant protection against respiratory illness and SIDS.
Opioids:	At therapeutic doses, most opioids (including **codeine**) are considered compatible with BF. Recreational use of large doses of opioids (such as heroin) is not compatible with BF.	• BF prior to therapeutic dose if possible • Withhold BF for ~3 hours after therapeutic use. • Educate mother to observe for sedation during therapeutic use of Codeine

		• Withhold BF for 24 to 48 hours after large dose and/or recreational use

EDUCATIONAL RESOURCES

Hand expression: a method to increase milk supply

Hand expression is simple to learn and can help you make more milk for your baby.

Many babies need time to learn effective breastfeeding. Hand expression and spoon/cup feeding colostrum provides more food for your baby and increases your milk supply. This helps your baby learn to breastfeed sooner.

In the first few days of life, the your baby drinks about a teaspoon of milk at each breastfeeding. Hand expression is an effective way to collect this small amount of milk from the breasts. It works better than an electric breast pump in the first few days.

If your baby is premature or ill, hand expression followed by pumping is the best way to collect colostrum and increase your milk supply.

Steps for Hand expression:

1. Sit up and lean forward; gravity helps the milk to flow.
2. Gently massage your breasts with your hands or a warm towel; this helps your milk "let down".
3. Place fingers in a "C" around the breasts, about 1 inch from the areola with your nipple between your thumb and finger. Round band-aids can help to mark the right spot for hand expression.
4. Push back toward chest wall, gently compress your breast, and then relax your fingers/hand. Repeat these steps to collect milk for your baby.
5. Alternate breasts; move back and forth between breasts frequently.
6. Collect milk in a teaspoon, cup or small vial for your baby.

The more frequently you use hand expression the earlier your milk will "come in" for your baby. **Combining hand expression with breastfeeding or pumping can double your milk supply in the first few days**.

Hand expression is also helpful during later breastfeeding if you become engorged or are separated from your baby.

See video at http://newborns.stanford.edu/Breastfeeding/HandExpression.html

Women's Health Program 2009

"Getting through the second night"
with your breastfed baby

You've made it through your first 24 hours as a new mom. And now it's your baby's second night!

All of a sudden your little one discovers he's no longer back in the warm and comfortable womb where he has spent the last 8 to 9 months – and its scary out here!

All sorts of people have been handling him and he is not used to all the noises, lights, sounds and smells.

He has found one thing though **– his voice** – and every time you take him off the breast where he has drifted off to sleep, he protests loudly!! And this goes on for hours! Moms are concerned that they "do not have enough milk" and are "starving their baby". That is **NOT** the reason for this behavior.

This sudden awakening is because your breast is the most comforting place your baby can be. It's the place where he can hear your heartbeat and soothing voice – it's closest to home!

This pattern during the 2nd night is universal for all babies! Remember – your baby needs you right now - you are not "spoiling your baby".

So what do you do??

- First of all, know that this is **normal newborn behavior**!
- Newborn babies cluster feed for several hours at a time – for snuggling and your colostrum!
- A good latch is important during cluster feeding to prevent sore nipples.
- The best thing to do after a good feeding is to let your baby fall asleep at the breast.
- Then gently slide your nipple out of your baby's mouth.
- Don't move – don't burp – just snuggle with your baby until he falls into a deep sleep.
- Then gently transfer him to a bassinette.
- The "second night" reassures your baby that you are still with him **and** increases your milk supply!
- Be aware that this can happen at home too – your baby may need some extra snuggling after a very busy day.

BREASTFEEDING AND YEAST INFECTIONS

Yeast normally lives in our bodies without causing a problem. It lives in moist, warm and dark places such as the mouth, nipple, vagina and groin. Yeast can spread easily from one person to another. Sometimes it overgrows and causes a yeast infection in the mother and/or her baby.

WHO IS LIKELY TO GET A YEAST INFECTION?

- A mother with sore cracked nipples, a history of vaginal yeast infections, antibiotic use during or since delivery and/or a baby with thrush (yeast) in his mouth.
- A baby who is/has been on antibiotics or has a mother with the yeast infection (vaginal or breast).

HOW TO KNOW IF YOU HAVE A YEAST INFECTION

You (mother) may have:

- sore nipples after a time of pain free nursing
- burning or shooting nipple and breast pain during and/or after nursing
- nipples that are very sensitive to touch (of clothing, shower etc)
- itchy nipples or flaking skin on nipples
- pink or red nipples with shiny areolae
- crescent-shaped cracks at base of nipple
- nipples that blanche (turn white) after feeding
- sore or cracked nipples that do not heal despite a healthy thriving baby with good latch
- or you can have no symptoms at all

Your baby may have:

- white spots on his tongue or cheeks (thrush)
- a diaper rash that does not clear
- changes in his behavior - fussy during feeding or refusing to feed
- pulling off the breast or "clicking" while feeding
- or your baby can have no symptoms at all

TREATMENT CHOICES / OPTIONS

Breastfeeding can and should continue during treatment!

It is important to treat both you and your baby, even if only one of you has signs of a yeast infection. Treatment should continue until you are both symptom-free for at least 1 week. Every mother and baby are different – these are suggestions for treatment only.

Treatment for mother:

Anti-yeast ointments:

- If you are not having nipple pain, or your pain is mild, Nystatin, Canestan (Clotrimazole) or Monistat (Miconazole) can be used on your nipples; these ointments can be purchased without a prescription.
- If your nipples are cracked and sore, “All Purpose Nipple Ointment” or Viaderm KC Ointment are more effective. These require a prescription.
- A small amount of ointment should be applied to your nipples and areola after every breastfeeding.
- These ointments are safe for your baby and do not need to be washed off before breastfeeding.
- Gentian Violet (1%) solution can also be painted on your nipples once a day for 4 to 7 days. This can be used as initial treatment for severe pain or it can be used in addition to the above ointments if pain continues or worsens. If your baby does not have thrush, use this solution after feeding (less messy).
- If you develop severe breast pain that is not getting better, you may need oral treatment (Diflucan or Ketoconazole). This should be used in addition to nipple and infant treatments.

Treatment for baby

If you baby has mild or no symptoms:

- Nystatin oral suspension can be applied to your baby's mouth after every breastfeeding. This liquid may decrease the growth of yeast between feedings, even if your baby has no symptoms.
- To apply, pour 1/2 dropper into a small cup. Dip a Q-tip into this liquid and paint the inside of your baby's mouth (inside cheeks, under tongue, around gum line). Any leftover medicine can be swallowed by your baby.
- Note: Babies who are not breastfeeding receive "1 dropper 4 times a day". Because yeast grows very fast and spreads to mothers quickly, using ½ dropper after every feeding works best for breastfeeding babies.

If your baby has moderate to severe symptoms and/or these symptoms are not getting better:

- Gentian Violet (.5 or 1%) can also be applied once a day for 4 to 7 days. This can also be used as initial treatment or can be used in addition to the above for extra treatment if necessary
- To apply, dip a Q-tip in the Gentian Violet and quickly paint the inside of your baby's mouth to cover his cheeks and tongue or paint your nipples and then breastfeed - this way both you and your baby are treated.
- Gentian Violet may cause mouth "ulcers". Therefore, check your baby's mouth daily.
- Gentian Violet should be used in addition to the treatments already listed.

