NICU Lactation Care Best practices

Preterm mothers and those with an infant in the NICU are at an increased risk of delayed or suppressed lactation if timely and effective measures are not taken.
A **proactive** and evidence-based approach with simple interventions and processes as detailed below will help mitigate the impact of mother-infant separation on the onset of lactation and optimize long-term milk supply.

Messaging to parents must be consistent from all staff across all departments.

INFORMED DECISION

As soon as possible after admission:

- ☐ Assess mother's intention to breastfeed/provide own mother's milk (OMM) and validate any mother's intent to formula feed, if this is what she has initially chosen, in a way that is not judgmental or dismissive. Most mothers decide to breastfeed or pump for their newborns following a meaningful informed conversation about the importance of own mother's milk (OMM) for their babies.

- ☐ Lactation assessment (ideally by lactation consultant): Assess the mother's breast development, check for flat or inverted nipples, inquire about breast surgeries and other lactation risk factors.

- ☐ Provide education on the science of OMM and emphasize that **it is the 1st and most important medical intervention** that only she can provide for her baby. For details, visit the Canadian Premature Babies Foundation's website www.cpbf-fbpc.org/breastfeeding and download/print the e-book "*Providing milk of their own mother to infants at risk*", developed by Pr. Paula Meier for the Rush Mother's Milk Club.

- ☐ Highlight the importance of early, frequent and effective pumping and breastfeeding for the success of lactation.

- ☐ Give the list of jobs to the partner/support person (see end of document) and advise the mother to only eat, sleep, breastfeed/pump and visit her baby at least for the first 2 weeks.

- ☐ Education messaging must be consistent from all staff across all departments (L&D, NICU, Ward).

For moms who are transferred in (outborn), prioritize the lactation consultation and initiation of pumping as soon as possible after admission.

TIME TO FIRST PUMPING & FREQUENCY OF EXPRESSION

- ☐ Provide a hospital grade double electric pump at the bedside, ideally equipped with Initiation technology (that mimics the irregular sucking patterns of newborns)

- ☐ Provide a double pumping kit.

- ☐ Ensure the same pump is also available in the L&D room

- ☐ Teach and assist the mother (and partner/support person) to:

Author: Rebecca Hoban, MD, MPH.
Director of Breastfeeding Medicine, Sick Kids hospital. Assistant Professor of Pediatrics, University of Toronto

- ☐ **Initiate double pumping** within the **1-3 hours** of delivery (after putting infant to breast if possible, depending on circumstances of NICU admission).
- ☐ Assemble and properly use the breast pump
- ☐ Select the Initiation pumping pattern if available
- ☐ Adjust the vacuum to the maximum comfortable level.
- ☐ Use hands on pumping, hand expression and breast massage before and after pumping.
- ☐ Safely collect colostrum
- ☐ Clean (and sterilize) the pump parts as per local/hospital protocol

FOR MOTHERS DELIVERING VIA C-SECTION

- ☐ Educate the parents as per this protocol.
- ☐ Ensure a hospital grade double electric pump is available in the OR/recovery room, ideally equipped with Initiation technology.
- ☐ Assist the mother and the partner to begin double pumping (with the Initiation program if available) within 1-3 hours of birth, ideally after putting infant to breast if possible, depending on circumstances of NICU admission.

☐ Observe the mother for an entire pumping session

☐ It is important to Inform the mother that *she may not express any milk at first* and that is normal. It is more about breast stimulation and programming than milk volume at this time.

☐ Ensure the breast shields (flanges) for each breast are the right size and **assess daily**. Use the measuring tool and follow the instructions

☐ Provide the parents with appropriate size containers and labels and instruct them to write the name and the time of expression.

TIME TO MILK COMING IN AND COMING TO VOLUME

☐ Provide the mother with a pumping log and demonstrate how to fill it. Emphasize the importance of reporting expressed milk volumes to monitor progress towards milestones and target volumes.

☐ Provide milk volume targets (per baby):

- Day 1-2: drops to 120 ml
- Day 3: 160-360 ml
- Day 4-5: 400-600 ml
- Day 6-9: 600-720 ml
- Day 10+: >720 ml

☐ Inform the mother that she may only express a few milliliters in the first hours after birth. This will help set realistic expectations and build confidence.

☐ Instruct the mother to always double pump, every 2 to 3 hours (≥ 8 times a day), using the Initiation technology (if available) for the full 15 minutes of the program

☐ Instruct the mother to pump at least once at night and avoid intervals longer than 4-5h without pumping. Advise the mother to drink 2 to 4 glasses of water before sleeping at night.

