

SUBJECT/TITLE: <b>Infant Feeding Assessment – Community/Acute</b>	NUMBER <b>1-F-2</b>	PAGE 1 of 22
AUTHORIZATION: POPA (2006 Feb 14) INN (2006 April 20) NNC (2006 April 21) RNCC (2006 May 3) Women and Infant Managers (2006 May 9)	DATE ESTABLISHED  May 23, 2006	DATE REVISED

**PURPOSE**

1. To provide the criteria, norms, variations, rationale and anticipatory guidance for Maternal/Infant Health Care Professionals to perform a comprehensive infant feeding assessment in the postpartum period.
2. To provide guidance for concerns arising from the infant feeding assessment and recommend interventions.

**POINT OF EMPHASIS**

1. Feeding is not a single behaviour but a series of behaviours. (31, 34, 36, 37, 40)
2. An effective feeding includes all the normal parameters as outlined in the “Infant Feeding Assessment Practice Guidelines”
3. An infant’s health is enhanced with exclusive breastfeeding from birth. (44)
4. Maternal confidence is increased with effective exclusive breastfeeding. (3, 5,9,11,12,24, 26, 30, 36)
5. The earlier the newborn has its first breastfeed, ideally in the first hour, the greater outcome for breastfeeding duration and infant health
6. The duration rate of breastfeeding is increased when exclusive breastfeeding is supported. (1,5,24,28, 29, 33, 34, 44)
7. Frequent assessment of breastfeeding ensures effective breastfeeding and reduces problems for both mothers and infants. (3, 4, 6, 7, 9, 13, 14, 15, 18, 19, 23, 25, 28, 30, 32,33, 34, 35, 37,38)
8. The first seven days postpartum are the most critical in establishing and maintaining breastmilk supply for adequate growth of the infant. (3, 4, 13,14, 15, 23, 25, 29, 33, 45)
9. Growth and development is the long term parameter of effective breastfeeding. (8, 13)
10. The healthcare provider will provide teaching re: infant feeding decisions after which a mother will be supported in her feeding decision to breast or bottle-feed her infant and appropriate teaching provided. (46, 47)
11. Skin-to-skin facilitates infant’s readiness to feed. (Kangaroo Mother Care KMC®) (14, 36, 41, 42, 43)

SUBJECT/TITLE:  <b>Infant Feeding Assessment – Community/Acute</b>	DATE ESTABLISHED:  May 23, 2006	DATE REVISED:	NUMBER:  <b>1-F-2</b>	PAGE:  2 of 22
--	---------------------------------------	---------------	-----------------------------	----------------------

## DEFINITIONS

**Constipation in infants:** Stools which are of hard consistency and are difficult to pass.

**Lactogenesis II:** Normal increase in milk volume post delivery.

**Medicated infant:** The neuro-behaviour of infant is affected by medications used during labour and birth. This compromises the infant's ability to latch and effectively transfer milk from the breast. The infant may present as sleepy, lethargic and/or not interested in feeding.

**Non Nutritive sucking:** The act of suckling the breast with little or no secretion of milk. Infant may suckle when distressed or to be calmed or quieted; suckling stimulates the vagal nerve which stimulates peristalsis of the gastrointestinal tract and the release of growth hormones and insulin into the gut which enhances absorption of nutrients.

**Reverse Pressure Softening:** Breast- areolar compression to help soften the areola to facilitate infant latch; especially helpful when intravenous fluids have been given to the mother which may result in areolar edema in the first few days after birth.

**Signs of Effective Milk Transfer:** Maternal comfort  
Audible swallowing: including the colostrum stage.  
Adequate Infant output

**Shut down cues:** Sleepy behaviour, pushing away, facial grimacing. Shut down occurs in response to something the infant doesn't like- e.g. ineffective latch, pressure on the infant's head, milk flow that is too slow or too fast before receiving sufficient intake.

## PROCEDURE

### Point of Emphasis

**A breastfeeding assessment includes one or more of the following:**

- a visual assessment by the health care provider is preferred where possible,
- a verbal report by the mother,
- physical indicators.

**1. Breastfeeding Assessment**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/CONCERNS	INTERVENTIONS
<p><b>Historical Factors</b></p> <ul style="list-style-type: none"> <li>• Age, Parity and Gestation</li> <li>• Birth experience</li> <li>• Identified Support</li> </ul>	<ul style="list-style-type: none"> <li>• Exposure/experience with breastfeeding knowledge and culture</li> <li>• Non intervention labour and vaginal birth</li> <li>• Breast changes through pregnancy</li> <li>• Has a support system</li> </ul>	<p>Birthing interventions may impact initiation and duration of breastfeeding</p> <p>Influences Lactogenesis II</p>	<ul style="list-style-type: none"> <li>• Lack of knowledge regarding breastfeeding</li> <li>• Previous breast surgery or trauma.</li> <li>• Difficult and or medicated delivery</li> <li>• No breast changes during pregnancy &amp;/or first 5 days post partum</li> <li>• Lack of support and/or negative influence</li> </ul>	<ul style="list-style-type: none"> <li>• Review parent expectations of feeding and ensure appropriate with circumstances</li> <li>• Provide education re: benefits of breastfeeding and strategies for success</li> <li>• Monitor infant and milk supply frequently evaluating need for further intervention</li> </ul>
<p><b>Readiness to Feed</b></p>	<ul style="list-style-type: none"> <li>• Normal Breastfeeding cues: stretching, stirring, licking, mouth movements, smacking, sucking, rooting, hand to mouth.</li> </ul>	<ul style="list-style-type: none"> <li>• When the infant is held skin to skin midline on mother’s chest, readiness cues will follow.</li> <li>• Being held skin to skin midline on the mother’s chest will calm the infant</li> <li>• Crying is a desperate, late feeding cue; the infant needs to be soothed before the rooting reflex can be elicited and for the infant to latch correctly and learn to breastfeed.</li> </ul>	<ul style="list-style-type: none"> <li>• Not cueing to feed.</li> <li>• Frantic behaviour</li> </ul>	<ul style="list-style-type: none"> <li>• Skin to skin and maternal stroking of the infant</li> <li>• Expressing some colostrum may elicit readiness cues</li> <li>• The infant needs to be soothed</li> </ul>
<p><b>Positioning</b></p>	<ul style="list-style-type: none"> <li>• Mother is comfortable –sitting upright at 90° with arms supported –lying down with back and legs supported by pillows –clutch/football – mother may need additional back support in order to</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage mother to use a comfortable position that allows her to see the infant’s mouth.</li> </ul>	<ul style="list-style-type: none"> <li>• Mother/Infant has pain and is unable to establish a relaxed position.</li> <li>• Mother has difficulty coordinating positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure maternal and infant comfort: provide pain medication as required.</li> <li>• Try an alternate position.</li> <li>• Mother may need a footstool.</li> </ul>