OTHER SUGGESTIONS TO TREAT A YEAST INFECTION

Natural treatments that may help to limit the yeast in your body:

- Acidophyllus 1 capsule 3 times a day
- Grapefruit Seed Extract capsules: 250 mg 3 times a day (may interfere with other prescription drugs)
- Grapefruit Seed Extract liquid: swab your baby's mouth and your nipples with 5-10 drops of grapefruit seed extract liquid in 1 ounce of water; apply after each feeding for 3-4 days
- Limit sweet foods and yeast containing foods (breads) in your diets
- Eat yogurt containing active bacterial culture several times a day
- Rinse your nipples after feeding with an acidic solution of 1Tbsp of vinegar in 1 cup of water

Other considerations:

- Good handwashing for entire family with non anti-bacterial soap
- Consider using paper towels to prevent spreading yeast
- Daily boiling of any items that contact your breasts or your baby's mouth (i.e. soothers, nipples, bottles, breast pads, bras, and pumping equipment)
- The amount of yeast in your breast milk may increase during a yeast infection; if you store milk during this time, consider labelling this milk as later use may re-infect you and your baby
- Take medicine (Ibuprofen) for pain relief before or after breastfeeding if necessary
- Other family members may require topical or oral treatment if yeast does not clear

All Purpose Nipple Ointment

- Mupirocin 2% ointment 15 g, Betamethasone 0.1% ointment 15 gm, Miconazole powder so final concentration is 2%
- It may be helpful to add Ibuprofen powder to final concentration 2% Jack Newman, MD, FRCPC. © 2003 www.breastfeedingonline.com

Laid-back Breastfeeding

LAID-BACK BREASTFEEDING, or Biological Nurturing, means getting comfortable with your baby and encouraging your own and your baby's natural breastfeeding instincts. See biologicalnurturing.com for further information.

- Dress yourself and your baby as you choose.
- Find a bed or couch where you can lean back and be well supported—not flat, but comfortably leaning back so that when you put your baby on your chest, gravity will keep him in position with his body molded to yours.
- Have your head and shoulders well supported. Let your baby's whole front touch your whole front.
- Since you're leaning back, you don't have a lap, so your baby can rest on you in any position you like. Just make sure her whole front is against you.
- Let your baby's cheek rest somewhere near your bare breast.
- Help her as much as you like; help her do what she's trying to do. You're a team.
- Hold your breast or not, as you like.
- Relax and enjoy each other.

With permission from La Leche League

Health Sciences Centre
Winnipeg

Codeine and Breastfeeding

You may be using a medicine for pain that contains codeine (such as Tylenol #3). Because you are breastfeeding, it is important to know that:

- Many medicines pass into breast milk in **small** amounts. Two of these medicines are codeine and morphine.
- Your body changes some of the codeine you take into morphine.
- A ***very small*** number of people change more codeine to morphine than others.
- Higher levels of morphine in your body may increase the amount in your breast milk. These amounts may cause unwanted effects in some babies.
- High doses and/or long term use of codeine raises the risk that your baby may get too much of the medicine you take.
- Occasional short-term use of codeine by you **may** be safer for your baby; however some babies may have unwanted effects from small doses of codeine.
- If you are taking codeine, you should watch your baby for the following unwanted effects:
    - Baby is more sleepy than normal (sleeps longer than 4 hours)
    - Baby is difficult to wake up
    - Baby does not breastfeed well (normal is every 2 to 3 hours)
    - Baby is having problems breathing
    - Baby is limp

If any of the above happens, contact your doctor or go to the emergency department. Tell the doctor that you are taking codeine and that you are breastfeeding.

You should also lower the amount of codeine and morphine in your breast milk by:

- Taking the lowest amount of codeine you need to relieve pain and for the shortest time possible
- Taking codeine (and all medicines) right after breastfeeding to decrease the amount in your breast milk when you breastfeed next
- Switching to other pain medicines such as acetaminophen (Tylenol) or ibuprofen (Advil) when your pain gets better. Both medicines do not contain codeine and are safe during breastfeeding.

References:

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Madadi P, Koren G, Cairns J et al. (2007). Safety of codeine during breastfeeding. Motherisk: Resources for mothers. www.motherisk.org.

Approved by Women's Health Program June 2009

APPENDIX A

Summary of the World Health Organization (WHO)/UNICEF International Code of Marketing of Breast Milk Substitutes, World Health Assembly (WHA), 1981; Resolution WRA 34.22 and Subsequent WHA resolutions 39.28, 47.5, 49.15, 54.2

1. **Aim:** The aim is to "contribute to the provision of safe and adequate nutrition for infants, by the protection and promotion of breastfeeding, and by ensuring the proper use of breast milk substitutes, when these are necessary, on the basis of adequate information and through appropriate marketing and distribution."

2. **Scope:** The Code applies to breast milk substitutes, including infant formula; to other milk products, foods and beverages, when marketed or otherwise represented as a partial or total replacement for breast milk; to feeding bottles and nipples. It also applies to their quality and availability, and to information concerning their use.

3. **Advertising:** No advertising of above product to the public.

4. **Samples:** No free samples to mothers, their families or health care workers.

5. **Facilities of Health Care Systems:** No promotion or products, i.e., no product displays, posters or distribution of promotional materials; no use of mother craft nurses or similar company-paid personnel. The "health care system" does not include pharmacies or other established sales outlets.

6. **Health Care Workers:** No gifts or samples to health care workers.

7. **Supplies:** No free or low-cost supplies of breast milk substitutes to maternity wards and hospitals.

8. **Information:** Informational and educational materials must explain the benefits of breastfeeding, the health hazards associated with bottle feeding, and the costs of using infant formula. Product information must be factual and scientific.

9. **Labels:** Product labels must clearly state the superiority of breastfeeding, to use only on the advice of a health care worker, instructions for the appropriate preparation and a warning about the health hazards of inappropriate preparation; no pictures of infants, or other pictures or text idealizing the use of infant formula.

10. **Products:** Unsuitable products, such as sweetened condensed milk, should not be promoted for babies. All products should be of a high, recognized standard.

11. **Exclusive breastfeeding:** Promote and support exclusive breastfeeding for six months as a global public health recommendation with continued breastfeeding for up to two years of age or beyond.

12. **Complementary Feeding:** Foster appropriate complementary feeding from the age of six months recognizing that any food or drink given before complementary feeding is nutritionally required may interfere with initiation or maintenance of breastfeeding.

13. **Marketing:** Ensure that complementary foods are not marketed for or used in ways that undermine exclusive and sustained breastfeeding.

14. **Sponsorship:** Financial assistance from the infant feeding industry may interfere with professionals' unequivocal support for breastfeeding.