- ☐ Report daily (24h) milk volumes from the pumping logs into the patient chart/health records

- ☐ Note the time to milk coming in (lactogenesis II) from birth, defined as a minimum of 20 mL of total milk expressed from both breasts in each of 3 consecutive pumping sessions
  - If ≤ 72h post-partum, continue to next steps
  - If > 72h, urgently refer to a lactation consultant for increased lactation care. Delayed onset of lactogenesis II has been associated with shortened duration of lactation.

- ☐ Instruct the mother to stop using the Initiation program and switch to the Maintain program, if applicable, once milk comes in, demonstrating how to adjust to the maximum comfortable vacuum level

- ☐ Instruct the mother to pump 2 minutes after last droplets of milk to ensure optimal breast drainage

- ☐ Note the time to “coming to volume” from delivery on the mother’s chart/health record: ≥500ml/24h 3 days in a row.

- ☐ Advise the mother to continue with high frequency pumping for at least the first 2 weeks. Reduction in the frequency of pumping in the first 2 weeks has been shown to reverse secretory activation and lower milk volumes.

ORAL IMMUNE THERAPY AND KANGAROO MOTHER CARE

- ☐ Support bedside pumping and encourage the family to frequently visit the baby if not rooming-in

- ☐ Teach parents how to practice oral immune therapy and ensure it is performed regularly until oral feeds begin

- ☐ Encourage kangaroo care holding whenever and for as long as possible

Dose of Own Mother’s Milk (OMM)

- ☐ Use the infant feeding log to document all types of feeds and respective volumes given to the newborn: OMM/donor human milk (DHM)/Formula

- ☐ Enter logs into the infant health record for further analysis of the dose of OMM throughout the NICU stay

TRANSITION TO DIRECT BREASTFEEDING

- ☐ Offer non-nutritive sucking opportunities at breast as soon as the infant is stable and feasible from a respiratory support standpoint.

- ☐ Document all non-nutritive sucking sessions in the infant chart and health record.

- ☐ Monitor nutritive sucking and use test weighing to evaluate milk transfer.

- ☐ Document milk transfer in the infant feeding log and health record.

- ☐ Teach the mother how to recognize her baby’s **feeding cues** and breastfeed on demand.

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FOLLOW-UP AND BREASTFEEDING DURATION

☐ Prior to discharge, share available community lactation support services.

☐ Designate a person responsible for follow-up calls with the mother or coordinate with a community health worker to perform post-discharge follow-up calls with the mother to check on breastfeeding status and record in the patient health record

☐ At 1 month: Date ___/___/_________
- ☐ Exclusive breastfeeding/OMM
- ☐ Partial breastfeeding/OMM
- ☐ No breastfeeding/OMM
- ☐ If non-exclusive breastfeeding/OMM, why:____

☐ At 3 months: Date ___/___/_________
- ☐ Exclusive breastfeeding/OMM
- ☐ Partial breastfeeding/OMM
- ☐ No breastfeeding/OMM
- ☐ If non-exclusive breastfeeding/OMM, why:____

☐ At 6 months: Date ___/___/_________
- ☐ Exclusive breastfeeding/OMM
- ☐ Partial breastfeeding/OMM
- ☐ No breastfeeding/OMM
- ☐ If non-exclusive breastfeeding/OMM, why:____

☐ If the mother is to be discharged while the baby is still in the NICU, refer her/her partner/support person to a breast pump rental location and remind them to (ideally on a printed handout):

- Always apply rigorous hygiene when expressing and handling breast milk
- Double pump at least 8 times a day and never allow more than 4-5 hours without pumping
- Always switch to the "Expression phase" (if applicable, or turn down pump speed) immediately at the 1st milk ejection
- Adjust the vacuum to the maximum comfortable level
- Assess and make sure the breast shields are still the correct size before and during pumping
- Ensure maximum emptying of the breasts by pumping 2 minutes after last droplets of milk
- Massage the breasts before and after pumping
- Document the pumping sessions and expressed milk volumes on the provided pumping log
- Properly label and store breast milk containers or bags