**1. Breastfeeding Assessment**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/CONCERNS	INTERVENTIONS
	<p>align the infant’s nose to the mother’s nipple</p> <ul style="list-style-type: none"> <li>• The infant is at breast level, tummy to tummy.</li> <li>• Infant’s bottom is tucked close into mother’s body</li> <li>• Head slightly extended</li> <li>• Nose aligned with mother’s nipple.</li> </ul>		<ul style="list-style-type: none"> <li>• Infant has low muscle tone and requires additional support or alternate positioning.</li> </ul>	<ul style="list-style-type: none"> <li>• Pillows may be used once the infant is latched to support the mother’s arms.</li> </ul>
<b>Rooting Reflex Present</b>	<ul style="list-style-type: none"> <li>• Wide open mouth with tongue down and forward.</li> <li>• Mother’s fingers or infant’s clothing are not causing infant to root away from the breast</li> </ul>	<ul style="list-style-type: none"> <li>• Reflex is present for four months.</li> <li>• Crying interferes with infant’s ability to elicit proper rooting response as tongue is in back of mouth.</li> <li>• Being held in the midline of the mother’s chest may help to calm and elicit appropriate cueing.</li> <li>• Need to wait for really wide mouth.</li> </ul>	<ul style="list-style-type: none"> <li>• Absent or diminished reflex.</li> </ul>	<ul style="list-style-type: none"> <li>• Teach and demonstrate that manually expressing colostrum may stimulate reflex.</li> <li>• May require physician assessment</li> <li>• Additional lactation intervention may be required.</li> </ul>
<b>Latching</b>	<ul style="list-style-type: none"> <li>• One hand lifts the breast underneath with fingers back near ribs, away from the areola and the thumb resting on top.</li> <li>• Mother holds infant on the neck and shoulders, below the occiput, tipping the infant’s head back slightly (sniffing position)</li> <li>• Infant comes into the breast <u>chin first</u> which</li> </ul>	<ul style="list-style-type: none"> <li>• Mother should make a second neck with her hand to support the infant.</li> <li>• Need to wait for really wide mouth</li> <li>• The tongue is attached to the lower jaw so when the chin comes forward the tongue does also.</li> <li>• Nipple soreness during breastfeeding is usually</li> </ul>	<ul style="list-style-type: none"> <li>• Mother feels pain: biting, pinching, stinging, and/or burning sensation.</li> <li>• Distortion of nipple shape or indication of compression.</li> <li>• Evidence of poor milk transfer.</li> <li>• If latch is attempted without wide gape then infant may be reluctant to open wide and latch can be ineffective/shallow.</li> </ul>	<ul style="list-style-type: none"> <li>• Take the infant off the breast, releasing the suction with the mother’s finger between infant’s jaws and then re-latch deeper, chin first.</li> <li>• Review nipple care with mother                             <ul style="list-style-type: none"> <li>–nipple care for undamaged nipples is EBM.</li> <li>–application of EBM; air dried, followed by scant</li> </ul> </li> </ul>

**1. Breastfeeding Assessment**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/CONCERNS	INTERVENTIONS
	<p>stimulates the wide gape so that the chin is under the breast for a deep latch.</p> <ul style="list-style-type: none"> <li>• Mother waits for a wide gape and brings infant onto the breast with pressure from the heel of her hand</li> <li>• Chin is tight to the breast ensuring nose is clear to breathe, lower lip should not be seen.</li> <li>• Mother feels “ pulling or tugging” sensation</li> <li>• On release from the breast, the nipple is round or the same shape as before the feeding with no indication of compression eg. No folds or creases distortion of shape of nipple.</li> </ul>	<p>indicative of an incorrect latch.</p> <ul style="list-style-type: none"> <li>• Absence of nipple soreness does not necessarily indicate a good latch.</li> <li>• Evidence of milk transfer is the best indicator of an effective latch.</li> </ul> <p>–Infant falls asleep or does not suck may be indicators that latch is not deep enough</p>	<ul style="list-style-type: none"> <li>• Unable to sustain and/or maintain a latch</li> </ul>	<p>amount of purified lanolin to a crack may be soothing to the mother and enhance healing. *Purified lanolin should not be used routinely and is not appropriate if fungal infection is suspected.</p> <ul style="list-style-type: none"> <li>• Persistent nipple trauma requires further evaluation.</li> </ul>
<p><b>Sucking –Change in Rhythm</b></p>	<ul style="list-style-type: none"> <li>• Initial sucking is a flutter suck: -rapid shallow sucks.</li> <li>• Flutter sucking helps to elicit a letdown</li> <li>• Sucking changes to a rhythmic pattern: “ deep &amp; steady”, “long &amp; drawing”</li> <li>• The whole jaw moves</li> <li>• Normal pauses: the infant may suck and swallow steadily or may have short pauses &lt;30sec between</li> </ul>	<ul style="list-style-type: none"> <li>• With a correct latch the nipple touches the soft palate stimulating the infant to suck</li> <li>• If the infant pauses indefinitely then mother needs to stimulate infant or take infant off the breast to burp and waken.</li> <li>• If there is no change from flutter sucking to deep rhythmic sucking, and consequently no</li> </ul>	<ul style="list-style-type: none"> <li>• No change from flutter sucking to deep rhythmic sucking, and consequently no swallows.</li> <li>• Clicking, smacking, slurping.</li> <li>• No suck</li> </ul>	<ul style="list-style-type: none"> <li>• Correct the latch</li> <li>• Assess infant and milk supply evaluating need for further intervention</li> <li>• Assess the need for supplementation (Policy 3-B-1)                             <ul style="list-style-type: none"> <li>▪ Assess need for expression – manual or breast pump</li> </ul> </li> </ul>

