



Winnipeg Regional Health Authority Office régional de la santé de Winnipeg

BREASTFEEDING PRACTICE GUIDELINES

For the Healthy Term Infant

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Table of Contents

	Page
INTRODUCTION	
Statement of Intent.....	1
Definitions.....	6
PRACTICE GUIDELINES	
1. Breastfeeding Initiation.....	7
Managing Early Problems	
2. Management of Common Problems in First Few Days.....	9
3. Supplementation of the Breastfed Baby	13
Managing Later Problems	
4. No Latch/Ineffective Breastfeeding.....	19
5. Sore Nipples.....	24
6. Breastfeeding Yeast	26
7. Plugged Nipple Pore	30
8. Engorgement.....	32
9. Plugged Duct.....	35
10. Mastitis.....	38
11. Dehydration.....	41
12. Insufficient Milk Supply	46
13. Abundant Milk Supply and/or Forceful Let-down	49
14. Growth Issues.....	53
APPENDICES	
Appendix A: International Code of Marketing of Breast Milk Substitutes.....	58
Appendix B: Standard for care provider education	60
Appendix C: Anticipatory guidance and prenatal education for breastfeeding	64
Appendix D: Impact of birthing practices/choices on breastfeeding initiation	66
Appendix E: LATCH-R Breastfeeding Assessment and Intervention guide.....	70
Appendix F: Contraindications to breastfeeding	81
Appendix G: Decision Tree: Breastfeeding initiation for the healthy term infant.....	83
Appendix H: Decision Tree: Breastfeeding assessment and support in the community	84
REFERENCES.....	85

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

1. Have a written breastfeeding guideline that is communicated to all health care providers and reviewed as necessary.
2. Train health care providers in the knowledge and skills necessary to practice within these guidelines.
3. Inform all pregnant women and their identified supports of the benefits and management of breastfeeding.
4. Encourage and assist all women who have decided to breastfeed to initiate breastfeeding within one hour of birth.
5. Show all women who have decided to breastfeed how to breastfeed and how to maintain lactation even if they are separated from their infants.
6. Refrain from giving food or drink other than breast milk unless **medically** indicated to infants who are being breastfed. Encourage exclusive breastfeeding to 6 months.
7. Encourage rooming in on a 24-hour basis.
8. Encourage breastfeeding on demand.
9. Refrain from giving pacifiers or artificial nipples to breastfed infants.
10. Inform all women of the breastfeeding resources available in the community and refer to breastfeeding support services upon discharge from hospital.
11. Document any breastfeeding difficulties on the Public Health Referral form.
12. Refrain from discriminating against any woman in her chosen method of infant feeding and fully support her when she has made that choice.
13. Support mothers to initiate and maintain breastfeeding after discharge from hospital.

Breastfeeding Practice Guidelines for the Healthy Term Infant

14. Encourage exclusive breastfeeding to 6 months and continued breastfeeding, with appropriately timed introduction of complementary foods.
15. Provide a welcoming atmosphere for breastfeeding families.
16. Ensure co-operation between health care staff, breastfeeding support groups and the local community.

Suggestions to operationalize these principles:

1. Have written breastfeeding guidelines that are communicated to all health care providers and reviewed as necessary.

- These guidelines define the commitment of the WRHA to the promotion, protection, and support of breastfeeding.
- Breastfeeding is the normal method of newborn and infant feeding and human milk is the optimum form of newborn and infant nutrition.
- All interventions and care plans directed toward the newborn or lactating woman will support breastfeeding and thus protect this valuable resource.
- These guidelines should be communicated to all appropriate staff upon employment and on a regular basis.
- These guidelines will be available as a practice resource for all staff throughout the WRHA.

2. Train health care providers in the knowledge and skills necessary to practice within these guidelines

- All staff who provide care for mothers, newborns and infants will receive breastfeeding education consistent with WRHA Breastfeeding Guidelines within 6 months of their employment, with updates provided on a regular basis.
- Education will include: 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 will also include supervised clinical experience, a system of referral to breastfeeding specialists after hospital discharge, and a list of community resources.

3. Inform all pregnant women and their identified supports of the benefits and management of breastfeeding.

- During the prenatal visits to the physician/midwife as well as prenatal classes, women will be provided with pertinent information on the benefits of breastfeeding and the potential health risks of formula feeding.
- All materials and teaching will reflect the WHO/UNICEF Baby Friendly best practice standards.

4. Encourage and assist all mothers who have decided to breastfeed to initiate breastfeeding within one hour of birth.

- The baby will be immediately placed on the mother's abdomen regardless of the intended

Breastfeeding Practice Guidelines for the Healthy Term Infant

feeding method.

- The mother will be encouraged to breastfeed within an hour of birth.
- Breastfeeding will be encouraged without interruption, in an unhurried environment, except if there is a medical contraindication.
- In the case of a cesarean, skin-to-skin contact and breastfeeding will be started within two hours or 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.
- Breastfeeding assessment, education and intervention (if required) using the LATCH-R Tool will be completed with first feeding after birth and once a shift until discharge, unless more frequently indicated.

5. Show all women who have decided to breastfeed how to breastfeed and how to maintain lactation even if they are separated from their infants.

- 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 pump her breasts eight times in a twenty-four hour period, with continued assistance by an experienced staff member.

6. Refrain from giving food or drink other than breast milk unless medically indicated to infants who are being breastfed. Encourage exclusive breastfeeding to 6 months.

- Supplementary 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 partial breastfeeding for the first year and beyond.

7. Encourage rooming in on a 24-hour basis.

- Mothers and newborns will be encouraged to remain together night and day unless separation is medically indicated.

Breastfeeding Practice Guidelines for the Healthy Term Infant

- The nurse will help the mother and family plan for periods of rest/sleep, both day and night.

8. Encourage breastfeeding on demand.

- Mothers will be encouraged to breastfeed their newborns on cue.
- Breastfeeding during the hospital stay will take priority over non-emergent events such as newborn bath, pictures and visitors.
- The mothers will be taught to recognize hunger cues, assess an adequate feed, and monitor wet and soiled diapers as signs of sufficient intake.

9. Refrain from giving pacifiers or artificial nipples to breastfed infants.

- The use of artificial nipples should be 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.
- If supplementation is necessary, appropriate alternate methods should be explored, using expressed breast milk (EBM) as first choice.
- No gift packs including formula or formula advertisements will be given to the mother upon discharge whether breastfeeding or bottle feeding.
- Nipple shields may be considered in exceptional circumstances after assessment by a breastfeeding specialist; ongoing breastfeeding support is required.

10. Inform all women of the breastfeeding resources available in the community and refer to breastfeeding support services upon discharge from hospital.

- Upon hospital discharge mothers will be verbally informed and given a list of support groups with telephone numbers.
- Members of the health care team should use their influence wherever possible to encourage a breastfeeding culture in the local community.
- The Public Health Nurse will make contact with the client the day after receipt of the referral.

11. Document any breastfeeding difficulties on the Public Health Referral form.

- Documentation of breastfeeding difficulties, assessment, intervention and discharge plan will be faxed, with the referral form, upon discharge.

12. Refrain from discriminating against any woman in her chosen method of infant feeding and fully support her when she has made that choice.

- When a mother makes an informed decision on infant feeding, she will be provided with individual support and education.
- When a mother makes an informed decision to artificially feed, she will be provided with individual instruction on the choice and preparation of infant formula.

13. Support mothers to initiate and maintain breastfeeding after discharge from hospital

- The PHN will endeavour to home visit every breastfeeding family within 48 hours of discharge to observe a breastfeeding session and perform a LATCH-R assessment.
- The PHN will advise the mother regarding optional positions and assist her to choose a position with which she is comfortable and which optimizes breastfeeding.
- The PHN will assist the mother to attach/latch the infant successfully and ensure the mother can identify the signs of a correct latch, suck, let-down and effective milk transfer.
- The PHN will provide information/skill development regarding hand expression of breast milk.
- The PHN will endeavour to prevent and promptly assist the mother with common issues related to breastfeeding.
- In the presence of any identified breastfeeding difficulties, the PHN will obtain a thorough history and offer hands-on infant, maternal and breastfeeding assessment.
- 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.