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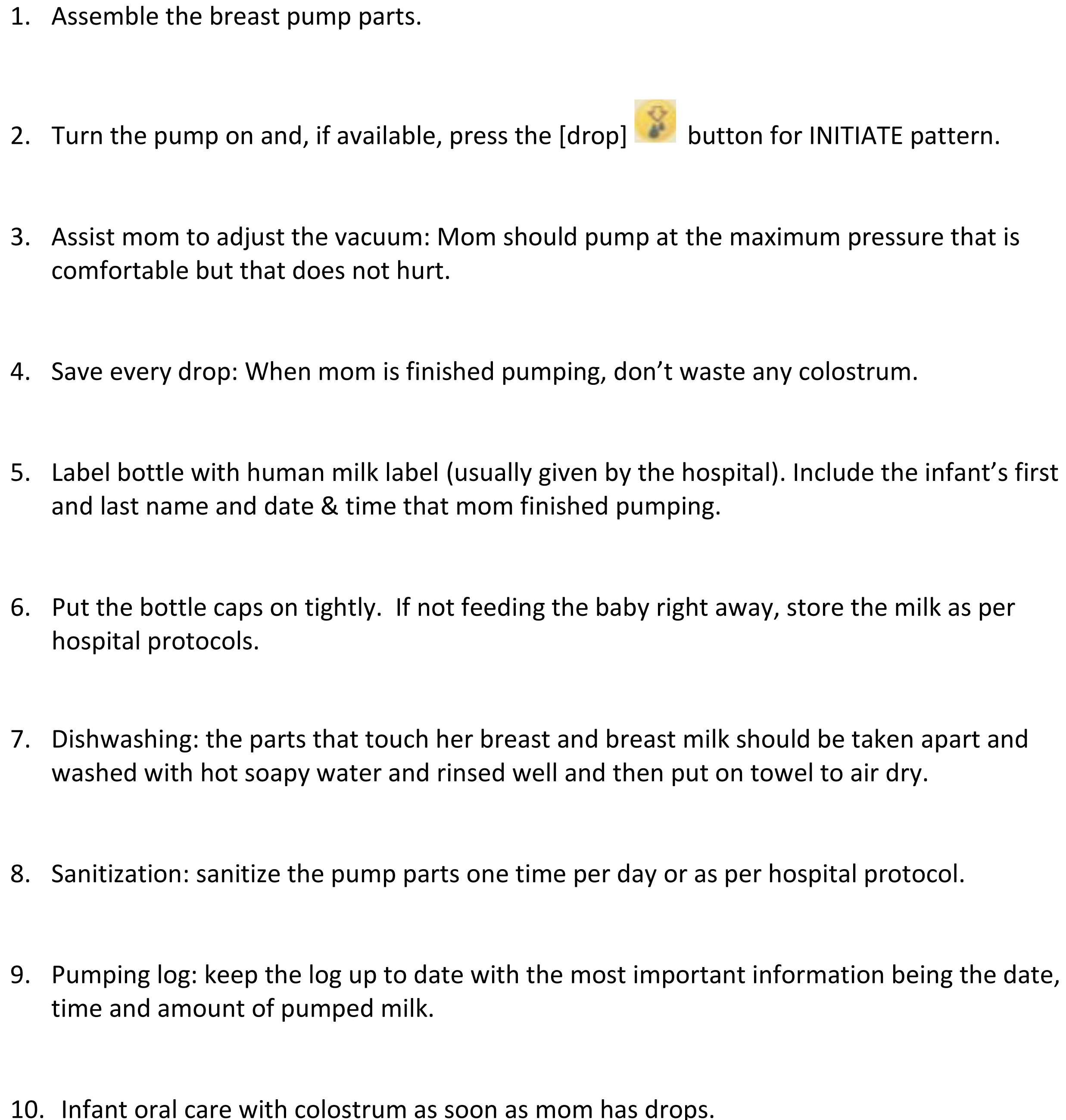
Top ten jobs for partner or support person to help start pumping!

1. Assemble the breast pump parts.

2. Turn the pump on and, if available, press the [drop]  button for INITIATE pattern.

3. Assist mom to adjust the vacuum: Mom should pump at the maximum pressure that is comfortable but that does not hurt.

4. Save every drop: When mom is finished pumping, don't waste any colostrum.

5. Label bottle with human milk label (usually given by the hospital). Include the infant's first and last name and date & time that mom finished pumping.

6. Put the bottle caps on tightly. If not feeding the baby right away, store the milk as per hospital protocols.

7. Dishwashing: the parts that touch her breast and breast milk should be taken apart and washed with hot soapy water and rinsed well and then put on towel to air dry.

8. Sanitization: sanitize the pump parts one time per day or as per hospital protocol.

9. Pumping log: keep the log up to date with the most important information being the date, time and amount of pumped milk.

10. Infant oral care with colostrum as soon as mom has drops.

Adapted from Spatz DL et al. J Perinat Educ. 2015;24(3):160-170.

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Director of Breastfeeding Medicine, Sick Kids hospital. Assistant Professor of Pediatrics, University of Toronto

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