**1. Breastfeeding Assessment**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/CONCERNS	INTERVENTIONS
	several suck/swallows. • The only sound heard should be swallows (ka, ka, ka)	swallows, then the infant is usually incorrectly latched. • Sucking alone does not imply milk transfer; there may be ineffective transfer or milk ejection may not be occurring.		
<b>Swallowing</b>	• Colostrum: swallows should be present although may be infrequent. • When milk volume increases (48-72hours) the rhythm of suck/swallow changes to approximately one per second or 1 swallow for each suck (1:1) • Swallows <b>must be heard</b>	• Noting a change in rhythm pattern is essential if swallows are not heard. • Teach mothers to identify sound of swallows. (ka, ka, ka)	• No audible swallow. • Minimal swallowing audible.	• Assess latch technique and correct as necessary  • Massaging the breast and /or breast compression during the feed may assist with the transfer of milk.  • Assess the need for supplementation with EBM or Commercially prepared infant formula and need for expression – manual or pump.
<b>Infant Satiated After a Feed:</b>	• Satiating cues: – releases the breast – arms and hands relaxed – no oral cues: hand to mouth cueing – may have quiet alert time after the feed – remains content and settled with diaper change. • Most infants need both breasts at each feeding.	• Burping and changing the infant after the feed will determine whether the infant is still hungry or is satiated. • Encourage the mother to keep the infant on one breast as long as swallowing is being observed. When the infant slows down, ceases swallowing, or comes off the breast he may need to be burped	• Medicated infants need more frequent assessment regarding cueing. • Fussy Infant: – in the early days and after an effective feed might be an indication of needing to be close to mother. • Infant shuts down/falls asleep due to lack of reward – infants who appear to be asleep or wake soon after the feed may be “shut	• Skin to skin contact, nonnutritive sucking at the breast and comfort techniques-rocking may assist with settling the infant. • Skin to skin in the midline of the mother’s chest will help the infant to cue appropriately. • Effective breastfeeding and assistance are necessary to ensure adequate milk transfer. • Assess the need for

**1. Breastfeeding Assessment**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/CONCERNS	INTERVENTIONS
		<p>or changed to see if he shows readiness cues to go back on the other breast.</p>	<p>down”                      –possibly due to incorrect latch or milk supply concerns                      • Frantic infant/difficult to settle.                      –may be a sign that the infant is not getting enough milk. Infant may swing from being sleepy, shut down to being frantic when wakened. These behaviors along with poor stooling (see chart pg 12 Breastfeeding Your Baby...What to expect) are warnings that the breastfeeding needs improvement.</p>	<p>supplementation.</p>
<p><b>Mother is comfortable during and after feeds</b></p>	<ul style="list-style-type: none"> <li>• Absolutely no pain with an effective latch; tenderness may present as a tugging or pulling sensation</li> <li>• Pain level as stated by mother scoring from 0 (absent) to 10 (high)</li> <li>• Breasts may become heavier/full sensation on day two or three</li> <li>• In the early weeks breasts should soften after breastfeeding.</li> <li>• Mother is continuing to offer the breast following</li> </ul>	<ul style="list-style-type: none"> <li>• Fullness is resolved with frequent effective breastfeeding</li> <li>• Complete softening of the breast enhances the caloric content of the milk.</li> </ul>	<ul style="list-style-type: none"> <li>• Engorgement due to infrequent feeding, more milk transfer or excess fluid during delivery.</li> <li>• Mother hesitant to breastfeed</li> </ul>	<ul style="list-style-type: none"> <li>• Reverse Pressure Softening</li> <li>• Ice between feeds</li> <li>• Moist heat prior to feeds <u>if milk is flowing</u> can soften breast tissue to assist with latching</li> <li>• Manual Expression to comfort</li> <li>• Assessment and further assistance with latching</li> </ul>

**1. Breastfeeding Assessment**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/CONCERNS	INTERVENTIONS
	<p>infant’s cues</p>			
<p><b>Maternal confidence</b></p>	<ul style="list-style-type: none"> <li>• Confidence level as stated by mother scoring from 0 (absent) to 10 (high) level.</li> <li>• Mother has ability to latch infant on her own.</li> <li>• Mother recognizes infant’s feeding cues:                             <ul style="list-style-type: none"> <li>– responds by offering the breast</li> <li>– mother anticipates feeding readiness when infant is sleepy or having difficulty with breastfeeding.</li> </ul> </li> <li>• Mother recognizes her body’s need to feed if breasts become uncomfortably full and brings infant to feed.</li> <li>• Mother reports enjoyment with feeding.</li> <li>• By 4-6 weeks the breastfeeding will seem easier for both mother and infant.</li> </ul>	<ul style="list-style-type: none"> <li>• When mothers are breastfeeding comfortably, the feeding time is a chance for mothers to rest and to develop attachment with her infant.</li> <li>• How a mother feels about the feedings is very important information and can facilitate early intervention and support to improve breastfeeding before problems arise.</li> <li>• Knowing that breastfeeding is a learned process for Mother and infant can be helpful in the early postpartum period.</li> </ul>	<p>Decreased maternal confidence</p>	<p>More frequent assessment of feeding and assistance with feeding.                      Identify mother’s support system                      Provide resources in the community for follow up</p>
<p><b>Normal Frequency of Feeding</b></p>	<ul style="list-style-type: none"> <li>• First 24 hours: continuous skin to skin (unlimited breast access) has a positive influence on the frequency of infant feeding in the first 24 hours</li> </ul>	<ul style="list-style-type: none"> <li>• Short frequent breastfeeding is desirable while mothers and infants learn to feed.</li> <li>-Breastmilk digests in about an hour.</li> <li>• Encourage mother to</li> </ul>	<ul style="list-style-type: none"> <li>• The earlier the newborn has its first breastfeed, ideally in the first hour, the greater outcome for breastfeeding duration and infant health.</li> <li>• Inappropriate frequency of feeding may be determined</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage increased skin to skin contact.</li> <li>• Review with mother/family expected infant feeding cues.</li> <li>• Discuss and demonstrate waking techniques.</li> <li>• Evaluate need for</li> </ul>