14. Encourage exclusive breastfeeding to 6 months and continued breastfeeding for the first two years of life or longer, with appropriately timed introduction of complementary foods.

- Care providers will communicate the benefits of continued breastfeeding for the mother and child.
- Care providers will provide information on the introduction of available and safe complementary foods at the appropriate time.
- 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.

15. Provide a welcoming atmosphere for breastfeeding families.

- Care providers will ensure breastfeeding is welcome at all WRHA sites.
- Private breastfeeding areas will be provided for mothers who prefer this option.
- Signage to address the above two options will be provided.
- Staff will be aware of how to support breastfeeding at all WRHA sites.

16. Foster cooperation between health care staff, breastfeeding support groups and the local community.


- A reliable and formal system will be available to communicate a mother's breastfeeding progress as she moves from hospital to community.

Breastfeeding Practice Guidelines for the Healthy Term Infant

- All mothers will be aware of breastfeeding support services in the community and which services are most appropriate to assist with breastfeeding concerns.
- Local community-based breastfeeding support programs (including peer support programs) will participate in the development of breastfeeding policies.
- Other health providers, community groups, businesses, schools and the media will collaborate to work toward a breastfeeding culture in the community.

DEFINITIONS

ABM:	Artificial breast milk
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 3 rd 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.

 Winnipeg Regional Health Authority <i>Caring for Health</i> Office régional de la santé de Winnipeg <i>À l'écoute de notre santé</i>	CLINICAL PRACTICE GUIDELINE		
	TITLE 1.0 BREASTFEEDING INITIATION		CODE
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 1 of 2

1. NORMAL NEWBORN BEHAVIOUR AND FIRST-DAY 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 5-10 feedings over 2-3 hours followed by 4-5 hours of deep sleep.

Normal feeding patterns/frequency

Birth to 24 hours: 4 or more feedings

After 24 hours: ≥ 8 feedings in 24 hours

2. FEEDING CUES

Teach mothers to recognize 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

3. BREASTFEEDING INITIATION

Unbundle the infant and place skin-to-skin. Allow time for nuzzling and licking. During first feeding, ensure optimal latch. The infant should be breastfed on one side until no longer swallowing effectively. If the infant does not swallow, elicit swallows with breast compression and sublingual massage. When the infant stops swallowing on the first breast, switch the infant to the other side until no longer swallowing. The infant may not feed as well on the second side; assessment of swallows is more important than length of time at breast. Frequent breastfeeding does not cause nipple damage if the infant is correctly positioned and latched. Frequent breastfeeding has been associated with improved lactation outcomes. It also increases early milk production and infant weight gain.

4. SATIETY

Satiety is indicated by the infant spontaneously letting go of the breast, relaxed arms and body, and closed mouth.

 Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé	CLINICAL PRACTICE GUIDELINE		
	TITLE 1.0 BREASTFEEDING INITIATION		CODE
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 2 of 2


5. NORMAL INFANT OUTPUT:

DAY	VOIDS	STOOLS
1	At least 1 wet Concentrated	At least 1 meconium (sticky, dark green)
2	At least 2 wet Concentrated	At least 2 meconium
3	At least 3 wet (pale and no odor) Measure of hydration	At least 2 meconium
4	At least 4 heavy wet *Urates should not be present	3 transitional (brown, green to yellow) <ul style="list-style-type: none"> • Measure of caloric intake • Meconium should not be present
5	At least 5 heavy wet	3 breast milk (seedy yellow)
6 +	At least 6 heavy wet	At least 3 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 as every 1-7 days. These stools are usually large; stool colour should be yellow.

6. NORMAL WEIGHT LOSS AND GAIN:

<ul style="list-style-type: none"> • 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 a week in the first 3 months • Never loses more than 10% of birth weight • 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 ABM 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 ABM fed infant • Breastfed infants self regulate energy intake
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NOTE: Utilize appropriate written resources as an adjunct to nurse teaching as required; ensure family understands both written and verbal information.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 2.0 MANAGEMENT OF COMMON PROBLEMS IN FIRST FEW DAYS</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 1 of 4</p>


1. **CONTRIBUTING FACTORS TO PROBLEMS IN THE FIRST FEW DAYS MAY INCLUDE:**
 - 1.1 Anatomical nipple variations which interfere with latch
 - 1.2 Effects of labour and labour interventions
 - 1.3 Effects of birth
 - 1.4 Neonatal jaundice
 - 1.5 Circumcision
 - 1.6 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

2. **LATCH ISSUES DUE TO ANATOMICAL NIPPLE VARIATIONS**
 - 2.1 Normal 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. Nipples that are everted are “easy” for a newborn to position at the junction of the hard and soft palate where the suck reflex is stimulated.
 - 2.2 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.

3. **USE OF LATCH STRATEGIES AND DEVICES**

If latch is not achieved due to nipple variations, the following strategies/devices may assist latch:

 - 3.1 **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:
 - Hold in place over nipple/areola by mother’s bra
 - Can be worn ½ hour before feeding to help the nipple protrude prior to breastfeeding


 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 2.0 MANAGEMENT OF COMMON PROBLEMS IN FIRST FEW DAYS</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 2 of 4</p>

- 3.2 **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. To use:
- Mother applies the plunger and gently pulls back to apply suction to the nipple to comfort
 - Suction is held for approximately 30 seconds
 - Can be used prior to each feeding or repeated between feedings as required
- 3.3 **Breast pump** can also be used to apply gentle pressure before feedings. May assist with nipple eversion and assist latch-on.
- 3.4 **Nipple shield should not be used in the first few days of breastfeeding. If the baby continues to have difficulty latching, this device may be used as a later option (See Guideline #4.0 No Latch/Ineffective Breastfeeding).**
- 3.5 Assess all mothers/infants with latch difficulties early and ongoing in the hospital and after discharge. If devices to assist with latch are employed during breastfeeding initiation, ongoing assessment and follow-up is required to assist with weaning from these devices.

If infants are not latching effectively, mothers should be encouraged to pump their breasts every 3 hours with a hospital grade electric breast pump.

4. **MANAGING A FRANTIC BABY**


- 4.1 Characteristics include:
- Feeds constantly
 - Does not settle
 - Mother is exhausted
 - Confidence to feed is affected

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 2.0 MANAGEMENT OF COMMON PROBLEMS IN FIRST FEW DAYS</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 3 of 4</p>

- 4.2 To intervene:
- Ensure optimal position and latch
 - 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
 - Express colostrum to entice baby to latch/feed
 - 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

5. MANAGING A SLEEPY BABY

- 5.1 Characteristics include:
- Difficult to awake for feeds
 - Latches but does not feed vigorously or nutritively
 - May result in weight loss
 - May result in inadequate voids and stools
- 5.2 To intervene:
- Ensure optimal position and latch
 - 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
 - Encourage mother to stimulate baby to stay awake at breast with the use of tickling, cold clothes, touching
 - Encourage mother to wake the baby to feed every 3 hours after 24 hours of age
 - Feed before over hungry; crying increases disorganized behaviour
 - Provide incentives to encourage latch (colostrum)
 - 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

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<p>TITLE 2.0 MANAGEMENT OF COMMON PROBLEMS IN FIRST FEW DAYS</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 4 of 4</p>


6. MANAGING A JAUNDICED BABY

6.1 Predisposing factors:

- Source of bilirubin is the 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 on Day 4
- Insufficient intake of breast milk is a contributing factor

- 6.2 • To intervene, increase frequency of effective breastfeeding.

