Breastmilk Expression Guidelines

SECTION I: BACKGROUND

Human breastmilk is the preferred nutrition for human infants. The health benefits of an exclusively breastmilk diet for the first 6 months of life is well established. Policies in hospitals should help support mothers and babies achieve exclusivity whenever desired and medically possible. Sometimes, manual expression of breastmilk may be necessary to achieve this goal. The following guidelines provide a framework for whom and how breastmilk expression is encouraged.

SECTION II: MANAGEMENT

Poor feeding:
Healthy term newborns do not need supplemental feedings for poor feeding for the first 24 hours. When difficulty with feeding occurs during the first 24 hours these mothers should not be encouraged to pump their breasts. Instead, these couplets should be encouraged to be in skin-to-skin contact for extended periods of time. Skin-to-skin contact is the best initial step to encourage an infant to latch and begin feeding. Infants fed directly from the breast during the initial 24-48 hours have longer continuation rates of breastfeeding over infants who are supplemented either with formula or breastmilk. Furthermore, breast pumps are a poor indicator of breastmilk supply, especially during the early postpartum period. Mothers should never be encouraged to gage their milk supply based on their ability to manually express milk.

Parents should be educated of the developmentally normal phenomenon where infants have a period of initial wakefulness immediately following birth and then sleepiness lasting 24-48 hours. After 24-48 hours, consideration about manual expression of breastmilk can be considered in conjunction with a Lactation Consultant. Hand expression of breastmilk should be initiated as the preferred method of breastmilk expression (See Appendix I). Hand expression has been shown to have improved breastfeeding rates at two months of age versus implementing the use of an electric breast pump for healthy infants feeding poorly.

Separation of mother and infant or inability of infant to breastfeed:
Babies who are too sick to breastfeed, who have a physical deformity making breastfeeding impossible, or whose mothers are too sick to allow breastfeeding will require supplemental feedings and these feedings should be attempted using breastmilk whenever possible. Manual milk expression should attempt to mirror normal human lactation as closely as possible. This means that attempts to express breastmilk should be made shortly after birth, ideally within one hour of birth or whenever mother is conscious and is well enough to begin expression of breastmilk. The responsibility of ensuring that this occurs lies with the infant’s nurse. The nurse should also educate the mother that she will need to hand express and/or hands-on pump every 3 hours. Hand expression should occur at a minimum of 5 times a day. It is important that the mother understands that early and frequent initiation of milk expression has
a long lasting impact on her milk supply. The amount of milk expressed early on is not significant, but the frequency of stimulation to the breasts is critical.

Mothers should be instructed on hand expression for the collection of breastmilk until Lactogenesis II, which is when the milk “comes in”. Once the milk comes in (usually postpartum day 3-5) milk should be collected using hands-on pumping (Appendix II). Hands-on pumping combines an electric breast pump with hand expression. This technique has been show to greatly increase longterm milk yields over simply pumping alone.

When the nurse brings the pump to the mother she will need to be instructed on how to assemble the breast pump, how to operate the breast pump, clean the pump parts, the storage and handling of breastmilk, trouble shoot basic issues with the breast pump, and the hands-on pumping technique. It is the nurse’s responsibility to ensure that the mother is appropriately educated. Often mothers will be discharged before Lactogenesis II. It is also the nurses’ responsibility to ensure that the mother has the appropriate skills to maintain lactation before discharge. The nurse should clearly document in the chart that the education has occurred. It is also the responsibility of the nurse to ensure that this mother has priority access to a double electric breast pump during her hospital stay. As there is not an electric breast pump available for every mother on the unit pump access should be determined by medical priority (See Appendix III).

**Antenatal breastmilk expression for infants at high risk for hypoglycemia:**
In an effort to reduce the use of cow’s milk formula supplementation, collection of colostrum during outpatient misoprostol inductions will be recommended to mothers delivering infants that are at high risk for hypoglycemia postdelivery. These infants will be limited to infants with suspected macrosomia (> 4000g), born to mothers with gestational diabetes or diabetes mellitus, or maternal use of labetalol during pregnancy. The colostrum will be collected using hand expression. A breast pump should not be used, as little to no milk will likely be collected in this manner. The outpatient misoprostol milk expression procedure can be located in Appendix IV.

**REFERENCES**


**APPENDIX I – HAND EXPRESSION STEPS**
1. Sit up and lean forward so that gravity is helping
2. Massage breast for 1 minute
3. Place the thumb and index finger 1 inch from areola across the nipple making a C.
4. Apply steady pressure inward towards the chest wall, not towards the nipple.
5. Gently compress fingers together with the soft pads of the thumb and index finger. Avoid sliding fingers down towards the nipple.
6. Milk will not begin to immediately flow.
7. Switch back and forth between breasts, spending 20-30 seconds on each breast until the milk begins to flow.
8. Collect milk in a spoon, cup, or 1 cc vial.

**APPENDIX II – HANDS-ON PUMPING**
1. Massage both breasts.
2. Double pump, compressing breasts as much as possible while pumping. Work one breast and then the other, back and forth. Continue until milk flow slows to a trickle.
3. Take a several minute break to massage breasts again, concentrating on areas that feel full and the outside margins.
4. Finish by either hand expressing into the pump's nipple tunnel or single pumping, whichever yields the most milk. Either way, during this step, do intensive breast compression on each breast, moving back and forth from breast to breast several times until both breasts are drained as fully as possible. Removing this small fraction of milk is very important.
5. For video demonstration see: http://newborns.stanford.edu/Breastfeeding/MaxProduction.html

**APPENDIX III – PUMP ACCESS PRIORITY**
1. Mothers separated from infants and infants with congenital malformations (i.e. cleft palate) making breastfeeding at the breast impossible
2. Delayed lactogenesis II (Postpartum day 3 or later)
3. Mothers who antenatal plan is to exclusively pump
4. Mothers wishing to pump in addition to breastfeeding without any medical indication for the need to pump.

APPENDIX IV – PROCEDURE FOR HAND EXPRESSION DURING OUTPATIENT MISOPROSTOL RIPENING

1. On day one of the outpatient induction the mother will be instructed on hand expression by the OB triage RN.
2. During hour 3 of the observed nonstress test mothers will hand express and collect their colostrum.
3. After the colostrum is collected the RN or mother will draw it into a syringe.
4. The RN will label the syringe with the patient’s name, date of birth and medical record number.
5. The syringe will be placed in bag with the mother’s name, date of birth, and medical record number, and stored in the breastmilk refrigerator located on the Labor and Delivery unit.
6. This procedure will be repeated on day two of the outpatient induction and again on day 3. On day 3 of the induction the mother’s labor nurse will assume responsibility.
7. The colostrum will only be used if the infant becomes hypoglycemic following delivery and requires supplementation. The colostrum will be used initially prior to supplementation with formula. If the colostrum is not used it can be discarded or sent home with the mother.