**1. Breastfeeding Assessment**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/CONCERNS	INTERVENTIONS
	<ul style="list-style-type: none"> <li>• In the first 24 hrs very small amounts of colostrum ie 1-2 ml may be an adequate feed                             <ul style="list-style-type: none"> <li>–after an unmedicated, uncomplicated birth most infants feed 4-6 X in 24 hrs</li> <li>–when an infant has been impacted by a complicated birth and/or labour medication, frequency of feeding may vary- maintaining skin to skin and access to the breast is critical to normal feeding in the first 24 hours</li> </ul> </li> <li>• After 24 hours infant feeding increases to reach 8 -12 times by 48 hours</li> <li>• Infants may cue frequently over a 2-6 hour period “cluster feeding”. They will usually sleep their longest stretch after a cluster feed session.</li> <li>• By 72 hours, total feeding time of up to one hour is normal.</li> </ul>	<ul style="list-style-type: none"> <li>offer the breast as often as the infant cues</li> <li>• Stomach size of the infant:                             <ul style="list-style-type: none"> <li>–First 24 -72 hours: size of a chickpea</li> <li>–72 hours 10 days: size of a cherry</li> <li>–10 days - walnut</li> </ul> </li> <li>• Frequent feeding reduces the re-absorption of the bilirubin and enhances the establishment of an adequate breastmilk supply.</li> <li>• Mothers can get their rest if the infant is kept in close proximity with them and feeds whenever he cues.</li> </ul>	<ul style="list-style-type: none"> <li>by signs and symptoms of hypoglycemia, inadequate output for age, inadequate weight gain</li> <li>• Infant does not cue to feed</li> <li>• Infant sleepy/lethargic</li> </ul>	<ul style="list-style-type: none"> <li>supplementation.</li> <li>• First 24 hours: Manual expression is preferred</li> <li>• &gt; 24 hours: Breast pump or manual expression</li> </ul>
<b>Stooling</b>	<ul style="list-style-type: none"> <li>• Frequency                             <ul style="list-style-type: none"> <li>–in the first 72 hrs 1-3 bowel movements</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The best indicator of intake and growth is in the output of stools.</li> </ul>	<ul style="list-style-type: none"> <li>• Decrease in expected amount and frequency</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate effectiveness of milk transfer</li> <li>• Monitor infant weight gain</li> </ul>

**1. Breastfeeding Assessment**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/CONCERNS	INTERVENTIONS
	<ul style="list-style-type: none"> <li>–after 72 hours 4+</li> <li>–when the frequency is low the size should be large.</li> <li>–after 6 weeks some exclusively breastfed babies have an irregular stooling pattern: weight should be evaluated to ensure growth is adequate.</li> <li>• Color/Consistency                             <ul style="list-style-type: none"> <li>–first 48 hours: meconium dark sticky</li> <li>–48-72 hours: transitional-dark brown, less sticky</li> <li>–Day 3-4: yellow with seedy or curd like consistency</li> </ul> </li> <li>• Amount                             <ul style="list-style-type: none"> <li>–infant’s palm size (See Chart pg12 Breastfeeding Your Baby ... What to expect)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Increasing and ensuring effective breastfeeding will increase calorie intake and directly result in increased frequency and amount of stooling</li> <li>• Bilirubin is excreted through the bowels so the importance of stooling cannot be overstated for the infant in the prevention of jaundice.</li> <li>• Sucking on the breast and small amounts of colostrum act as a laxative, enhancing the early excretion of the meconium stools</li> <li>• An exclusively breastfed infant should never become “constipated” without pathology present.</li> </ul>	<ul style="list-style-type: none"> <li>• Abnormal Color/consistency                             <ul style="list-style-type: none"> <li>–some maternal foods may produce unusual intermittent stool color</li> <li>–may indicate intolerance or illness</li> <li>–unusual stool consistency may indicate inadequate calorie intake, intolerance, malabsorption or illness</li> </ul> </li> <li>• No passage of meconium within 24 hours of delivery</li> <li>• Constipation (under 3 months)</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Increase feeding frequency</li> <li>• Evaluate need for supplementation</li> <li>• Physician referral</li> <li>• Physician referral</li> <li>• Physician referral</li> <li>• Physician referral</li> <li>•</li> </ul>

**1. Breastfeeding Assessment**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/CONCERNS	INTERVENTIONS
<b>Voiding</b>	<ul style="list-style-type: none"> <li>• Frequency                             <ul style="list-style-type: none"> <li>–first 24 hours: 1 wet</li> <li>–24-48 hours: 2 wet</li> <li>–48-72 hours: 3 wet</li> <li>–72-96 hours: 4-5 wet</li> <li>–96+hours: 6-8 heavy wet</li> </ul> </li> <li>• Color: clear pale yellow, odourless                             <ul style="list-style-type: none"> <li>–uric acid crystals: can be seen in the first few days of life and are not significant when stooling pattern is normal.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Disposable diapers can be difficult to assess in terms of wetness. Heavy wet is comparable to 45 ml (3 Tbsp) of water on the diaper.</li> <li>• Voids are indicative of hydration; stooling is the primary indicator of breastmilk intake.</li> </ul>	<ul style="list-style-type: none"> <li>• Uric acid crystals after day 3 may be a sign of dehydration</li> </ul>	<ul style="list-style-type: none"> <li>• Increase fluids and supplementation</li> </ul>

**Breastfeeding Your Baby ... What to expect**

Age in Hours	# of Feeds / 24hrs	Expected # Wet Diapers	Expected # & Colour Soiled Diapers	Breasts Feel
First 24 hrs	Varies. Offer q 3 hourly if baby not cueing to feed	Minimum 1	Minimum 1 dark, sticky	soft
24-48 hrs	Increasing number of feeds to 8-12	Minimum 2	1-3 dark	soft
48 – 72 hrs	8-12	Minimum 3	1-3 brown	fullness
72- 96 hrs	8-12	Minimum 4-5	4 + yellow seedy very loose	fullness softer after feeds
96 hrs +	8-12	colourless, odourless 6 or more heavy wet diapers	4 or more yellow seedy stools	milk is flowing well soft after feeding
after 6 weeks	8-12	6+	varies – ensure infant is gaining	soft unless miss several feedings

**No Soothers or Pacifiers:**

- Infant should not be using a soother especially in the first 4-6 weeks of breastfeeding. The need to suck indicates hunger or discomfort. The breast and skin-to-skin should be offered first.
- Early introduction of soothers can interfere with establishing breastfeeding since they interfere directly with the infant’s cues to breastfeed and effective sucking on the breast.
- Inappropriate use of a soother can lead to missed breastfeedings which may reduce milk supply.