APPENDIX B
STANDARD OF CARE FOR CARE PROVIDER EDUCATION

Orientation and continuing education should include the following principles and competencies:

- Benefits of breastfeeding
- Risks of not breastfeeding
- Current breastfeeding statistics
- UNICEF/WHO Baby Friendly Initiative
- Assessment with the LATCH-R Tool
- WRHA Breastfeeding Policy and Practice Guidelines
- Overview of anatomy and physiology of including:
  - The breast
  - Hormonal influence
  - Infant role
  - Deviations from normal anatomy and physiology
  - Initiation and maintenance of breastfeeding
  - Prevention of common problems
  - Maintenance of breastfeeding and lactation when complications arise
- Potential breastfeeding problems:
  - Maternal
  - Infant
  - Intervention strategies
  - Impact of hospitalization on the breastfeeding family

BREASTFEEDING COMPETENCY CHECKLIST Key: N=Novice, C=Competent, P=Proficient	**SELF EVALUATION**			**PRECEPTOR EVALUATION**		
	N	**C**	**P**	**N**	**C**	**P**
Demonstrates knowledge of:						
• Benefits of breastfeeding and risks of artificial milk feeding						
• Contraindications to breastfeeding						
• Principles and practices which support breastfeeding (baby friendly initiative)						
• Factors which may impact breastfeeding						
• Anatomy, physiology and psychology of lactation						
• Breastfeeding process: lactation initiation and breastfeeding techniques						
• Methods of expression, storage, and alternate feeding of breast milk						
• Methods of suppression of lactation and/or weaning						
• Impact of breastfeeding on birth control options						
• Predisposing factors for breastfeeding difficulties						
• Resources available in the community						
Demonstrates attitudes which:						
• Reflects a commitment to the promotion of breastfeeding and seeks to improve breastfeeding initiation and duration rates						
• Describes breastfeeding as a learned skill						
• Indicates awareness of personal values regarding breastfeeding and parenting						
• Facilitates the development of breastfeeding as a cultural norm						
• Encourages and supports mothers to exclusively breastfeed for six months and to continue breastfeeding for the first two years of life or longer						
• Assesses and fosters mother's level of confidence in her ability to breastfeed						
Demonstrates assessment skills:						
• Reviews mother's previous experience and relevant health and breastfeeding history						

BREASTFEEDING COMPETENCY CHECKLIST Key: N=Novice, C=Competent, P=Proficient	**SELF EVALUATION**			**PRECEPTOR EVALUATION**		
	N	**C**	**P**	**N**	**C**	**P**
• Completes infant and maternal assessment and weight.						
• Identifies parents' breastfeeding knowledge, commitment and goals						
• Identifies potential/actual breastfeeding issues						
Demonstrates optimization of breastfeeding:						
• Identifies family and friend's capacity to support the breastfeeding dyad						
• Discusses impact of mother's medications on breastfeeding						
• Discusses lactation physiology, nipple and breast care and engorgement management						
• Provides anticipatory guidance regarding feeding cues and readiness						
• Encourages parents to provide skin-to-skin contact						
• Advises and assists with optional positions						
• Identifies abnormal cry and behaviour patterns						
• Provides anticipatory guidance regarding sleep/wake states, consoling measures, self-comforting abilities						
• Intervenes according to LATCH-R tool and other existing guidelines to encourage effective correct latch, position, suck and swallow						
• Intervenes and provides anticipatory guidance in keeping with the principles of adult learning						
• Observes a complete feeding and attempts to optimize breastfeeding prior to offering supplementation unless health status warrants immediate supplementation and/or referral for medical attention						
Demonstrates knowledge of supplementation:						
• Advises supplementation at breast with EBM to satiation whenever possible						
• Assesses hydration indicators and identifies presence of risk factors/signs and symptoms of dehydration						

BREASTFEEDING COMPETENCY CHECKLIST Key: N=Novice, C=Competent, P=Proficient	**SELF EVALUATION**			**PRECEPTOR EVALUATION**		
	N	**C**	**P**	**N**	**C**	**P**
• Identifies deviations, monitors feeding patterns, infant weight, recommends appropriate interventions and notifies primary care provider of abnormal findings per guidelines						
• Exhibits judicious use of supplementation devices, bottles, soothers and pumps						
• Develops plan of care with the mother/family						
• Assists mother to manage required supplementation devices (i.e. cup feeds, SNS, Finger feeding), pumps (electric, hand pumps) and the handling and storage of expressed breast milk						
• Advises primary care giver if signs of dehydration, weight loss of 10% +, and/or ineffective breastfeeding are evident						
• Uses available resources to assist in care plan development and the resolution of breastfeeding issues						
• Consults with and refers as necessary to other health care providers and community resources. (i.e., Health Links, Public Health Nurses, Lactation Consultant, support groups, Breastfeeding Clinics)						
• Documents assessment, plan of care, interventions and evaluation						

APPENDIX C
ANTICIPATORY GUIDANCE FOR BREASTFEEDING

PRENATAL EDUCATION CURRICULA - BREASTFEEDING

Learning Objectives
Upon completion of the Breastfeeding Class, the participants will: 1. Experience a welcome and introduction to the class 2. Have an opportunity to identify some of their learning needs and expectations 3. Feel reassured by briefly overviewing the class 4. Identify advantages of breastfeeding 5. Have the information needed to make an informed decision related to infant feeding 6. Increase confidence in babies' innate abilities which assist them with breastfeeding 7. Explore common myths believed about breastfeeding 8. Identify the anatomy, changes and functions of the pregnant and lactating breast 9. Identify skills that lead to effective breastfeeding including the mother's position, positioning of the baby at the breast, supporting the breast, latching the baby and removing the baby from the breast 10. Be aware of baby's hunger and satiety cues, and of how to burp a baby 11. Identify difficulties that could hinder breastfeeding 12. Identify significant ways to provide support to a woman who is breastfeeding 13. Identify community resources and equipment (including recommended breast pumps) that are available to support the breastfeeding woman

ANTICIPATORY GUIDANCE FOR THE PARENTS OF A FULL TERM BREASTFED INFANT

Parents require breastfeeding information in a timely and appropriate manner. Ideally this information is given prenatally and reinforced as needed in the postpartum period. In keeping with the principles of adult education, information and teaching provided in hospital often warrants repetition in the home. Public Health Nurse contact is made the day after discharge.

Parents are taught:

1. To encourage frequent feedings and skin-to-skin contact. Parents are advised that feeds should be cue based and infant sleep patterns are such that the baby may want to sleep one 4-5 hour stretch in a 24-hour period but at least 8 feedings per 24 hrs is required to maintain infant growth and maternal milk supply.
2. Feeding cues, the signs of satiation, principle of supply and demand, how and when to use breast compression and switch nursing.
3. Self assessment of breastfeeding based on the components of the LATCH-R tool
4. Soothers should not be used to delay a feeding.
5. Breastfeeding patterns. Infants' sleep and wake periods change during the first days of life. During the first 24 hours, the infant may be alert for a few hours after birth, then go into a deep sleep. Thus, infants less than 24 hours may breastfeed less often, but for long periods. Later on, parents need to recognize cluster feeds.
6. Normal infant growth patterns (growth spurts).
7. Normal infant wake sleep patterns.
8. Signs of inadequate infant hydration.
9. Nutrition, exercise and rest.

10. Potential negative impact of early introduction of soothers, bottles and other technologies.
11. Potential breastfeeding problems and contributing factors (engorgement, sore nipples, mastitis, yeast).
12. The importance of night feedings while establishing breastfeeding, in order to ensure unrestricted breastfeeding and optimal milk production. It is important to wake baby for these feedings especially when infant weight gain is inadequate or breastfeeding/hydration is not optimal.
13. The "sleepy baby" must be woken and fed as discussed above. The infant who is hard to wake for feeds or unresponsive requires careful assessment and may require medical attention.
14. To monitor infant output and evidence of milk transfer.
15. Common infant problems (jaundice).
16. Available breastfeeding supports/resources in their community.

Nurses must ALSO be prepared to discuss the following:

- Breast pumps (recommendations)
- Storage of expressed breast milk
- Proper preparation of artificial breast milk when warranted
- Breastfeeding as a student or working mother
- Weaning
- Breastfeeding and sex
- Use of medications and alcohol
- Breastfeeding in public
- Returning to school/work
- Impact of social support on breastfeeding duration
- Proper use and care of pumps and other technologies when warranted (preferably on an individual basis)
- Supplementation when medically warranted (preferably on an individual basis)

APPENDIX D
IMPACT OF BIRTHING PRACTICES/CHOICES ON BREASTFEEDING INITIATION

The long-term success of breastfeeding is affected by many variables. Practices, education and choices made antenatally, during labour and in the immediate postpartum period can have substantial impact on the mother-infant breastfeeding dyad.

