

Lactation Tracking & Follow-up Manual

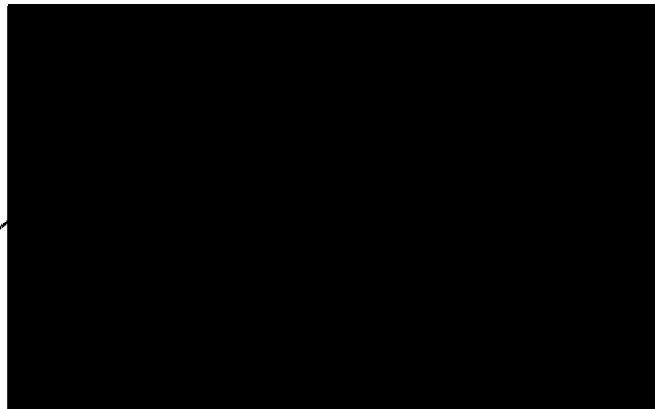
Developed for North Carolina Children's Hospital (UNC), Newborn Critical Care Center (NCCC)

By: Meheret Mamo

A training manual presented to the faculty and staff of The University of North Carolina at Chapel Hill and at North Carolina Children's Hospital - Newborn Critical Care Center (NCCC) in partial fulfillment of the requirements for the degree of Master of (Master of Science) in Public Health in the Department of Maternal and Child Health.

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Approved by:



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LACTATION TRACKING & FOLLOW-UP MANUAL

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(UNC), Newborn Critical Care Center (NCCC)

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BACKGROUND

Benefits of Providing Breastmilk to Preterm Infants

Human milk is associated with both infant and maternal health benefits. Evidence suggests significant correlation between breastmilk and its protective effect against infectious diseases, cognitive development, sudden infant death syndrome (SIDS) prevention, chronic disease risk reduction, and prevention of other health conditions such as acute leukemia during the infant period and adulthood.¹ Milk expression also offers similar health benefits as breastfeeding for mothers including protective effects against breast and ovarian cancer, reduction in maternal depression, expedited recovery, and increased postpartum weight loss after child birth.²

Human milk-based diet is beneficial for preterm infants, especially those who are very low birth weight (VLBW).³ Premature infants are a vulnerable group with special nutritional and immune protection needs. They are at more risk of growth failure, developmental delays, necrotizing enterocolitis (NEC), and late-onset sepsis.³ In addition to the nutritional, immunological, developmental, and psychological benefits, human milk provides additional nutritional and developmental benefits to preterm infants due to its unique protein structure, patterns of fatty acids, and ability to promote fat absorption.^{3,4} Studies have shown that a human milk-based diet is associated with improved feeding tolerance as well as significantly lower rates of late-onset sepsis, NEC, and surgical NEC when compared with a diet of preterm formula.^{4,5} The underlined benefits will ultimately have a positive impact on the infant's long-term health and development.³

Challenges of Providing Breastmilk to Preterm Infants

Despite the benefits of human milk, low rates of lactation and short lactation duration is common in infants born preterm. Studies have shown that only 30% of mothers were able to supply 100% of their extremely premature infants' needs.⁶ Mothers of preterm infants report numerous and multilayered challenges to providing breastmilk including establishing and maintaining milk supply as well as transitioning from gavage feeding to breastfeeding once babies are able to breastfeed.⁴ Mothers of preterm infants may encounter challenges due to the overall stability and physiological and developmental

status of the infant.³ Preterm infants, especially those that are VLBW, are immature and weak and do not have the capability to directly breastfeed and stimulate breastmilk production.³ Most mothers have to depend on daily, frequent pumping to establish and maintain milk supply, which may not be sustainable for all mothers. As a result, some mothers have difficulty with maintaining milk supply even with successful establishment of milk supply. In addition, once an infant is mature enough to breastfeed, mothers and their preterm infants may have significant difficulties in making the transition from gavage feeding to feeding at the breast due to infant maturation and underdeveloped sucking and swallowing skills.^{3,7}

Realizing the benefits and challenges of providing breastmilk to a preterm infant, it is imperative that mothers are encouraged and supported through the process. It is important for Newborn Critical Care Center (NCCC) International Board Certified Lactation Consultants (IBCLCs) and nurses to take preemptive steps to recognize cues and signs when a mother who intends to provide breastmilk is facing challenges and follow-up to make sure that suitable approaches have been provided in a timely manner. This will ultimately enable the establishment and maintenance of adequate milk supply for the preterm infant.

PURPOSE OF MANUAL

The purpose of this manual is to introduce NC children's hospital NCCC nurses and lactation consultants to newly developed lactation tracking and follow-up materials. Utilizing the proposed materials will help identify lactation challenges as well as provide necessary support to mothers in the NCCC.

This manual includes the following **lactation tracking and follow-up materials**:

❖ NCCC Materials

▪ Lactation Follow-up Card (NCCC)

- This document will be used by nurses in the NCCC to follow-up with mothers who express having challenges with milk supply. The questions will help identify any underlying issues with regards to milk supply as well as milk expression/pumping. The card will be completed by the shift nurse and will be given to a lactation consultant who will then follow-up with the mom to address any noted challenges and concerns. The card will be available in all Pods of the NCCC.