**Manual Expression/Pumping:**

- All mothers benefit from being shown how to manually express their milk, whether they need to or not; the ability to see the colostrum and/or being able to manually express after nursing to see that the breasts have milk, is beneficial and empowering for the mother.
- Refer to the instructions in From Here To Maternity.
- With effective frequent breastfeeding, pumping is not usually necessary.
- If infant cannot remove milk from the breast, hand expression into a spoon, med cup, or a syringe is most effective during the colostrum phase. Manual expression may continue once a higher volume of milk is present or some mothers may prefer to use a pump.
- With fullness, plugged ducts, or mastitis, infant effectively feeding is the best way to remove breastmilk. If infant cannot feed at the breast, a commercial electric pump is the most effective method of removing milk.

**NOTE:** Using the pump to help pull out flat or inverted nipples may be helpful for latching in the first few days; however, if the mother has areolar edema from IV fluids, pumping will exacerbate the edema.

**2. Bottle Feeding Assessment Procedure**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/ CONCERNS	INTERVENTIONS
<b>Readiness to Feed</b>	<ul style="list-style-type: none"> <li>• Normal Feeding cues: stretching, stirring, licking, mouth movements, smacking, sucking, rooting, hand to mouth.</li> <li>• Mother responds to readiness cues by placing the nipple of the bottle in the infant’s mouth.</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage skin to skin. When infant is held skin to skin midline on mother’s chest, readiness cues will follow.</li> <li>• Being held skin-to skin midline on the mother’s chest will calm the infant.</li> <li>• Crying is a desperate-late feeding cue; the infant needs to be soothed prior to feeding effectively.</li> </ul>	<ul style="list-style-type: none"> <li>• Not cueing to feed.</li> </ul>	<ul style="list-style-type: none"> <li>• Skin to skin</li> <li>• Monitor frequently</li> <li>• May require physician evaluation.</li> </ul>
<b>Positioning</b>	<ul style="list-style-type: none"> <li>• Infant will require direct support from care giver’s arms in the sitting position.</li> <li>• Mother gives full attention with eye contact to the infant throughout the feed.</li> <li>• Mother alternates side placement for bottle feeding.</li> </ul>	<ul style="list-style-type: none"> <li>• Proper positioning of the bottle fed infant will facilitate suck/ swallow/ breathe.</li> <li>• Eye contact during the feeding encourages attachment.</li> <li>• Alternate side placement for feeding is important in the prevention of plagiocephaly.</li> </ul>	<ul style="list-style-type: none"> <li>• Mother has difficulty supporting infant.</li> <li>• Parents propping bottle to feed infant-not holding.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate use of pillows to support arms as necessary.</li> <li>• Educate parent re: the importance of holding their infant for feeding.</li> </ul>

**2. Bottle Feeding Assessment Procedure**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/ CONCERNS	INTERVENTIONS
<b>Sucking and changes in rhythm</b>	<ul style="list-style-type: none"> <li>• Normal pauses: infant may suck and swallow steadily or have short pauses in between several suck/swallows</li> </ul>	<ul style="list-style-type: none"> <li>• Infant should not be urged to feed. Respect his/her pauses in sucking, not only because they influence the infant’s ability to self-regulate during feeding, but also because they influence swallowing coordination</li> </ul>	<ul style="list-style-type: none"> <li>• Inability to suck due to poor muscle tone and /or diminished suck reflex due to neurological impairment or lethargic behavior.</li> </ul>	<ul style="list-style-type: none"> <li>• Additional feeding intervention may be required.</li> </ul>
<b>Swallowing</b>	<ul style="list-style-type: none"> <li>• The rhythm of the suck/swallow is about one per second or 1 swallow for each suck (1:1).</li> </ul>	<ul style="list-style-type: none"> <li>• Teach mothers to identify sound of swallows.</li> <li>• The volume of milk in the bottle should diminish.</li> <li>• Adequate output in diapers must also correspond with effective feeding using a bottle. – See summary chart for output</li> </ul>	<ul style="list-style-type: none"> <li>• Minimal or no swallow audible.</li> </ul>	<ul style="list-style-type: none"> <li>• Assess flow of the milk from the bottle nipple</li> <li>• Evaluate the need for an alternate feeding method to ensure adequate intake.</li> </ul>
<b>Infant Satiated After a Feed:</b>	<ul style="list-style-type: none"> <li>• Satiation cue:                             <ul style="list-style-type: none"> <li>– infant lets go of the bottle and has a relaxed appearance.</li> <li>– arms and hands relaxed</li> <li>– no oral cues: hand to mouth cueing</li> <li>– may have quiet alert time after the feed</li> <li>– remains content and settled with diaper</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Bottle fed infants thrive better when fed demand amounts of expressed breastmilk (EBM) / commercially prepared infant formula on a demand schedule.</li> <li>• Burping and changing the infant after the feed will determine whether the infant is still hungry</li> </ul>	<ul style="list-style-type: none"> <li>• Medicated infants need more frequent assessment regarding cueing.</li> <li>• Infant fussing:                             <ul style="list-style-type: none"> <li>– in the early days and after an effective feed might be an</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Ensure parents have knowledge of infant satiation cues to ensure adequate intake of milk volume.</li> <li>• Skin to skin contact, and comfort techniques-rocking may assist with</li> </ul>

**2. Bottle Feeding Assessment Procedure**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/ CONCERNS	INTERVENTIONS
	change.	or is satiated. • Do not attempt to prod the infant to continue sucking (through turning or twisting the bottle or by passively moving the infant’s jaw) –these strategies have led to infant oral aversion as well as an increase risk of childhood obesity.	indication of needing to be close to mother. • Infant shuts down/falls asleep due to inappropriate milk flow –Infants who appear to be asleep but wake very soon after a feed may be frustrated with the flow of milk from the bottle. The infant may have a tense body tone.  • Frantic infant or difficult to settle. –may be a sign that the infant is not getting enough milk. Infant may transition from being sleepy, shut down to being frantic when wakened. These behaviors along with poor stooling (see chart) are warnings that the feeding needs improvement	settling the infant.  • Evaluate the milk flow          • May be an indication of intolerance to commercially prepared infant formula and requires physician evaluation
<b>Maternal confidence</b>	• Confidence level as stated	• When Mothers are	• Decreased maternal	• More frequent