Protecting, supporting, and promoting breastfeeding reflect the guiding principles of family-centred maternity and newborn care. According to the *Family Centred Maternity and Newborn Care National Guidelines*, it is essential that:

- Care is based on research evidence.
- Women are cared for within the context of their families – mothers, babies and families are not separated unless absolutely necessary.
- Women and their families need knowledge to make informed choices; women are empowered through respect and informed choice to take responsibility; and health care providers have a powerful effect on women and families.
- Technology is used appropriately.
- The importance of language is recognized.

The importance for both parents and caregivers to be informed about how birthing choices and practices influence breastfeeding cannot be underestimated.

Hydration/IV Therapy

It is common practice in hospital birth settings to restrict oral intake in labour. Clear fluids and/or ice chips are commonly all that is allowed once the woman is labouring. The work of labour, however consumes large amounts of calories and fluids. The administration of IV fluids is not routine for every woman, although many situations either require or warrant the initiation of an IV. Examples include epidural analgesia, induction/augmentation of labour, antibiotic administration, or a non-reassuring fetal status.

Although institutional policies require that the caregiver restrict the woman's intake of food, maintaining a fluid balance within the context of labour is of utmost importance. Ketones occur when carbohydrate stores are used up. The tendency towards ketosis in pregnancy is accentuated by increased muscular activity and by the starvation that is imposed by the limit on oral intake. Physiologic dehydration is not uncommon in labour and the assistance of the woman to maintain an adequately hydrated state should be a priority of nurses/midwives caring for women in labour. Additional oral fluids in early labour will afford her the needed nourishment and hydration she requires when the labour becomes more active.

IV intake not monitored diligently can contribute to fluid overload, which in turn can contribute to different problems. Severe cases of breast, nipple and areolar edema on the second or third postpartum day have been associated with induction of labour (oxytocin acts as an antidiuretic) and IV fluid overhydration. Edema in the breast can present difficulty in latching on and may contribute to nipple pain and poor milk transfer. The mother may be reluctant to put her baby to breast if it causes pain.

Fluid overload can also have an effect on the process of lactogenesis, the mother's production of milk. There is also some evidence to suggest that IV therapy in labour contributes to edematous

newborns whose subsequent diuresis and weight loss can lead to unnecessary supplementation. There have been reports of larger amounts of weight loss and electrolyte imbalances in infants whose mothers had IV fluid as opposed to oral fluids only.

Labour Pain Medications

Vast amounts of literature on analgesia and anesthesia suggest that **routine** use of labour medications can negatively impact the normalcy of labour. Increased rates of labour augmentation and decreased ability to fully utilize the range of labour positions and options can lead to the necessity of instrumental or surgical deliveries. This "cascade of interventions" is well known to health care providers caring for women in labour. These interventions can have effects on the mother's alertness and well-being as well as the newborn's readiness to see, smell, root and attach to the mother's breast.

It is well known that narcotic analgesics such as Demerol have a central nervous system depressive impact on newborns, resulting in decreased alertness, disorganization and delayed rooting, sucking and latching on. Despite this, Demerol continues to be a commonly used choice of medication for labour pain. Metabolism and excretion of narcotics is slower in newborns than in the mother and results in CNS depression in the baby well beyond the first few hours of life.

The use of epidural analgesia in labour has become increasingly popular. Since their early use, epidurals have changed significantly. Earlier use of epidurals found women completely "frozen" from the waist down and confined to their bed with continuous fetal monitoring. Despite recent improvements in their effects such as decreased motor block, epidurals continue to impact the process of birth, hence the breastfeeding experience. Recent studies that have compared the use of epidurals with breastfeeding success have come to different conclusions. There can be no doubt however, that an epidural and its unavoidable associations (requires an IV, decreases ease of ambulation, and necessitates close if not continuous fetal monitoring) affect the labour and birth process. Although recent studies show neuro-behavioural effects on the newborn's activity, the effects of epidural analgesia on breastfeeding are still inconclusive.

It must also be recognized that inadequate coping with the extreme pain of labour contributes to increased fear/anxiety in the mother and an increase in the level of circulating adrenalin. With poor pain control and increased fear and anxiety, adrenalin works as an antagonist to oxytocin by weakening uterine contractions and possibly prolonging labour. The delay of analgesics until active labour is well established seems to have less effect on the labour process and need for interventions than their early administration.

In response to extended physical stress, the human brain's response is to release endogenous opiates into the bloodstream. These are called endorphins. Natural endorphins appear to help to reduce the perception of uterine pain, provide a sense of well-being and may have an amnesic effect. Unmedicated, a woman with good social supports and who feels safe in her environment can cope well even during the hardest and strongest part of the labour. It is believed that labour pain medications can block the woman's natural endorphins. The caregiver must inform the woman and be willing to provide non-pharmacologic methods of labour pain relief. Informed choice is imperative!

Immediate Skin-to-Skin Contact after Birth/Non-Separation of Mother and Infant

Immediate mother-baby contact after birth is firmly established as an evidence-based practice that supports breastfeeding. The Baby Friendly Hospital Initiative lists it as a recommended

standard of immediate post-delivery care.

Healthy full-term infants demonstrate a very specific set of behaviours immediately following delivery when placed in skin-to-skin contact with their mother. When left undisturbed on the mother's abdomen, the newborn will display behaviours such as fist clenching, hand to mouth movements, rooting, sucking and latching on. The baby's senses are cued in to the smell of amniotic fluid and the smell of the mother's breasts before washing. This 'sensitive' period allows mothers and infants to develop a synchronous interaction pattern provided they are together and in intimate contact.

A 2004 review of 17 published studies involving over 800 participants (mothers and babies) found statistically significant and positive effects of early skin-to-skin contact. These studies showed that:

- More mother-baby pairs with early skin-to-skin contact were successfully breastfeeding at day 3.
- More mother-baby pairs with early skin-to-skin contact were still breastfeeding one to three months and at one year than those who did not have early skin-to-skin contact.
- Infants with early skin-to-skin contact were more likely to maintain temperature in the neutral thermal range.
- Infants with early skin-to-skin contact were less likely to cry when left in direct contact with their mothers.
- Infants with early skin-to-skin contact had higher blood glucose levels and lower respiratory rates.
- Mothers with early skin-to-skin contact displayed more affectionate behaviours to their infants in 8 studies that examined maternal attachment behaviours.
- Mothers with early skin-to-skin contact with their newborns had decreased breast engorgement pain on day 3 postpartum.

Hospital routines that promote early skin-to-skin contact and minimize postpartum mother-infant disturbances should lead to improved rates and duration of breastfeeding and enhanced mother-infant attachment.

The importance of caregivers' support of non-separation of the mother-baby unit in both the immediate postpartum period and beyond cannot be overestimated.

Labour Interventions and Readiness to Breastfeed

It is a known fact that the long-term success of breastfeeding is affected by the events of labour and the birth process. Infant feeding ability requires three things to be in place:

- A patent, uncompromised airway.
- Oropharyngeal muscle strength and coordination to allow infant to obtain milk from mother's breast.
- The ability to signal the need to feed.