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

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 3.0 SUPPLEMENTATION OF THE BREASTFED BABY</p>			<p>CODE</p>
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 1 of 6</p>

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 IN THE HOSPITAL SETTING


- 1.1 Maternal infant separation
- 1.2 Maternal illness/need for contraindicated medications
- 1.3 Infant demonstrating clinical signs of dehydration
- 1.4 Hypoglycemia or at high risk for hypoglycemia **and** not feeding effectively
- 1.5 Infant who has not fed effectively at 12 hours of age
- 1.6 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
- 1.7 After a **thorough** physical examination and assessment of sleep/wake patterns, milk transfer, voids, stools and blood glucose level as appropriate, the following babies **may** require supplementation:
 - Baby has lost $\geq 8\%$ of birth weight **and** is not feeding effectively
 - Baby has not fed the recommended number of feeds in a 24-hour period as outlined in the Newborn Care Map

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

2. NEGATIVE EFFECTS OF ROUTINE SUPPLEMENTAL FEEDINGS

2.1 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.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 3.0 SUPPLEMENTATION OF THE BREASTFED BABY</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 2 of 6</p>

2.2 **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.

2.3 **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.


2.4 **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 SUPPLEMENTING A BREASTFED BABY**

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. Complete LATCH-R, assessment and review history (e.g. narcotic use in labour, forceps or vacuum extractor, visitors causing mother to restrict breastfeeding).
- 3.2 Attempt to optimize breastfeeding whenever possible prior to beginning supplementation.
- 3.3 Gentle waking techniques should be attempted for 5 to 10 minutes if baby is sleepy.
- 3.4 Frantic infants who will not breastfeed due to extreme hunger tension may be calmed with up to 5-10 ml of appropriate fluid so that effective breastfeeding can follow.
- 3.5 When attempts to improve “ineffective breastfeeding” have failed, supplement is required. Expressed breast milk is always preferred.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 3.0 SUPPLEMENTATION OF THE BREASTFED BABY</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 3 of 6</p>


- 3.6 If supplementing, the parents will need further information about the preferred method of supplementation and other relevant information.
- 3.7 Whenever possible supplement with EBM. If EBM is not available, consider supplementing with 5% Glucose Water if baby is less than 24 hours of age (to prevent early exposure to cow's milk protein and potential allergy) and ABM if baby is over 24 hours of age. If baby is less than 24 hours of age 2 to 5 ml of colostrum is a sufficient amount of supplement. Do not mix small amounts of EBM and ABM if both are to be given. Give EBM first to ensure it is not wasted.
- 3.8 If baby is not nursing or is nursing ineffectively, mother should start hand expressing milk and/or pumping breasts every 3 hours as soon as possible (by 12 hours post delivery).
- 3.9 Feed baby whenever baby exhibits feeding cues.
- 3.10 Encourage frequent breastfeeding and skin-to-skin contact.
- 3.11 When the infant is able to latch, offer the breast first at each feeding.
- 3.12 Most alternative feeding methods are time consuming; therefore it is an advantage to provide supplementation at the breast whenever possible.
- 3.13 The amount of supplement will vary dependent on the size of the infant, age of the baby, type of supplement and the presenting situation.
- 3.14 Increase or decrease supplement according to infant response, signs of milk transfer, satiation and adequate hydration. Supplements can be stopped when infant stooling, voiding and weight gain is consistent with expected outcomes for the breastfed infant. Continue to encourage frequent breastfeeding at least 8-12 times in 24 hrs.
- 3.15 Mother must demonstrate independence in the use of alternate feeding method prior to leaving hospital.
- 3.16 Continue to follow the family in the community until mother is observed to manage breastfeeding independently and expresses confidence in her ability to do so.
- 3.17 When acute dehydration is identified, immediate re-hydration and referral to a physician or midwife is required. *See Guideline #11.*
- 3.18 When supplementation is provided for purposes other than maternal decision, primary care provider communication is required.
- 3.19 Infant weight gain is to be monitored at home visit according to birth weight and baseline weight at first visit. Baby should be weighed naked and on the same scale to ensure accuracy.

 Winnipeg Regional Health Authority <i>Caring for Health</i>	Office régional de la santé de Winnipeg <i>À l'écoute de notre santé</i>	CLINICAL PRACTICE GUIDELINE		
		TITLE 3.0 SUPPLEMENTATION OF THE BREASTFED BABY		CODE
AUTHORIZED BY		EFFECTIVE DATE	REVISED DATE	Page 4 of 6


- 3.20 AC/PC weights are rarely required in the community. The PHN should seek advice from a lactation consultant if AC/PC weights are needed.
- 3.21 Close monitoring by phone/home visits and ongoing weight checks are essential until the PHN, the family and the physician or midwife are satisfied that the infant is stable, well hydrated and growing.

4. SUPPLEMENTATION/ALTERNATIVE FEEDING METHODS

Feeding System	Strengths	Limitations
Cup Feeding/ Teaspoon	<ul style="list-style-type: none"> • Quick way to supplement a baby that does not contribute to nipple confusion • 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 	<ul style="list-style-type: none"> • Does not teach sucking at breast • Does not increase milk supply • Term babies can easily become so accustomed to the cup that they will not go to breast
Syringe/ Dropper	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Often needs a second person to help • Is a foreign object in the mouth • Milk can be improperly injected into mouth • Is a slow way to feed baby

 Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé	CLINICAL PRACTICE GUIDELINE		
	TITLE 3.0 SUPPLEMENTATION OF THE BREASTFED BABY		CODE
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 5 of 6

Feeding System	Strengths	Limitations
Feeding Tube Devices at the Breast/SNS	<ul style="list-style-type: none"> • All feeding experience is at the breast - less opportunity for faulty imprinting • Consistent practice and reinforcement for appropriate sucking at breast • Frequent breast stimulation for enhanced milk production • Establishes milk flow to regulate sucking 	<ul style="list-style-type: none"> • Only useful if baby can “latch” • May be cumbersome and unappealing • Needs continuing expert follow-up and teaching • Improper tube placement with no monitoring may exacerbate problem with baby’s sucking action and mouth conformation • Baby may suck on the tube like a straw • Parts can break, may be expensive for some
Finger Feeding	<ul style="list-style-type: none"> • Can be used to train baby for sucking at breast • Mouth must be open wide • Keeps tongue down, forward, and cupped • Delivers milk only with correct sucking action 	<ul style="list-style-type: none"> • Finger is firm and does not change shape with sucking • 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	<ul style="list-style-type: none"> • Faster and easier for baby to obtain milk • Does not require large time expenditure 	<ul style="list-style-type: none"> • May create nipple confusion • Ease of use may decrease mother’s desire to continue breastfeeding • Artificial nipple may weaken baby’s suck, suppress central grooving of the tongue, and decrease masseter muscle activity and development • May reinforce improper oral configuration • May induce bradycardia, apnea, and oxygen de-saturation • Does not teach sucking at breast • Does not increase milk supply • Babies can become accustomed to the bottle and may not go to breast


 Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé	CLINICAL PRACTICE GUIDELINE		
	TITLE 3.0 SUPPLEMENTATION OF THE BREASTFED BABY		CODE
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 6 of 6

5. Supplementation guidelines for the healthy term infant: physiologic feeding amounts

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

- **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.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<h2>CLINICAL PRACTICE GUIDELINE</h2>		
TITLE 4.0 NO LATCH/INEFFECTIVE BREASTFEEDING			CODE
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 1 of 5

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 symptoms:**

1.1 **Feedings:**

- Breastfeeds less than 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)
- 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 (indicates swallowing)
- Rapid, nibbling, shallow type of suck
- Indrawing of cheeks/smacking or clicking sounds
- Difficulty eliciting milk ejection reflex (MER)/let-down
- Falls asleep at breast but does not release nipple

1.2 **Behaviours:**

- Usually sleeps 4-6 hours at a time/hard to waken
- Infant is sleepy and refusing to feed
- Fussy after feeds, chews hands or uses pacifier for very long periods
- Infant is irritable and restless
- Acts “hungry” all the time
- Sucks fist or blanket
- Moves head from “side to side” rapidly

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 4.0 NO LATCH/INEFFECTIVE BREASTFEEDING</p>			<p>CODE</p>
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 2 of 5</p>

1.3 Output:

- 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
- Stools may appear “green” in colour – this may be an indicator of insufficient caloric intake
- Stooling patterns change around 1 month of age at which time some infants may have a large stool as often as every 1-7 days; these stools should be yellow in colour. Stools that are infrequent and/or green may indicate ineffective breastfeeding


Note: The earliest sign of inadequate breast milk intake is infrequent passage of stools.