**2. Bottle Feeding Assessment Procedure**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/ CONCERNS	INTERVENTIONS
	<p>by mother scoring from 0 (absent) to 10 (high)</p> <ul style="list-style-type: none"> <li>• Mother has ability to feed her infant on her own confidently.</li> <li>• Mother recognizes infant’s feeding cues:                             <ul style="list-style-type: none"> <li>– responds by offering the bottle.</li> <li>– mother anticipates feeding readiness when infant is sleepy .</li> </ul> </li> <li>• Mother is confident in her ability to pump EBM and aware of recommendations for storage of EBM.</li> <li>• Mother indicates an understanding and expresses confidence in her ability to safely mix commercially prepared infant formula. Indicates an awareness of different concentrations that are available for purchase.</li> <li>• Mother reports enjoyment with feeding.</li> </ul>	<p>feeding comfortably and confidently, the feeding time is a chance for mothers to rest and to develop attachment with her infant.</p>	<p>confidence in recognizing feeding cues.</p> <ul style="list-style-type: none"> <li>• Lack of knowledge re: pumping technique/frequency and storage of EBM.</li> <li>• Lack of knowledge re: mixing and storage of formula and concentration variations available.</li> </ul>	<p>assessment of feeding and assistance with feeding.</p> <ul style="list-style-type: none"> <li>• Demonstrate and educate re: pumping techniques and discuss frequency of pumping in order to protect milk supply.</li> <li>• Educate parents re: the importance of following the instructions outlined in “From Here Through Maternity” on mixing and storing Commercially prepared infant formula.</li> <li>• Provide additional resource: “Infant Formula” to all parents who are exclusively ABM feeding. ( form # NT0038)</li> </ul>

**2. Bottle Feeding Assessment Procedure**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/ CONCERNS	INTERVENTIONS
<p><b>Normal Frequency of Feeding</b></p>	<ul style="list-style-type: none"> <li>• 24-72 hours feeds are short, and possibly irregular.</li> <li>• First 24 hours: Mother feeds the infant as often as he cues: generally 4-6 times.</li> <li>• After 24 hours:                             <ul style="list-style-type: none"> <li>– 6-10 times in 24 hours.</li> </ul> </li> <li>• After 72 hours the total feeding time of up to 30 minutes is normal.</li> </ul>	<ul style="list-style-type: none"> <li>• Short frequent feeding is desirable.</li> <li>• Stomach size of the infant:                             <ul style="list-style-type: none"> <li>– first 24 - 72 hours: size of a chickpea.</li> <li>– 72hrs to day 10 size of a cherry</li> </ul> </li> <li>• When establishing feeding, observing the infant’s cues and providing unlimited access to the bottle for the infant becomes very important in establishing cue based feeding.</li> <li>• Important to focus on infant cues rather than on finishing the bottle.</li> <li>• Mothers can get their rest if the infant is kept in close proximity with them and feeds whenever he cues.</li> </ul>	<ul style="list-style-type: none"> <li>• Inappropriate number of feeds in 24 hours.</li> <li>• Sleepy infants may need stimulation to stay awake.</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage increased skin to skin contact.</li> <li>• Encourage mother to offer the bottle as often as the infant cues.</li> <li>• Review with mother/family expected infant feeding cues.</li> <li>• Discuss and demonstrate waking techniques.</li> <li>• Evaluate the need for increased frequency of feedings.</li> </ul>
<p><b>Stooling</b></p>	<p>EBM</p> <ul style="list-style-type: none"> <li>• Frequency                             <ul style="list-style-type: none"> <li>– in the first 72 hrs 1-3 bowel movements</li> <li>– after 72 hours 4+</li> <li>– when the frequency is low the size should be large.</li> <li>– after 6 weeks some exclusively breastfed</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The best indicator of intake and growth is in the output of stools.</li> <li>• Increasing and ensuring effective EBM intake will increase calorie intake and directly result in increased frequency and amount of stooling                             <ul style="list-style-type: none"> <li>– Bilirubin is excreted</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate stooling                             <ul style="list-style-type: none"> <li>– amount</li> <li>– frequency</li> </ul> </li> <li>• Abnormal Color</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate effectiveness of feeding with the bottle.</li> <li>• Monitor infant weight gain</li> <li>• Increase feeding frequency/amounts</li> </ul>

**2. Bottle Feeding Assessment Procedure**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/ CONCERNS	INTERVENTIONS
	<p>babies have an irregular stooling pattern: weight should be evaluated to ensure growth is adequate.</p> <ul style="list-style-type: none"> <li>• Color/Consistency                             <ul style="list-style-type: none"> <li>–first 24 hours: meconium –dark sticky</li> <li>–24-72 hours: transitional-dark brown, less sticky</li> <li>–Day 3-4: yellow with seedy or curd like consistency</li> </ul> </li> <li>• Amount                             <ul style="list-style-type: none"> <li>– infant’s palm size</li> </ul> </li> </ul> <p>Commercially prepared infant formula:</p> <ul style="list-style-type: none"> <li>• Frequency                             <ul style="list-style-type: none"> <li>– 1-2+ bowel movements per day</li> <li>–when the frequency is low the size should be large.</li> </ul> </li> <li>• Color/Consistency                             <ul style="list-style-type: none"> <li>–first 24 hours: meconium –dark sticky</li> <li>–24-72 hours: transitional-dark brown, less sticky</li> <li>–Day 3-4: soft pasty yellow to green.</li> </ul> </li> </ul>	<p>through the bowels so the importance of stooling cannot be overstated for the infant in the prevention of jaundice.</p> <ul style="list-style-type: none"> <li>• An exclusively breastfed infant should never become “constipated” without a pathology present.</li> <li>• Commercially prepared infant formula is harder to digest and may actually decrease frequency of stooling, provided the infant has appropriate weight gain stool frequency is not a concern.</li> </ul>	<ul style="list-style-type: none"> <li>–Some maternal foods may produce unusual stool color</li> <li>–May indicate intolerance or illness</li> <li>• No passage of meconium within 24 hours of delivery.</li> <li>• Constipation</li> <li>• Abnormal color                             <ul style="list-style-type: none"> <li>–may indicate intolerance or illness.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Physician referral</li> <li>• Physician referral</li> <li>• Physician referral - under 3 months of age</li> <li>• Evaluate appropriate mixing of commercially prepared infant formula and knowledge of concentration variations.</li> </ul>