A baby who is compromised in any of these systems is at risk for feeding problems. Instrumental deliveries, despite being necessary at times to expedite delivery and prevent oxygenation compromise, are not benign interventions. Mechanical forces during birth can disrupt the

alignment of bony structures and therefore affect nerve and muscle function. The development of hematomas, caput succedaneum (localized scalp edema), bruising, and nerve damage that result after an instrumental delivery all have the potential to interrupt the normal suck-swallow-breathe pattern, hence the infant's ability to "coordinate" their actions for breastfeeding.

Instrument-assisted birth and Cesarean birth both exert additional mechanical forces on the infant's bony structures above the levels of force during spontaneous vaginal birth. As well, babies born by Cesarean usually require more suctioning after birth, further affecting infant oral motor function. Postpartum, the mother delivered by Cesarean starts off her relationship with her infant in a less than ideal fashion. Pain management and energy conservation, important for the healing process of the mother, often result in a not fully alert mother, a baby that may be cared for in the nursery for a period of time, and the increased chance of a postpartum infection or other complication. Studies show that breastfeeding mothers delivered by Cesarean may have a later onset of full lactation and may have an increased risk to discontinue breastfeeding sooner.

If a baby cannot feed effectively as a result of trauma from an instrumental delivery, dehydration and reduced caloric intake further compromise the sucking response. The compromised baby cannot feed well, and muscle function is further compromised and less effective, and the infant becomes more disorganized and even less able to feed. Hypoglycemia and hyperbilirubinemia then become a threat. Also, if the baby cannot feed effectively, the balance between milk production and milk transfer is compromised. Ineffective emptying of the breast can lead to milk stasis and the sending of the erroneous message for her breasts to slow down production. As production is slowed, milk transfer is further compromised and supplementation may be utilized to provide necessary nourishment to the infant.

Caregivers must be fully aware of the potential effects that labour interventions can have on breastfeeding success. Extra physical and emotional support as well as anticipatory guidance is necessary to assist mom and baby to get off to the best start possible.

APPENDIX E
LATCH-R BREASTFEEDING ASSESSMENT AND INTERVENTION GUIDE

LATCH-R SCORE

	0	1	2
L Latch	Too sleepy or reluctant No Latch achieved	Repeated attempts Hold nipple in mouth Simulate to suck	Grasps breast Tongue down Lips flanged Rhythmic sucking
A Audible swallowing	None	A few with stimulation	Spontaneous and intermittent < 24 hours old Spontaneous and frequent > 24 hours old
T Type of nipple	Inverted	Flat	Everted (after stimulation)
C Comfort (Breast/Nipple)	Engorged Cracked, bleeding, large blisters or bruises Severe discomfort	Filling Reddened/small blisters or bruises Mild/moderate discomfort	Soft Non-tender
H Hold (Positioning)	Full assist (staff holds infant at breast)	Minimal assist (i.e., elevate head of bed: place pillows for support) Teach one side; mother does other Staff holds and then mother takes over	No assist from staff Mother able to position/hold infant
R Mother's responsiveness to infant cues, confidence to breastfeed	Mother does not respond to infant feeding cues Mother does not feel confident about her ability to breastfeed	Mother requires help to interpret infant feeding cues Mother requires confidence building	Mother responds appropriately to infant feeding cues Mother feels confident about her ability to breastfeed

Adapted from the LATCH Tool *Nursing Service Division – Sacred Heart General Hospital, Eugene, Oregon and the WRHA LATCH-R Breastfeeding Assessment and Intervention Guideline 1999

LATCH-R BREASTFEEDING ASSESSMENT
AND INTERVENTION STRATEGIES ©2000

Developed by Kathy Hamelin and Jean McLennan
In conjunction with the Newborn Care Map Team
Women's Health Program, Winnipeg Regional Health Authority
Public Health LATCH-R Assessment Tool 2003
Adapted by Carolyn Hill-Carroll, Maria MacKay, Kathy Hamelin and Shelley Corvino

Purpose:
The LATCH-R Breastfeeding Assessment and Intervention Strategies is provided as an educational tool. It will assist the nurse in completing a LATCH-R breastfeeding assessment and intervening, if necessary, based on a complete visual assessment of the mother and infant during breastfeeding.

Standard of care:
Assessment of breastfeeding using the LATCH-R Tool will be completed with first breastfeeding and every 8 hours until discharge from hospital.

Consistent and evidence-based interventions to support breastfeeding will occur when LATCH-R score indicates sub-optimal initiation.

A score of at least "one" in each category except "T" indicates discharge readiness. If this score is not attained, a plan for supporting breastfeeding will be put in place and communicated to Public Health Nurse prior to discharge from hospital.

The Public Health Nurse will assess breastfeeding using the LATCH-R score with initial home visit and on an ongoing basis as necessary. A score of "2" in each category except "T" indicates readiness for discharge from Public Health follow up.

Ongoing education and interventions will reflect evidence-based practice guidelines that accompany the LATCH-R score.

LATCH-R Assessment Tool

Assessment and Interventions:

L: Latch

Expectation: All of the following criteria are met:
- Baby's gum line is on the areola and approximately 3/4 – 1 inch from base of nipple.
- Both lips are flanged outward.
- Jaw movement is visible at ear or temple area.
- Tongue is positioned under areola (can be assessed through sublingual palpation).
- Adequate suction is demonstrated by full cheeks, no dimples.
- Rhythmical sucking occurs with a sustained latch and sucking occurs in bursts.

L = 2

Assessment:
- All criteria met.

Intervention:
- Reinforce elements of correct latch with mother.

L = 1

Assessment:
- Repeated attempts are necessary to achieve latch.
- Mother requires assistance to ensure that nipple is in baby's mouth; mother must hold nipple in baby's mouth to achieve latch.
- The baby requires repeated stimulation to suck.

Intervention:
- Reinforce elements of correct latch with mother.
- Assist the baby to latch by holding nipple in baby's mouth, and assisting mother to hold baby's head close by bringing baby to breast.
- Position baby to achieve good head control (cross-cradle or football hold).
- Apply gentle sublingual pressure/massage to ensure placement of baby's tongue under nipple and stimulate effective sucking.
- Attempt to stimulate latch by expressing a small amount of colostrum or breast milk onto nipple.
- Provide empathetic support to validate mother's and family's breastfeeding challenges.

L = 0

Assessment:

- The baby is too sleepy or reluctant to breastfeed.
- No latch is achieved.

Intervention:

- Reinforce to mother that "sleepy" periods are normal in the first 24 to 48 hours of life. A baby who has breastfed well shortly after birth can manage this sleepy period, and less than optimal breastfeeding, without complications. Mothers should observe for wakeful periods and attempt breastfeeding at these times.
- Awaken the baby by stimulation (remove blankets and clothing) and intervene to achieve latch as above in L1 interventions.
- If unable to awaken and achieve latch, assess the baby for signs of dehydration, hypoglycemia and/or sepsis. If the infant is well, reawaken and attempt breastfeeding again after 1 hour of sleep (maximum).
- Continue this process as long as baby remains well and until successful breastfeeding is achieved.
- After several unsuccessful feeding attempts and infant is well, latch can be encouraged with the use of a feeding tube at the breast (SNS).
- If infant demonstrates signs of dehydration, hypoglycemia and/or sepsis contact physician or midwife for immediate medical attention.
- If infant demonstrates signs of dehydration, hypoglycemia and/or sepsis, ensure infant nutrition through alternate feeding methods that do not interfere with breastfeeding process (SNS, finger feeding, cup feeding).
- If supplementation is necessary or the infant sleeps for a prolonged period of time, encourage mother to stimulate and maintain milk supply with an electric breast pump.
- Soothers and rubber nipples should be avoided, if possible, at this stage.
- Consult a Lactation Consultant as necessary.
- Provide empathetic support to validate mother's and family's breastfeeding challenges.