2. Assess mother for the following symptoms:

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

3. Consider precipitating factors in the maternal/infant history which may include:

- 3.1 Primigravida
- 3.2 Medicated birth (Demerol or epidural)
- 3.3 Caesarean birth
- 3.4 History of maternal infant separation
- 3.5 Delay in first breastfeed experience
- 3.6 History of "forcing" infant to breast
- 3.7 Early supplementation
- 3.8 Jaundice
- 3.9 Maternal depression
- 3.10 Maternal exhaustion
- 3.11 Inadequate teaching/support


 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 4.0 NO LATCH/INEFFECTIVE BREASTFEEDING</p>			<p>CODE</p>
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 3 of 5</p>

4. **Provide care to:**
 - 4.1 Support infant's nutrition and maternal milk supply through optimization of breastfeeding management (correct latch and position, increased frequency of feeds, teaching re: suck/swallow ratio, breast compressions, switch nursing).
 - 4.2 Support family's efforts, including teaching signs of hydration and how to know baby is getting enough.

5. **Support infant nutrition**

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

 - 5.1 Assess ability to latch/breastfeed – often calorie deprivation leads to an infant who has insufficient energy to effectively breastfeed.
 - 5.2 If poor or no latch, discuss feeding options with family. Best practice shows that infants can do well without breastfeeding being interrupted. If no latch, consider spoon, cup feeding, finger feeding and bottle with the family. If baby is latching, consider SNS. Encourage the mother to continue with feedings at the breast and limit feeding times using SNS to maximize time at the breast. If family is not comfortable with SNS, the mother can offer the breast for a short period and then supplement with alternate feeding method.
 - 5.3 Discuss alternate feeding options with family and allow family to choose method they are most comfortable with. The family should realize that baby may not effectively breastfeed until back to birth weight and/or gaining well.
 - 5.4 **A nipple shield may be considered if the baby continues to have difficulty latching, despite optimal position. This device should only be used after a full assessment by a breastfeeding specialist or experienced public health nurse.**
A nipple shield is a thin silicone (not rubber) shield, which is placed over the nipple and areola on which infant sucks. Choice of nipple length and width should be based on maternal and infant assessment. A nipple shield can assist with latch-on due to flat or inverted nipples or when the infant is unable to open mouth wide enough to achieve deep latch.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 4.0 NO LATCH/INEFFECTIVE BREASTFEEDING</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 4 of 5</p>

To use nipple shield:

- Introduce as short-term strategy only; should be used judiciously in term population as “nipple preference” to shield can occur.
- Roll shield back and then apply to nipple/areola; this places the mother’s nipple deeper into the shield. The infant will pull the nipple even further into shield after several minutes of sucking.
- Remove shield at this point and place infant quickly onto the breast before nipple/areola loses its shape.
- If the infant does not latch, instruct mother to keep practicing latch at each feeding after the infant has sucked on the shield for several minutes.

5.5 Preference for supplementation should be with expressed breast milk. If no EBM, then supplement with ABM to ensure adequate calorie intake.

5.6 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.

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

5.8 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). 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.

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

6. Support maternal milk supply

With the goal of providing enough breast milk to eliminate need for artificial baby milk:


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

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

6.3 Encourage family to rent or purchase appropriate equipment and express breast milk in conjunction with infant's feeding times.

6.4 Reassess milk supply after 24 to 48 hours of pumping.

6.5 Discuss the potential use of galactogogues if milk supply less than baby's daily oral requirements. Natural galactogogues may also be considered.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 4.0 NO LATCH/INEFFECTIVE BREASTFEEDING</p>			<p>CODE</p>
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 5 of 5</p>


7. Wean from supplementation

- 7.1 Introduce infant back to breast when alert, demanding feedings, and approaching birth weight.
- 7.2 Ensure position and latch are optimal.
- 7.3 Assess intake at breast (AC/PC weight), nutritive sucking pattern and audible swallows.
- 7.4 If infant does not have energy for entire feeding or consecutive feedings, inform mother that baby may still require supplementation in addition to attempts at breast.
- 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 slowly decrease supplementation.
- 7.7 Wean from galactogogues when baby no longer requiring supplementation.

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 physician or midwife.

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

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<h2>CLINICAL PRACTICE GUIDELINE</h2>		
TITLE 5.0 SORE NIPPLES		CODE	
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 1 of 2

PURPOSE:

To provide support and a consistent approach to breastfeeding mothers experiencing sore nipples.


PROCEDURE:

1. **Assess infant factors:**
 - 1.1 Aggressive or strong suck
 - 1.2 Clamping/clenching response
 - 1.3 Short frenulum
 - 1.4 Poor latch/improper placement of tongue

2. **Assess maternal factors:**
 - 2.1 Nipple type and condition
 - 2.2 Engorgement
 - 2.3 Milk blister due to plugged duct
 - 2.4 Candidiasis
 - 2.5 Nipple vasospasm/blanching of nipples

3. **Discuss the following strategies with the family:**
 - 3.1 Proper latch and positioning
 - 3.2 Discuss and assist with correct latch and position trying a variety of positions to relieve nipple soreness

4. **Discuss the following comfort measures with the mother:**
 - 4.1 Apply warm moist compresses
 - 4.2 Warm nipples for short periods after each feeding, using a hair dryer on low setting
 - 4.3 Apply colostrum/breast milk to nipples after feedings
 - 4.4 Apply Lansinoh/Purelan if nipple soreness continues
 - 4.5 Do not wash nipples frequently; daily bathing is sufficient
 - 4.6 For moderate to severe pain, presence of cracks or blisters, discuss prescription ointments. Apply a small amount after nursing with no need to wash off. (Note: ointments containing steroids should not be used for longer than 10 days).

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 5.0 SORE NIPPLES</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 2 of 2</p>


- 4.6 For severe nipple trauma, presence of exudate and/or infection and pain consider antibiotics.
- 4.7 If nipple pain is intolerable, consider pumping for 24-48 hours (a double electric pump is optimal to maintain milk supply when baby is not breastfeeding).
- 4.8 Consider alternative feeding methods if required.

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 physician or midwife.

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

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<h2>CLINICAL PRACTICE GUIDELINE</h2>		
TITLE 6.0 BREASTFEEDING YEAST		CODE	
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 1 of 4

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:**
 - 1.1 Sore nipples after a time of pain-free nursing
 - 1.2 Burning or shooting pain during and/or after nursing
 - 1.3 Itchy nipples or flaking skin on nipples
 - 1.4 Pink or red nipples with shiny taut areola
 - 1.5 Crescent shaped cracks at nipple/areolar junction
 - 1.6 Cracks that do not heal with a good latch/thriving baby
 - 1.7 Blanching of the nipple during or after feeding (vasospasm)
 - 1.8 **Can have no symptoms at all


2. **Assess infant for the following symptoms of breastfeeding yeast:**
 - 2.1 A white tongue or oral mucous membrane
 - 2.2 Diaper rash that does not clear
 - 2.3 Change in behaviour - fussiness while feeding, refuses to feed
 - 2.4 Pulls off breast or "clicks" while feeding
 - 2.5 **Can have no symptoms at all

3. **Assess for other factors:**
 - 3.1 Maternal history of vaginal yeast infection
 - 3.2 Maternal diabetes
 - 3.3 Maternal and/or infant history of antibiotic use
 - 3.4 Previous sore nipples due to position/latch
 - 3.5 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.