**2. Bottle Feeding Assessment Procedure**

ASSESSMENT	NORMS/NO CONCERNS	RATIONALE/ ANTICIPATORY GUIDANCE	VARIATIONS/ CONCERNS	INTERVENTIONS
<p><b>Voiding</b></p>	<ul style="list-style-type: none"> <li>• Frequency                             <ul style="list-style-type: none"> <li>– first 24 hours: 1 wet</li> <li>– 24-48 hours: 2 wet</li> <li>– 48-72 hours: 3 wet</li> <li>– 72-96 hours: 4-5 wet</li> <li>– 96+hours: 6-8 heavy wet</li> </ul> </li> <li>• Color: clear pale yellow, odourless</li> <li>• Uric acid crystals: can be seen in the first few days of life and are not significant when stooling pattern is normal.</li> </ul>	<ul style="list-style-type: none"> <li>• Disposable diapers can be difficult to assess in terms of wetness. Heavy wet is comparable to 45 mls (3 Tbsp) of water on the diaper.</li> <li>• Voids are indicative of hydration.</li> </ul>	<ul style="list-style-type: none"> <li>• Uric acid crystals after day 3.</li> <li>• Concentrated urine</li> </ul>	<ul style="list-style-type: none"> <li>• Assess volume intake</li> <li>• Assess appropriate mixing and concentration of commercially prepared infant formula.</li> </ul>

**When Bottlefeeding ... What to expect**

Age in Hours	# of Feeds / 24hrs	Expected # Wet Diapers	EBM or Donor Milk Expected # & Colour Of Stools	Commercially prepared infant formula Expected # & Color Of Stools
First 24 hrs	4 - 6	1	Minimum 1 dark, sticky	Minimum 1 dark, sticky
24-48 hrs	6 - 8	2	1-3 dark	1-2 dark
48 – 72 hrs	6 - 8	3	1-3 brown	1-2 brown
72- 96 hrs	6 - 10	4-5	4 or more yellow seedy very loose	1 or more pale yellow to green pasty
96 hrs +	6 - 10	6 or more heavy wet diapers colourless, odourless	4 or more yellow seedy stools	1 or more pale yellow to green pasty
After 6 weeks	6 - 10	6+	Varies – ensure infant is gaining	Varies-ensure infant is gaining

The goal is to ensure that bottle feeding is a safe and pleasant experience for the infant.

Milk options available for mothers who choose to bottle feed:

1. Expressed human milk
2. Pasteurized donor human milk
3. Commercially prepared infant formula.

Commercially prepared infant formula:

1. Iron fortified cow’s milk based formula should be used until the infant is 9 -12 months old; generic commercially prepared infant formulas meet nutritional standards of Canada Food and Drug.
2. Commercially prepared infant formula has many different brand names and types of preparations.
3. Always check the expiry date.
4. Use of alternate commercially prepared infant formula should only be used after consultation with primary care giver.
5. Commercially prepared infant formulas must be prepared exactly as the directions indicate; always check the label, since there are three types of preparations: concentrated liquid, powder or ready to use.
6. For infants under four months, sterilize bottles, nipples, lids, measuring cup, mixing jug and any other equipment.
7. Powdered preparations are not sterile and must be prepared and used within a short period to prevent bacteria growth. (16)

Bottles and Nipples

- Bottles are available in a variety of shapes and sizes; individual choice depends on personal preference.
- Flow rate of the bottle teat is dependent on the firmness, and number of holes and the shape of the teat.
- Artificial nipples should be checked before each use to make sure that they have no signs of damage (such as tears, cracks, swelling, tackiness or stickiness). This could result in a choking hazard for infants.

SUBJECT/TITLE:	DATE ESTABLISHED:	DATE REVISED:	NUMBER:	PAGE:
<b>Infant Feeding Assessment – Community/Acute</b>	May 23, 2006		<b>1-F-2</b>	21 of 22

## REFERENCES

- Adams, D, Hewell, S (1997) Maternal and Professional Assessment of Breastfeeding, *J Human Lact* 13:279-283, 1997.
- AWHONN (2000) Evidence-based clinical practice guideline. Breastfeeding Support: Prenatal Care Through the First Year, AWHONN, 2000, 36 pages.
- Bassett, V (2001) How One Canadian Hospital Developed a Infant Critical Path and Documentation Tool that Supports Moms and Babies, *AWHONN Lifelines* June/July 2001 p 49-54.
- Blair, A et al (2003) The Relationship Between Positioning, the Breastfeeding Dynamic, the Latching Process and Pain in Breastfeeding Mothers with Sore Nipples, *Breastfeeding Review* 11:5-10, 2003.
- Blyth, R et al (2002) Effect of Maternal Confidence on Breastfeeding Duration: an application of breastfeeding self-efficacy theory, *Birth* 29:278-284, 2002.
- Bono, BJ (1992) Assessment and Documentation of the Breastfeeding Couple by Health Care Professionals, *J Human Lact* 8:17-22, 1992.
- Cadwell, K et al (2002) *Maternal and Infant Assessment for Breastfeeding and Human Lactation: A Guide for the Practitioner*, Jones & Bartlett, 2002.
- Canadian Pediatric Society, "Use of growth charts for assessing and monitoring growth in Canadian infants and children: Executive summary" (CPS, DC, CHNAC, CFPC) <http://www.cps.ca/english/statements/N/CPS04-01Abstract.pdf>
- Cooke, M et al (2003) A Description of the Relationship Between Breastfeeding Experiences, Breastfeeding Satisfaction, and Weaning in the First 3 Months After Birth, *J Human Lact* 19:145-156, 2003.
- Davis, M (2002) *Core Curriculum for Lactation Consultancy Practice*, Ch. 35, p558-581, Walker, Editor, Jones & Bartlett, 2002
- Dennis, C-L (1999) Development and Psychometric Testing of the Breastfeeding Self-Efficacy Scale, *Res Nurs Health*, 22:399-409, 1999.
- Dennis, C-L (1999) Theoretical Underpinnings of Breastfeeding Confidence: A Self-Efficacy Framework, *J Human Lact*. 15:195-201, 1999.
- Dewey, KG et al (2003) Risk Factors for Suboptimal Infant Breastfeeding Behavior, Delayed Onset of Lactation, and Excess Neonatal Weight Loss, *Pediatrics* 112:607-619, 2003.
- Glover, R (2004) Lessons from Innate Feeding Abilities Transforms Breastfeeding Outcomes, *ILCA Conference Syllabus*, p 87-95, Scottsdale, Arizona, July 2004.
- Hall, RT et al (2002) A Breastfeeding Assessment Score to Evaluate the Risk for Cessation of Breastfeeding by 7 to 10 Days of Age, *J Pediatr* 141:659-664, 2002.
- Health Canada (2002) Health Professional Advisory *Enterobacter sakazakii* Infection and Powdered Infant Formulas, [http://www.hc-sc.gc.ca/fn-an/securit/ill-intox/esakazakii/enterobacter\\_sakazakii\\_e.html](http://www.hc-sc.gc.ca/fn-an/securit/ill-intox/esakazakii/enterobacter_sakazakii_e.html) , accessed December 10, 2005
- International Lactation Consultant Association (2005) Clinical Guidelines for the Establishment of Exclusive Breastfeeding, ILCA, June 2005
- Jensen, D et al (1994) LATCH: A Breastfeeding Charting System and Documentation Tool, *JOGNN* 23:27-32, 1994.
- Jones, F & Green, M (2004) Effective Breastfeeding Assessment: Putting the Puzzle Pieces Together, *ILCA Conference Syllabus*, Arizona 2004, p 155-161.
- Kroeger, M (2004) *Impact of Birthing Practices on Breastfeeding*, Jones & Bartlett, 2004.
- Kutner, L (2005) *Counselling the Nursing Mother*, Lauwers & Swisher, Jones & Bartlett, Ch 6, Client Consultations, p 91-111, 2005.
- Lawrence, Ruth and Lawrence, Robert (2005) *Breastfeeding: A Guide for the Medical Profession*, Mosby, 2005
- Matthews, MK (1988) Developing an Instrument to Assess Infant Breastfeeding Behaviour in the Early Neonatal Period, *Midwifery* 4:154-165, 1988.
- Matthews, MK (1991) Mothers' Satisfaction with their Neonates' Breastfeeding Behaviours, *JOGNN* 20:49-55, 1991.
- Matthews, MK (1993) Assessments and Suggested Interventions to Assist Infant Breastfeeding Behavior, *J Human Lact*. 9(4): 243-248, 1993.
- McCarter-Spaulding, DE & Kearney, MH (2001) Parenting Self-Efficacy and Perception of Insufficient Breast Milk, *JOGNN* 30(5):515-522, 2001
- Mohrbacher, N & Stock, J (2003) *The Breastfeeding Answer Book*, LLLI 2003.
- Mulford, C (1992) The Mother Infant Assessment (MBA): An 'Apgar Score' for Breastfeeding, *J Human Lact* 8:79-82, 1992.