A: Audible Swallowing

Expectation: All of the following criteria are met:

- Swallowing is an indicator of intake of breast milk and is a necessary part of breastfeeding.
- Swallowing is seen as a "wide-open pause" while sucking and/or heard as a short forceful expiration of air.
- Spontaneous and intermittent swallowing is seen and /or heard if baby is less than 24 hours of age.
- Spontaneous and more frequent swallowing is seen and/or heard if baby is greater than 24 hours of age.
- As milk volume increases (3 – 4 days after birth), the suck-swallow ratio is 1 – 2 per second.

A = 2

Assessment:

- All age dependent criteria are met.

Intervention:

- Reinforce with mother the importance of swallowing at the breast and how to assess swallowing.

A = 1

Assessment:

- Swallowing is seen and/or heard infrequently and/or only with stimulation.

Intervention:

- Reinforce elements of correct latch with mother.
- Ensure that the mother's nipple is placed far enough into the baby's mouth to stimulate the suck/swallow reflex (the most frequent reason for lack of audible swallowing is inadequate latch).
- Assist the baby to latch by holding nipple in baby's mouth to ensure stimulation of baby's palate.
- Assist mother to hold baby close enough to maintain latch and position of nipple in baby's mouth.
- Apply gentle sublingual pressure/massage to ensure placement of baby's tongue under nipple and stimulate effective sucking.
- Attempt to stimulate suck/swallow by expressing a small amount of colostrum or breast milk onto nipple.
- Gentle breast compression can be used to encourage a let-down of milk and stimulate swallowing.
- Ensure that the parent is aware of the signs of dehydration, feeding cues, how to wake a sleepy baby, and when to seek PHN services, LC support or physician or midwife help.
- Arrange with mother for follow-up in-person contact to assess need for further assistance.
- Provide empathetic support to validate mother's and family's breastfeeding challenges.

A = 0

Assessment:

- No audible swallowing is seen and/or heard.

Intervention:

- Intervene as above in A1 interventions.
- Perform a suck assessment by placing index finger into baby's mouth and stimulating palate.
- Determine position of tongue and strength of suck during the suck assessment.
- If the infant is able to "cup" the finger and rhythmically suck, position a SNS (feeding tube/syringe with EBM or formula) on the breast and nipple to stimulate sucking and swallowing, and ensure caloric intake by baby.
- If the infant is unable to "cup" the finger and rhythmically suck, encourage appropriate tongue position and sucking through finger feeding. This will ensure caloric intake as necessary (lack of swallowing/caloric intake results in decreased breastfeeding ability).
- If supplementation is necessary, encourage mother to stimulate milk production/supply with an electric breast pump.

- Consult a Lactation Consultant as necessary.
- Provide empathetic support to validate mother's and family's breastfeeding challenges.

T: Type of Nipple

Expectation: All of the following criteria are met:
- Nipple/breast assessments are completed to promote the baby's ability to achieve an adequate latch.

T = 2

Assessment:
- Nipple is everted and/or everts with breastfeeding.
- This ensures stimulation of the infant's palate and suck reflex during breastfeeding.

Intervention:

T = 1

Assessment:
- Nipple is flat; does not evert or everts minimally with breastfeeding.

Intervention:
- Teach mother manual stimulation of nipples prior to breastfeeding; this can be accomplished through gentle rolling and/or pulling of the nipple or through the use of a breast pump/nipple everter syringe.
- Discuss the appropriate use of breast shells with mother to stretch the ligaments and tissue-surrounding nipple. Soft-backed shells provide gentle pressure and can be used between or prior breastfeeding.
- Reinforce elements of correct latch, suck and swallow with mother.
- Provide empathetic support to validate mother's and family's breastfeeding challenges.

T = 0

Assessment:
- Nipple is inverted.

Intervention:
- True nipple inversion is uncommon; assessment of nipple protractility can be accomplished through the "pinch test".
- Grasp nipple tissue over areola between thumb and forefinger to observe nipple retraction and assess elasticity of breast/nipple tissue (if nipple elongates with traction, reassure mother that the infant can achieve the same effect with a good latch).
- Teach mother manual stimulation of nipples prior to breastfeeding as above.
- Encourage the appropriate use of breast shells or other devices as listed in T1.
- Reinforce elements of correct latch with mother.
- Consult a Lactation Consultant as necessary.
- Provide empathetic support to validate mother's and family's breastfeeding challenges.

C: Comfort of Breast and Nipple

Expectation: All of the following criteria are met:

- Adequate latch and effective breastfeeding will prevent sore nipples and engorgement, and promote breast health.
- Nipple/breast assessments are completed to assess and promote the baby's ability to achieve an adequate latch.

C = 2

Assessment:

- Breasts are soft or full and non-tender.
- Areas of breast bruising, redness, excessive heat are not seen.
- Signs of nipple blistering, cracks or bleeding are not seen.
- Mother is not experiencing discomfort or pain.

Intervention:

Reinforce the following with the mother:

- Breast fullness without pain is normal and should decrease after breastfeeding.
- Initial discomfort with latch may occur in early breastfeeding period (this pain should subside after approximately 20 to 30 seconds and the remainder of the breastfeeding should be comfortable).
- The mothers should be encouraged to seek help if initial latch pain continues after the first 7 days of breastfeeding.
- Breast/nipple pain is not normal during breastfeeding.

C = 1

Assessment:

- Breasts are becoming fuller, rounder and firmer.
- Nipples are reddened and may have small blisters, cracks or bruises.
- Mothers reports mild to moderate discomfort.

Intervention:

- Reinforce with mother the normal signs of increasing milk production and that pathological engorgement can be prevented with regular and effective emptying of the breasts.
- Assist with effective latch during period of fullness and discomfort.
- Ensure frequent effective breastfeeding for prevention of engorgement.
- If mother is still uncomfortable after effective breastfeeding, the use of cold compresses, cabbage leaves and analgesia (i.e. Ibuprofen) should be encouraged.
- Suggest use of supportive nursing bra without underwire.
- Mothers should be discouraged from pumping to relieve mild to moderate breast fullness, as this will stimulate excessive milk production and engorgement.
- Mothers should be encouraged to express breast milk onto nipple after feeding to promote healing.
- Additional measures include exposing nipples to air, avoidance of nipple irritants (soap) or trauma.
- Anhydrous lanolin preparations may be used to promote breast comfort and nipple healing.

- Provide empathetic support to validate mother's and family's breastfeeding challenges.
-

C = 0

Assessment:

- Breasts are red, hot, and hard (severely engorged).
- Nipples are cracked, bleeding and/or very reddened.
- Nipples have large blisters or areas of bruising.
- Mother reports severe discomfort.

Intervention:

- Assess infant latch at breast and implement recommendations for improving latch.
- Reassure mother that proper latch will result in comfortable breastfeeding despite nipple condition.

- Mother may require the application of warmth and gentle breast massage to soften the breast/areola, stimulate "let-down", and promote effective breastfeeding.

- If engorgement interferes with latch, pumping with low pressure for a short period of time may relieve engorgement and enable infant to latch.
- If mother is still uncomfortable after effective breastfeeding, the use of cold compresses, cabbage leaves, and analgesia should be encouraged.