 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 6.0 BREASTFEEDING YEAST</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 2 of 4</p>

- 4.4 **If infant exhibits mild or no symptoms of oral thrush, discuss:**
- Nystatin oral suspension can be applied to baby’s mouth **after every** breastfeeding. This liquid may decrease the growth of yeast between feedings, even if baby has no symptoms.
 - 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.
5. **If infant has moderate to severe symptoms and/or these symptoms are not getting better, discuss:**
- 5.1 Gentian Violet (0.25 or 0.5%) can be applied once a day for 4-7 days. This can also be used as initial treatment.
- 5.2 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.
 - Paint the infant’s mouth and mother’s nipple after the feeding.
- 5.3 Gentian Violet may cause mouth “ulcers”. Therefore, check baby’s mouth daily.
- 5.4 Gentian Violet should be used in addition to the treatments already listed.
- 5.5 For persistent oral thrush, oral medication may be considered.
- 5.6 Continue using Nystatin suspension in conjunction with oral medication.
6. **If infant exhibits symptoms of yeast in groin/buttocks:**
- 6.1 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.
- 6.2 Treat oral and diaper area until all signs and symptoms of yeast are gone.
- 6.3 Continue to treat until all signs and symptoms are gone.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 6.0 BREASTFEEDING YEAST</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 3 of 4</p>

7. **If mother exhibits symptoms of nipple candidiasis, discuss ointments/medications:**
 - 7.1 If symptoms are **mild**, OTC ointments can be used on nipples. These ointments can be purchased without a prescription.
 - 7.2 If **nipples are cracked** and sore, prescription ointments are more effective. These require a prescription. (Note: ointments containing steroids should not be used for longer than 10 days).
 - 7.3 If symptoms **persist or worsen** despite this treatment, discuss the use of ointment containing Canestan and Fucidin 1:1; this requires a prescription.
 - 7.4 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.
 - 7.5 Gentian Violet (0.25 or 0.5%) 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.
 - 7.6 For **persistent systemic nipple/breast candidiasis**, consider treating with oral medication.
 - 7.7 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:**
 - 8.1 Acidophyllus 1 capsule 3 times a day
 - 8.2 Grapefruit Seed Extract capsules: 250 mg 3 times a day
 - 8.3 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.
 - 8.4 Limit sweet foods and yeast containing foods (breads) in diet
 - 8.5 Eat yogurt containing active bacterial culture several times a day
 - 8.6 Rinse nipples after feeding with an acidic solution of 1 Tbsp. of vinegar in 1 cup of water

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 6.0 BREASTFEEDING YEAST</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 4 of 4</p>

9. **Discuss other considerations:**
 - 9.1 Good hand washing for entire family with non anti-bacterial soap is important
 - 9.2 Consider using paper towels to prevent spreading yeast
 - 9.3 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)
 - 9.4 Take medicine for pain relief before or after breastfeeding if necessary
 - 9.5 Other family members may require topical or oral treatment if yeast does not clear

10. **Discuss care plan and progress of mother and baby with physician or midwife.**

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


 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 7.0 PLUGGED NIPPLE PORE</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 1 of 2</p>

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:**
 - 1.1 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.
 - 1.2 Pinpoint pain described as throbbing.
 - 1.3 Pain increases during feeding as pressure behind plugged pore increases with let-down of milk.
 - 1.4 White dot may increase in size during feeding.
2. **Assess infant for the following symptoms:**
 - 2.1 Infant may be “fussy” during feeding because of slower flow of milk from plugged area.
3. **Provide care to:**
 - 3.1 Support infant's nutrition
 - 3.2 Manage maternal milk supply
 - 3.3 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.


 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 7.0 PLUGGED NIPPLE PORE</p>			<p>CODE</p>
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 2 of 2</p>

4.6 Mother requires directions for preventative nipple care to ensure healing without infection; prescription ointments may prevent bacterial and/or yeast infection. (Note: ointments containing steroids should not be used for longer than 10 days).

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

5. Discuss care plan and progress of mother and baby with physician or midwife.

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

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<h2>CLINICAL PRACTICE GUIDELINE</h2>		
TITLE 8.0 ENGORGEMENT		CODE	
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 1 of 3

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:**
 - 1.1 Bilateral breast swelling
 - 1.2 Tenderness
 - 1.3 Warmth
 - 1.4 Redness
 - 1.5 Throbbing pain
 - 1.5 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:**
 - 3.1 Previous breastfeeding experience
 - 3.2 Medicated birth (Demerol or epidural)
 - 3.3 Caesarean birth
 - 3.4 History of maternal infant separation
 - 3.5 Delay in first breastfeed experience
 - 3.6 Early supplementation
 - 3.7 Jaundice
 - 3.8 Inadequate teaching/support

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.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 8.0 ENGORGEMENT</p>			<p>CODE</p>
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 2 of 3</p>


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.
 - For severe engorgement, combine heat and massage until breasts are emptied.
- 5.2 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.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 8.0 ENGORGEMENT</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 3 of 3</p>

- 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.
 - 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 physician or midwife.**

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

 Winnipeg Regional Health Authority <i>Caring for Health</i> Office régional de la santé de Winnipeg <i>À l'écoute de notre santé</i>	CLINICAL PRACTICE GUIDELINE		
	TITLE 9.0 PLUGGED DUCT		
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 1 of 3

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:**
 - 2.1 Palpable lump
 - 2.2 Warmth in the area
 - 2.3 Redness
 - 2.4 Mild to severe localized pain
 - 2.5 Gradual onset
 - 2.6 May shift in location
 - 2.7 The mother feels generally well
 - 2.8 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:**
 - 3.1 Infant may be “fussy” during feeding because of slower flow of milk from plugged area.


 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 9.0 PLUGGED DUCT</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 2 of 3</p>

4. **Provide care to:**

- 4.1 Support infant's nutrition
- 4.2 Manage maternal milk supply
- 4.3 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.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 9.0 PLUGGED DUCT</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 3 of 3</p>

- 5.9 **Rest.** Encourage the mother, if possible, to go to bed with the baby and stay there until she is feeling better. 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 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:

- 6.1 Maternal health
- 6.2 Infant weight gain

7. Discuss care plan and progress of mother and baby with physician or midwife.

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

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<h2>CLINICAL PRACTICE GUIDELINE</h2>		
TITLE 10.0 MASTITIS			CODE
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 1 of 3

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:**
 - 1.1 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:**
 - 2.1 Palpable lump
 - 2.1 Sudden onset
 - 2.2 Localized
 - 2.3 Breast is pink or red, hot, tender and swollen
 - 2.4 Redness may appear in a wedge shaped area on the breast
 - 2.5 Intense localized pain
 - 2.6 Mother has flu-like symptoms
 - 2.7 Temperature is 101° F or 38.4° C or higher

3. **Assess infant for the following symptoms:**
 - 3.1 Infant may be “fussy” during feeding because of slower flow of milk from affected area.

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


 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 10.0 MASTITIS</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 2 of 3</p>

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 nursings.
 - 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.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 10.0 MASTITIS</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 3 of 3</p>

- 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 with the baby and stay there until she is feeling better. 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:
- 6.1 Maternal health
 - 6.2 Infant weight gain
7. **Discuss care plan and progress of mother and baby with physician or midwife.**

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

 Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé		CLINICAL PRACTICE GUIDELINE	
TITLE 11.0 DEHYDRATION			CODE
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 1 of 5


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.