SUBJECT/TITLE:	DATE ESTABLISHED:	DATE REVISED:	NUMBER:	PAGE:
<b>Infant Feeding Assessment – Community/Acute</b>	<b>1-F-2</b>			22 of 22

29. Naylor, AJ (2000) Infant Oral Motor Development in Relationship to the Duration of Exclusive Breastfeeding, Developmental Readiness Paper, Linkages Project, Washington, DC, USA  
<http://linkagesproject.org/publications/devreadinesspaper.html>
30. Powers, N (2005) Low Intake in the Breastfed Infant: Maternal and Infant Considerations. In Riordan, J ed. (2005) *Breastfeeding and Human Lactation*, Jones & Bartlett, 3<sup>rd</sup> Edition, Sudbury, MA, Jones & Bartlett, p 281, 2005.
31. Renfrew, M, Woolridge, M et al (2000) Enabling Women to Breastfeed; A Review of Practices which Promote or Inhibit Breastfeeding, The Stationary Office, London, UK, 2000.
32. Riordan, J (1997) Reliability and Validity Testing of Three Breastfeeding Assessment Tools, JOGNN 26:181-187, 1997.
33. Riordan, J et al (2001) Predicting Breastfeeding Duration Using LATCH Breastfeeding Assessment Tool, J Human Lact 17:20-23, 2001.
34. Riordan, J et al (2005) Indicators of Effective Breastfeeding and Estimates of Breast Milk Intake, J Human Lact 21(4):406-412, 2005.
35. Schlomer, JA et al (1999) Evaluating the Association Between Two Breastfeeding Assessment Tools with Breastfeeding Problems and Breastfeeding Satisfaction, J Human Lact 15:35-39, 1999.
36. Smillie, CM (2005) A Neurobehavioral Model for Self Attachment in Infancy, Mt. Sinai Conference Syllabus, Toronto, 2005.
37. Thoyre, SM et al (2005) The Early Feeding Skills Assessment for Preterm Infants, Neonatal Network, 24(3):7-16, May/June 2005.
38. Walker, M (2004) Breastfeeding Evaluation and Prediction Tools: What Do These Numbers Really Mean? ILCA Conference Syllabus, Arizona, 2004.
39. Wiessinger, D (1998) A Breastfeeding Teaching Tool Using A Sandwich Analogy for Latch-on, J Human Lact 14(1):51-56, 1998.
40. Winberg, J (2002) Breastfeeding – An Evolutionary and Neuroendocrine Perspective, *Integrating Population Outcomes, Biological Mechanisms and Research Methods in the Study of Human Milk and Lactation*, edited Davis et al, Klawer Academic/Plenum Publishers, 2002.
41. Carfoot, S Williamson, P Dickson, R (2005) A Randomized Controlled Trial in the North of England Examining the Effects of Skin-to-Skin Care on Breastfeeding, Midwifery 21(1), March 2005.
42. Ferber, SG & Markoul, JR (2004) The Effect of Skin-to-skin Contact (Kangaroo Care) Shortly After Birth on the Neurobehavioral Responses of the Term Infant: a Randomized Controlled Trial, Pediatrics 113:858-865, 2004  
[www.pediatrics.org/cgi/content/full/113/4/858](http://www.pediatrics.org/cgi/content/full/113/4/858) (accessed Sept 1, 2005)
43. Chiu, S-H, Anderson, GC & Burkhammar, MD (2005) Infant Temperature During Skin-to-skin: Breastfeeding Couples having Breastfeeding Difficulties, Birth 32(2):115-121, 2005.
44. Health Canada (2004) Exclusive Breastfeeding Duration, Health Canada's Recommendation, 2004.
45. Ingram, J, Johnson, D & Greenwood, R (2002) Breastfeeding in Bristol: Teaching Good Positioning and Support from Fathers and Families, Midwifery 18:87-101, 2002.
46. Health Canada (2000) Family Centred Maternity and Infant Care: National Guidelines, Ch 7 Breastfeeding, 2000.
47. Calgary Health Region (2006) From Here to Maternity, revised edition for 2006