- If the baby does not breastfeed long enough on both breasts to soften them, hand-express or "pump to comfort" with an effective breast pump just long enough for the breasts to feel comfortable. Draining the breasts of milk is more effective at relieving discomfort than other methods (cabbage or cold treatments).

- If baby is unable to feed frequently enough, then fully drain the breasts once or twice daily with an effective breast pump until engorgement is over. This increases breast drainage and contributes to maternal comfort.
- Review nipple care as outlined above.
- Recommend use of anhydrous lanolin preparations to augment the healing of nipple cracks.
- If there is nipple trauma as a result of poor latch, warm moist compresses may be considered to facilitate healing.
- Consider consult with physician/midwife for prescription for nipple ointment to facilitate healing of nipples.
- Consult a Lactation Consultant as necessary.

- Provide empathic support to validate mother's and family's breastfeeding challenges.

H: Hold/Positioning at Breast

Expectation:
All the following criteria are met:
- The mother is able to independently position and latch her infant to ensure effective breastfeeding.
- The mother should be in a comfortable position during breastfeeding.

H = 2

Assessment:
- Mother is able to position the baby at the breast without assistance.
- Mother demonstrates optimal positioning with both recommended positions (cross-cradle and football hold).
- Mother should be in a comfortable position with good back support during breastfeeding.
- The baby's head should be aligned with the trunk so that the head is directly facing the breast and not turned laterally or hyperextended (baby cannot swallow with head turned to the side).
- The baby's body should be flexed with no muscular rigidity present.
- Pillows should be used to ensure that the baby's head and body are at breast level and supported close to the mother's body during feeding.
- The mother should support her breast with a cupped hand.

Intervention:
- Reinforce maintenance of correct latch and position of infant at breast.

H = 1

Assessment:
- The mother requires assistance to latch and position the baby as described above.
- This assistance is required initially; mother subsequently is able to continue feeding and switch infant to second breast with minimal assistance.

Intervention:
- Assist and reinforce teaching (visual assessment using LATCH-R Tool) as required to achieve and maintain correct position and latch in H2 assessment criteria.
- Arrange with mother for follow-up with in-person contact to determine breastfeeding success and assess need for further assistance.
- Provide empathic support to validate mother's and family's breastfeeding challenges.

H = 0

Assessment:
- Mother unable to correctly position herself and infant at breast.
- Mother requires continual assistance to establish and maintain a correct position and effective latch.

Intervention:

- Instruct mother and provide assistance to position herself comfortably with adequate back support.

- Assist mother in positioning infant at breasts as above in H1 interventions.
- Assist mother to maintain baby's position and latch during entire feed through "hands-on" help.
- Reinforce principles of correct position and latch in subsequent feeds
- Maintain constant presence during complete breastfeeding session to maximize observation and opportunities to assist mother to demonstrate correct and independent positioning of herself and baby during breastfeeding.
- Consult a Lactation Consultant as necessary.
- Arrange with mother for follow-up with in-person contact to determine breastfeeding success and assess need for further assistance.
- Provide empathic support to validate mother's and family's breastfeeding challenges.

R: Maternal Responsiveness to Infant Cues and Maternal Confidence to Breastfeed

Expectation: All of the following criteria are met:
- Mother responds appropriately to early infant feeding cues.
- Mother feels confident about her ability to breastfeed.

R = 2

Assessment:
- Mother is attentive and responsive to early infant feeding cues.
- Mother feels confident about her ability to breastfeed.

Intervention:
- Reinforce importance of early feeding cues.
- Congratulate mother on her early breastfeeding success.

R = 1

Assessment:
- Mother requires help to interpret early feeding cues.
- Mother requires confidence building.

Intervention:

- Reinforce teaching related to early infant feeding cues and the importance of responding to these cues.
- Point out positive aspects of early breastfeeding to build maternal confidence to breastfeed.
- Provide empathic support to validate mother's and family's breastfeeding challenges.

R = 0

Assessment:

- Mother does not respond to early infant feeding cues.
- Mother does not feel confident about her ability to breastfeed.

Intervention:

- Educate mother about early infant feeding cues and the importance of responding to these cues.
- Reassure mother that breastfeeding practice will increase her ability and confidence to breastfeed.
- Assess family and social support for breastfeeding, acknowledging the positives and the barriers with the mother and significant others.
- Provide empathic support to validate mother's and family's breastfeeding challenges.

APPENDIX F
CONTRAINDICATIONS TO BREASTFEEDING

MATERNAL CONTRAINDICATIONS

1. Infection

HIV Positive status

Herpetic lesions on the breast

Mothers with active lesions **on the breast** should **not** breastfeed. Lesions on other areas should be covered. Breastfeeding is permissible. *Scrupulous hand washing is necessary.

Chicken Pox

If mother develops chicken pox in the days prior to delivery, and baby is born **without** the disease, mother and infant should be isolated separately until mother is no longer contagious, regardless of feeding method. (Mother is considered not to be contagious when all existing lesions have crusted and there have been no new lesions in the past 72 hours, usually 6 - 10 days from the onset of the rash.) Varicella zoster immunoglobulin (VZIG) should be given to the infant. If breast is free of lesions, expressed breast milk can be given as soon as infant has received VZIG.

If baby has lesions, isolate mother and baby together. Breastfeeding is permissible.

Active TB

Respiratory contact is contraindicated regardless of feeding method, when mother in contagious state. Expressed milk is safe for baby (tubercle bacillus is **not** passed through milk) provided there are no active TB breast lesions. If an active TB lesion exists, pumped milk must be discarded until lesion is fully healed. After mother has received effective anti-TB therapy, has shown clinical improvement, and has a negative sputum smear (usually takes about 2 weeks), direct breastfeeding may begin.

Invasive Group A Streptococcus Infection

Breastfeeding should continue **after** a temporary suspension during the first 24 hours of maternal therapy. Prophylactic or empiric therapy may be indicated for the infant.

NOTE: Breastfeeding is **not contraindicated** for mothers with **Hepatitis A, B, or C**.

2. Medications

2.1 Breastfeeding is **contraindicated** for mothers taking medications listed below. See Practice Guideline #16 for guidance in working with substance-using mothers.

Amiodarone	Heroin
Amphetamines	Isotretinoin
Bromocriptine	Lithium
Cocaine	Marijuana
Cyclophosphamide	Methotrexate
Cyclosporine	Phencyclidine (PCP)
Doxorybicin	Phonindione
Ergotamine	

*****Codeine: see attached handout advising caution related to use of codeine during BF

Consult reference material for all medications not listed.

2.2 Radioactive Agents

Breastfeeding will need to be the interrupted until milk is clear. Consult Hale: Clinical therapy in breastfeeding patients for time period during which mother's milk must not be used.