1.1 Maternal History

Previous/Existing Medical History	Labour and Delivery/ Hospital Experience	Physical Factors
<ul style="list-style-type: none"> • 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) 	<ul style="list-style-type: none"> • 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) 	<ul style="list-style-type: none"> • 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


 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<h2>CLINICAL PRACTICE GUIDELINE</h2>		
<p>TITLE 11.0 DEHYDRATION</p>			<p>CODE</p>
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 2 of 5</p>

1.2 Infant 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”

1.3 Other:


- Lack of knowledge re: breastfeeding
- Inadequate support in home/exhaustion
- Not enough time at breast
- 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

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<h2>CLINICAL PRACTICE GUIDELINE</h2>		
<p>TITLE 11.0 DEHYDRATION</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 3 of 5</p>


2. **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

3. **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)

4. **Care plan related to supplementation of the dehydrated baby.**
 - 4.1 In the presence of acute dehydration (late signs of dehydration) immediate re-hydration and referral to a physician or midwife is required.
 - 4.2 In the presence of **early** signs of dehydration, take history, complete LATCH-R assessment and attempt to optimize breastfeeding whenever possible before beginning supplementation.
 - 4.3 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.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<h2>CLINICAL PRACTICE GUIDELINE</h2>		
<p>TITLE 11.0 DEHYDRATION</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 4 of 5</p>

- 4.4 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. 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.
- 4.5 If infant does not latch well and/or milk transfer (swallow) is not evident then immediate supplementation is necessary.
- 4.6 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.
- 4.7 Whenever possible supplement with EBM. If EBM is not available, supplement with ABM. When baby is fed EBM and ABM, feed EBM first (to ensure it is not wasted) and then ABM to requirements. EBM and ABM however may be safely mixed.
- 4.8 Parents will need information and appropriate teaching about their preferred method of supplementation (*Guideline #3*).
- 4.9 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.
- 4.10 Consider communication with primary care provider prior to supplementation. Provide primary care provider with proposed plan of care via telephone contact. When supplementation is provided for purposes other than maternal decision, primary care provider communication is required.
- 4.11 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.
- 4.12 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 hours.
- 4.13 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.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 11.0 DEHYDRATION</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 5 of 5</p>

5. **Determining the amount of supplement – factors to consider:**
 - 5.1 Age
 - 5.2 Evidence of milk production, transfer and intake at breast
 - 5.3 Whether supplementation is feeding replacement (no latch, breast refusal)
 - 5.4 Type of supplementation (EBM or ABM)
 - 5.5 Mother’s commitment to mutually negotiated plan i.e. comfort with recommended technologies
 - 5.6 Approximate “stomach capacity” per age and approximate amount of “usual milk/colostrum production” per age (*See Guideline #3.0*)
 - 5.7 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)


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

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

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

8. **Frequent follow-up by the PHN and/or PHN/Lactation Consultant.**
 - 8.1 Assess:
 - Infant weight gain
 - Maternal milk supply
 - 8.2 Support of mother's efforts
9. **Discuss care plan and progress of mother and baby with physician or midwife.**

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

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<h2>CLINICAL PRACTICE GUIDELINE</h2>		
TITLE 12.0 INSUFFICIENT MILK SUPPLY		CODE	
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 1 of 3

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:**
 - 1.1 Losing weight after the first week
 - 1.2 Infant does not regain birth weight by two weeks
 - 1.3 Weight loss greater than 10% of birth weight
 - 1.4 Evidence of malnutrition/dehydration – sunken fontanel, greyish pallor, lethargy, loss of fat layer under the skin, strong urine, inadequate stools
 - 1.5 Weight loss below 10th percentile at one month
 - 1.6 Fussy at the breast; refusal to feed

2. **Assess mother for the following symptoms:**
 - 2.1 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)
 - 2.2 No report of initial “engorgement” or fullness in the early postpartum period


3. **Provide care to:**
 - 3.1 Support infant's nutrition and maternal milk supply through optimizing breastfeeding management (latch, positioning, breast compressions, switch nursing, increased feeding frequency)
 - 3.2 Support family’s efforts

4. **Support infant nutrition:**

Goal of feeding plan is to maximize infant caloric intake while supporting maternal milk production.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 12.0 INSUFFICIENT MILK SUPPLY</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 2 of 3</p>

- 4.1 Assess ability to latch/breastfeed. Calorie deprivation may lead to an infant who has insufficient energy to effectively breastfeed.
 - 4.2 If poor or no latch, discuss feeding options with family, including finger feeding, cup feeding, bottle-feeding (*See Guideline #3*).
 - 4.3 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.
 - 4.4 Supplementation should be with either breast milk or iron fortified infant ABM, to ensure adequate calorie intake. Mom should be encouraged to pump every 3 hours with double electric pump if possible.
 - 4.5 Volume of supplementation should reflect infant age and condition. *See Supplementation Guidelines #3 and/or Dehydration Guideline #11.*
 - 4.6 Infant should be fed at least 8 times in 24 hours.
 - 4.7 Family needs to waken infant to feed since hypocaloric babies in particular will sleep through hunger – awaken to feed q3h for first 48 hours.
 - 4.8 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).
 - 4.9 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.
 - 4.10 Encourage skin-to-skin contact before and after feedings.
5. **Support maternal milk supply:**
- 5.1 Assess maternal milk supply – hypocaloric baby may not stimulate maternal milk production.
 - 5.2 If baby cannot breastfeed effectively, milk production should be stimulated, increased, or maintained with a hospital grade electric breast pump.
 - 5.3 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 ABM).
 - 5.4 Reassess milk supply after 24 to 48 hours of pumping.
 - 5.5 Consider galactagogue if milk supply is less than baby's daily oral requirements.
 - 5.6 Galactogogues should be maintained at full dose until infant off all supplements.
 - 5.7 When baby is fully BF and gaining 4 to 7 ounces a week for at least 1 week, weaning from galactogogue can be considered.

 Winnipeg Regional Health Authority Caring for Health	Office régional de la santé de Winnipeg À l'écoute de notre santé	CLINICAL PRACTICE GUIDELINE	
TITLE 12.0 INSUFFICIENT MILK SUPPLY			CODE
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 3 of 3

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


5.1 Assess:

- Infant weight gain
- Maternal milk supply

5.2 Support of mother's efforts

7. Discuss care plan and progress of mother and baby with physician or midwife.

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


 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 13.0 OVER-ABUNDANT MILK SUPPLY AND/OR FORCEFUL LET-DOWN</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 1 of 4</p>

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.


 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<h2>CLINICAL PRACTICE GUIDELINE</h2>		
TITLE 13.0 OVER-ABUNDANT MILK SUPPLY AND/OR FORCEFUL LET-DOWN		CODE	
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 2 of 4

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; use the same breast each time in a 2-3 hour period (block feeding). This reduces breast stimulation and increases “hind milk” intake. 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.
- 4.3 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.
- 4.4 Try different breastfeeding positions. 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).

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<h2>CLINICAL PRACTICE GUIDELINE</h2>		
TITLE 13.0 OVER-ABUNDANT MILK SUPPLY AND/OR FORCEFUL LET-DOWN			CODE
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 3 of 4

- 4.5 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.
- 4.6 Initiate the let-down of milk prior to latching the baby – or take the baby off the breast as the initial let-down occurs. 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.
- 4.7 Avoid the use of pacifiers or supplements. Overuse of pacifiers can delay feedings and increase the milk volume at the next feeding. Supplements are **not** appropriate for babies under six months of age. Some mothers report that although their babies seem to improve initially on ABM, they often encountered other problems associated with early introduction of bottles to breastfeeding babies.
- 4.8 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 (15 minutes every 3 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.
- 4.9 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.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 13.0 OVER-ABUNDANT MILK SUPPLY AND/OR FORCEFUL LET-DOWN</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 4 of 4</p>


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

Assess:

- 5.1 Infant fussiness
- 5.2 Maternal milk supply
- 5.3 Family health
- 5.4 Infant's weight gain weekly

6. Discuss care plan and progress of mother and baby with physician or midwife.

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

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<h2>CLINICAL PRACTICE GUIDELINE</h2>		
TITLE 14.0 GROWTH ISSUES		CODE	
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 1 of 5

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 for the following symptoms:

1.1 Feeding:


- Breastfeeds less than 8 times in 24 hours
- Long feeds (> 30 minutes per side)
- Very short feeds (< 5 minutes per side)
- 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 (indicative of a hypocaloric state)

 Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé	CLINICAL PRACTICE GUIDELINE		
	TITLE 14.0 GROWTH ISSUES		
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 2 of 5

- 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:**

- 2.1 Breasts do not soften after feed
- 2.2 Persistent or increasingly painful nipples
- 2.3 Engorgement unrelieved by feeding
- 2.4 Lack of breast fullness or apparent milk supply
- 2.5 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:

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

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

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

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<h2>CLINICAL PRACTICE GUIDELINE</h2>		
TITLE 14.0 GROWTH ISSUES		CODE	
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 3 of 5

4. Review maternal infant history for:

- 4.1 History of maternal infant separation
- 4.2 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)
- 4.3 Delay in first breastfeed experience
- 4.4 Mother has many other responsibilities
- 4.5 Infant illness
- 4.6 Maternal medication (oral contraceptives)
- 4.7 Early supplementation


5. Provide care to:

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


6. Support infant nutrition:

The goal of feeding plan is to maximize 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, the following strategies may be necessary
- 6.2 If poor or no latch, discuss alternate feeding options with family (*Guideline #3*).
- 6.3 Family should choose method that they are comfortable with and can manage.
- 6.4 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).

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<h2>CLINICAL PRACTICE GUIDELINE</h2>		
TITLE 14.0 GROWTH ISSUES		CODE	
AUTHORIZED BY	EFFECTIVE DATE	REVISED DATE	Page 4 of 5

- 6.5 Supplementation should be with either breast milk or iron fortified infant ABM, to ensure adequate calorie intake.
 - 6.6 Volume of supplementation should reflect Guideline #3 or #11.
 - 6.7 If the infant is supplemented and the mother is pumping, feeding every 3 hours (8 times a day) ensures infant nutrition, breast stimulation and rest.
 - 6.8 Mom should be encouraged to pump with double electric pump every three hours if possible.
 - 6.9 Family needs to waken infant to feed since hypocaloric babies in particular will sleep through hunger - awaken to feed q3h for first 48 hours.
 - 6.10 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).
 - 6.11 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.
 - 6.12 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 ABM).
 - 7.4 Reassess milk supply after 24 to 48 hours of pumping.
 - 7.5 Discuss use of galactagogue if milk supply less than baby's daily requirements.
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.

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p>	<p>CLINICAL PRACTICE GUIDELINE</p>		
<p>TITLE 14.0 GROWTH ISSUES</p>		<p>CODE</p>	
<p>AUTHORIZED BY</p>	<p>EFFECTIVE DATE</p>	<p>REVISED DATE</p>	<p>Page 5 of 5</p>

- 8.5 If baby fussy/impatient at breast while waiting for MER, try SNS or small amount of supplement by alternate feeding method prior to breastfeeding.
 - 8.6 When baby breastfeeding for almost full oral requirements, encourage mother to offer frequent BF and slowly decrease supplementation.
 - 8.7 Discuss weaning from galactagogue when supplementation no longer required.
9. **Frequent follow-up by the care provider.**
- 9.1 Assess:
 - Infant weight gain
 - Infant energy level
 - Hydration status
 - Maternal milk supply
 - Volume of supplement
 - 9.2 Support of mother's efforts
10. **Discuss care plan and progress of mother and baby with physician or midwife.**

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

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.

Breastfeeding Practice Guidelines for the Healthy Term Infant

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 Practice Guidelines for the Healthy Term Infant

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						

Breastfeeding Practice Guidelines for the Healthy Term Infant

BREASTFEEDING COMPETENCY CHECKLIST Key: N=Novice, C=Competent, P=Proficient	SELF EVALUATION			PRECEPTOR EVALUATION		
	N	C	P	N	C	P
Demonstrates assessment skills:						
• Reviews mother’s previous experience and relevant health and breastfeeding history						
• 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						

Breastfeeding Practice Guidelines for the Healthy Term Infant

BREASTFEEDING COMPETENCY CHECKLIST Key: N=Novice, C=Competent, P=Proficient	SELF EVALUATION			PRECEPTOR EVALUATION		
	N	C	P	N	C	P
Demonstrates knowledge of supplementation:						
<ul style="list-style-type: none"> • Advises supplementation at breast with EBM to satiation whenever possible 						
<ul style="list-style-type: none"> • Assesses hydration indicators and identifies presence of risk factors/signs and symptoms of dehydration 						
<ul style="list-style-type: none"> • Identifies deviations, monitors feeding patterns, infant weight, recommends appropriate interventions and notifies primary care provider of abnormal findings per guidelines 						
<ul style="list-style-type: none"> • Exhibits judicious use of supplementation devices, bottles, soothers and pumps 						
<ul style="list-style-type: none"> • Develops plan of care with the mother/family 						
<ul style="list-style-type: none"> • 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 						
<ul style="list-style-type: none"> • Advises primary care giver if signs of dehydration, weight loss of 10% +, and/or ineffective breastfeeding are evident 						
<ul style="list-style-type: none"> • Uses available resources to assist in care plan development and the resolution of breastfeeding issues 						
<ul style="list-style-type: none"> • 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). 						
<ul style="list-style-type: none"> • 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 8-12 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.

Breastfeeding Practice Guidelines for the Healthy Term Infant

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, 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

Breastfeeding Practice Guidelines for the Healthy Term Infant

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 2003 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

Adapted from the LATCH Tool © Nursing Service Division – Sacred Heart General Hospital, Eugene, Oregon and the HSC Women's Hospital, LATCH Breastfeeding Assessment and Intervention Guideline ©1996.

Purpose:

The LATCH-R Breastfeeding Assessment and Intervention Strategies are 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 heard resembling a short forceful expiration of air.
- Spontaneous and intermittent swallowing is heard if baby is less than 24 hours of age.
- Spontaneous and more frequent swallowing is 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.

Breastfeeding Practice Guidelines for the Healthy Term Infant

A = 2

Assessment:

- All age dependent criteria are met.

Intervention:

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

A = 1

Assessment:

- Swallowing is 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 audible 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 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 ABM) on the breast and nipple to stimulate sucking and

Breastfeeding Practice Guidelines for the Healthy Term Infant

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”.

Breastfeeding Practice Guidelines for the Healthy Term Infant

- 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.

Breastfeeding Practice Guidelines for the Healthy Term Infant

- 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.

Breastfeeding Practice Guidelines for the Healthy Term Infant

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.

Breastfeeding Practice Guidelines for the Healthy Term Infant

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

1.1 HIV Positive status

1.2 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.

1.3 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.

1.4 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.

1.5 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.

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

Consult reference material for all medications not listed.