2.3 Radio opaque agents

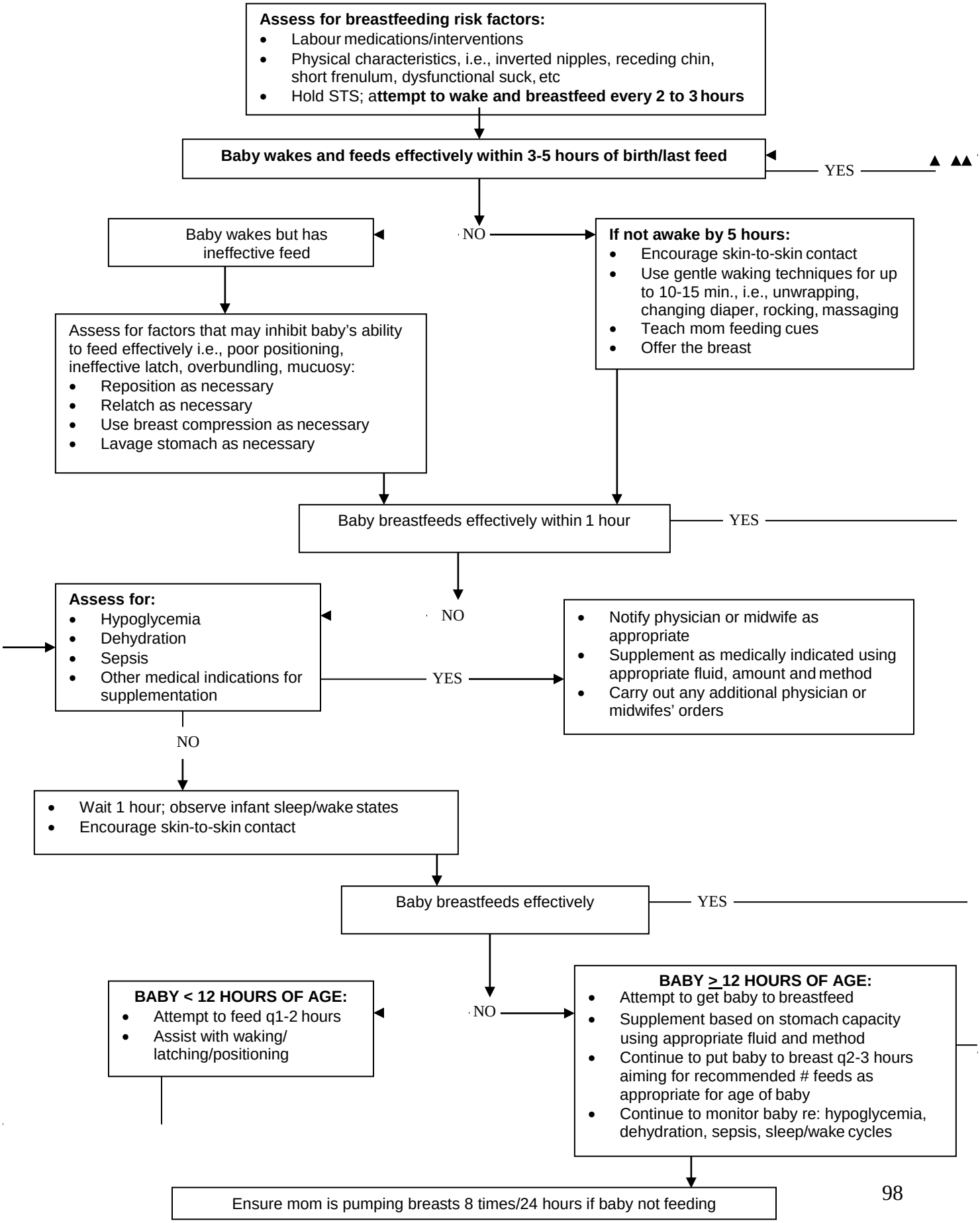
Breastfeeding may, in most instances**,** continue when mother has received radio-opaque contrast agents. Consult Hale: Clinical therapy in breastfeeding patients for current recommendations**.**

NEONATAL CONTRAINDICATIONS

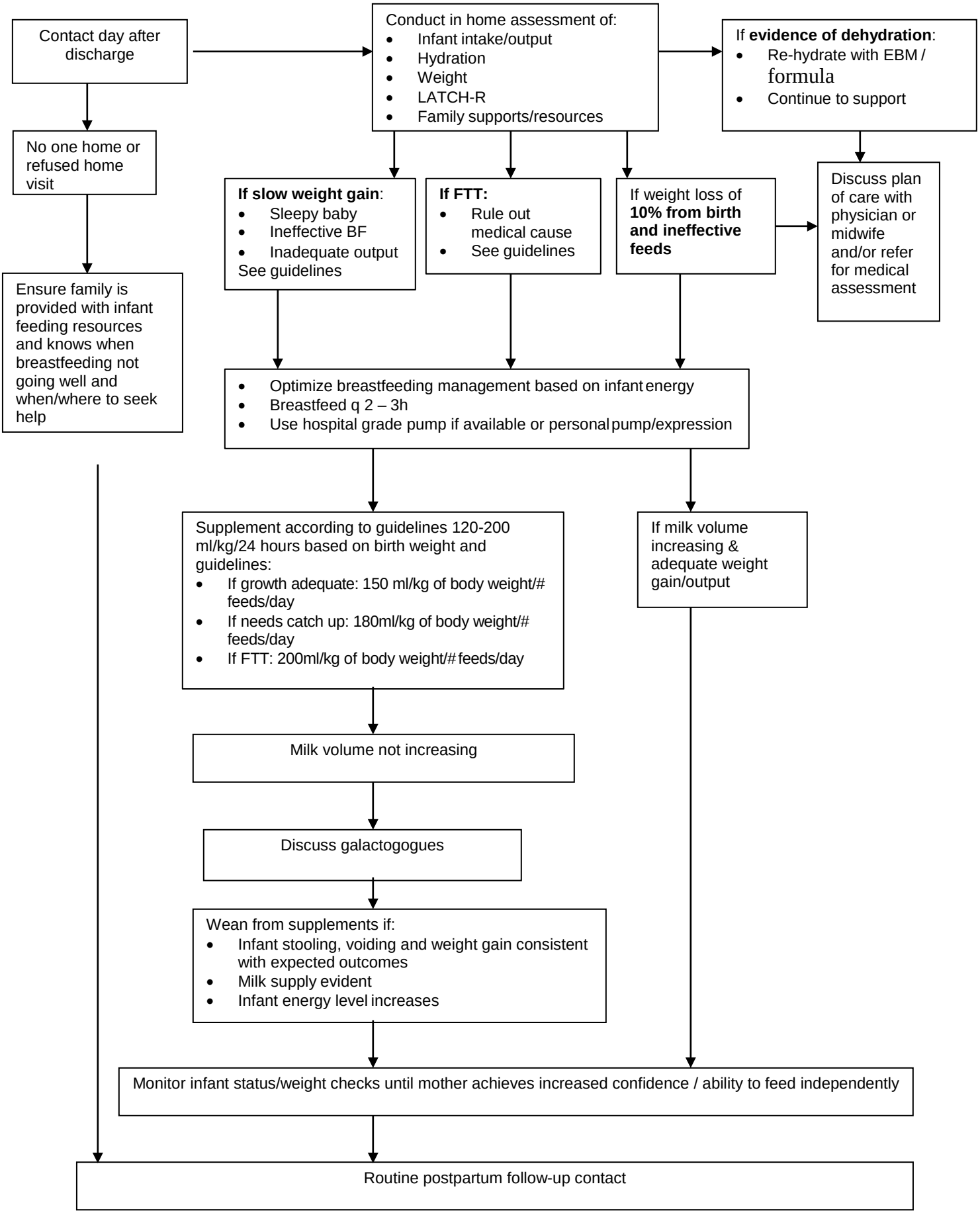
1. Galactosemia

2. Phenylketonuria: Partial breastfeeding only, in combination with phenylalanine free milk (Lofenalac).

APPENDIX G
DECISION TREE: BREASTFEEDING INITIATION FOR THE HEALTHY TERM INFANT



DECISION TREE: BREASTFEEDING ASSESSMENT AND SUPPORT IN THE COMMUNITY



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