2.2 Radioactive Agents

Breastfeeding will need to be 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

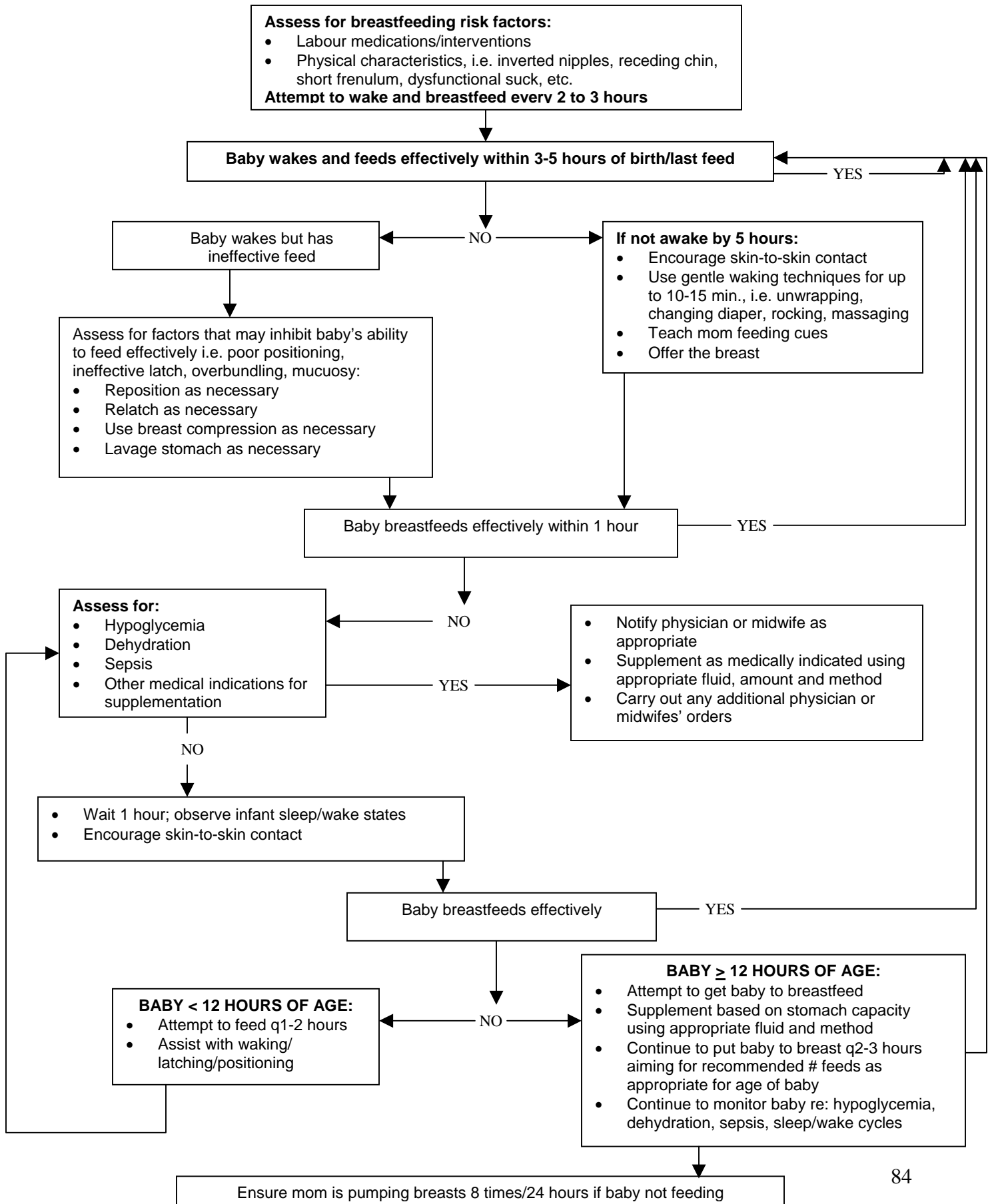
Breastfeeding may, in most instances, continue when mother has received radio-opaque contrast agents. Consult Hale: Clinical therapy in breastfeeding patients for current recommendations.

NEONATAL CONTRAINDICATIONS

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

Breastfeeding Practice Guidelines for the Healthy Term Infant

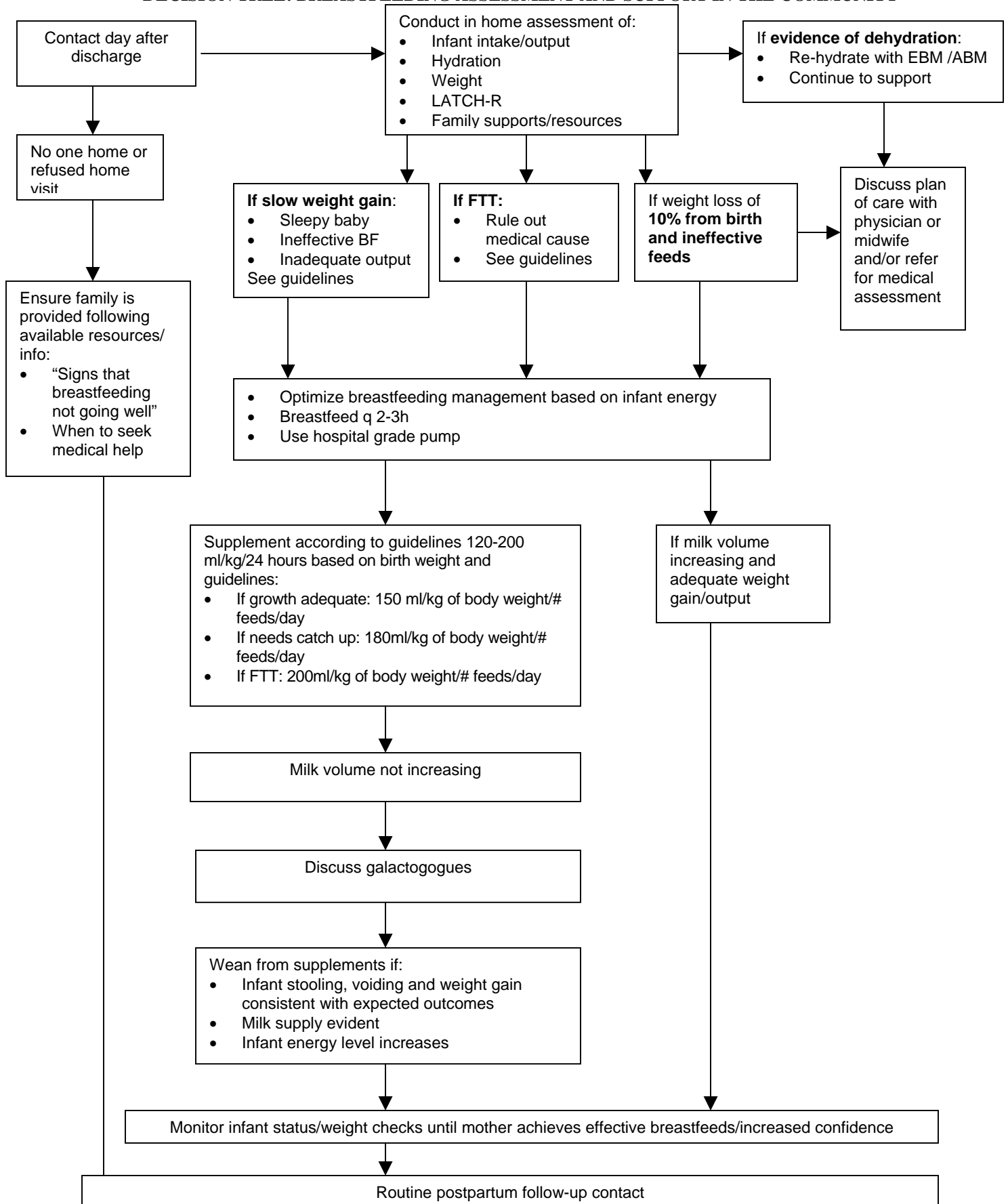
APPENDIX G DECISION TREE: BREASTFEEDING INITIATION FOR THE HEALTHY TERM INFANT



Breastfeeding Practice Guidelines for the Healthy Term Infant

APPENDIX H

DECISION TREE: BREASTFEEDING ASSESSMENT AND SUPPORT IN THE COMMUNITY



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