▪ Troubleshooting Lactation Challenges (NCCC)

- This document will further identify and evaluate lactation challenges. It examines all approaches a mother has already attempted including contacting a lactation consultant as well as using any lactation-promoting methods. This form can be completed by either a nurse or a lactation consultant and may be used in combination with the **Lactation Follow-up Card**. If completed by a nurse, the form will be given to a lactation consultant who will follow-up with the mom. To assist with triaging priority of care, chief concerns should be succinctly summarized and documented on the "*Chief Complaint*" section of the document once assessment is completed. The document will be available in all Pods of the NCCC.

❖ Phone Follow-up Materials

▪ Lactation Follow-up Card (Phone Call)

- This document is similar to the NCCC Lactation Follow-up Card; however this card will be used for follow-up calls. Using the provided script, NCCC nurses, IBCLCs, as well as any other staff may use this card when making follow-up calls regarding lactation with mothers who have been discharged from the hospital postpartum. If the call has been made by a nurse or NCCC staff member, the completed card will be given to a lactation consultant to further follow-up and address any noted challenges and concerns.

- **Milk Supply Tracking Spreadsheet (Phone Follow-up)**

- This spreadsheet will be used by NCCC nurses, IBCLCs, and any NCCC unit staff or Hospital Unit Coordinators (HUCs) to track breast milk supply once mothers have been discharged from the hospital. The spreadsheet will be specifically used to track **mothers with neonates** in an attempt to identify and address milk supply challenges during a baby's first two weeks of life, a critical neonatal period. The spreadsheet will list all mothers with babies who are less than 4 weeks old and identify mothers who are having challenges with establishing and sustaining breastmilk supply as well as milk expression/pumping.
- NCCC unit staff will call to follow-up with mothers with low milk supply to further identify and evaluate lactation challenges. During the call, the caller will use the phone "**Lactation Follow-up Card**" as well as "**Troubleshooting Lactation Challenges**" document to access lactation challenges. In addition to the above mentioned documents, they will also fill any essential information in the "**Notes**" section of the spreadsheet which will further assist the lactation consultant when following-up with the mom.

- ❖ **Lactation Resources**

- This document provides a list of hospital, local, and mobile device lactation resources for mothers. Resources may be edited and updated as needed.

- ❖ **Evaluation of Materials**

- This questionnaire will be used by NCCC staff to evaluate and provide feedback on the presented materials. Feedback will be used to further develop and improve materials so that they will be able to fulfill their intended purposes.

LACTATION TRACKING & FOLLOW-UP MATERIALS

Lactation Follow-up Card NCCC

Mom currently
pumping?

- ☐ YES
☐ NO

MRN: _____

1. About **how many bottles** would you say that you are getting everyday? (Small 11mls/Large 70mls)

⇒ How much would you say is in each bottle/snappy? (Full/Half/Quarter)

2. Are **you getting** less, more, or about the same each time you pump?

3. Do you have any **concerns** about pumping; is there something you would like to tell the lactation consultant?

⇒ If so may one of our lactation consultants give you a call or would you like to call them at your convenience?

- What is the best way to reach you and at what time? *(If they request to be contacted)*



Troubleshooting Lactation Challenges NCCC

** (Note: Use the following questionnaire to help mothers troubleshoot challenges related to lactation.)*

MRN: _____

Chief Complaint: _____

1. Have you contacted a lactation consultant?
 - If “yes” continue to next question
 - If “no” ask:
 - * Would you like to get in touch with a lactation consultant, a doctor, a nurse, a psychologist, social worker etc.? * (Note: provide available resources)
2. What is the name of the lactation consultant/s you have spoken with? (Note: If mom doesn't recall, continue to next question)
3. How often did you see a lactation consultant?
4. What are some of the techniques and supplements you have already used?
5. Were these techniques you already knew or were they suggested by a lactation consultant?
6. Of the techniques you used or that were suggested to you by a lactation consultant, which were helpful?
7. Of the techniques you used or that were suggested to you by a lactation consultant, which were NOT helpful?
8. Since you were discharged, have you been prescribed any new medications and/or are you taking any new over the counter medications?
9. How can we assist you?
 - Would you like to speak to a lactation consultant, a doctor, a nurse, a psychologist, social worker?
 - Are there any resources we can provide? (i.e. referrals, materials)

Lactation Follow-up Card Phone Call

Mom currently
pumping?

- ☐ YES
☐ NO

MRN: _____

Hello Ms. XXXX, I am calling from the UNC Newborn Critical Care Center to follow-up with you regarding lactation. How are you doing today? I just wanted to see how everything is going with pumping. Are you currently pumping at home or work? *(If YES, indicate in the box above and continue with questions; if NO, indicate in the box above and end.)*

1. About **how many bottles** would you say that you are getting everyday? (Small 11mls/Large 70mls)

⇒ How much would you say is in each bottle/snappy? (Full/Half/Quarter)

2. Are **you getting** less, more, or about the same each time you pump?

3. Do you have any **concerns** about pumping; is there something you would like to tell the lactation consultant?

⇒ If so may one of our lactation consultants give you a call or would you like to call them at your convenience?

- What is the best way to reach you and at what time? *(If they request to be contacted)*

MILK SUPPLY TRACKING SPREADSHEET - PHONE FOLLOW-UP

NICU_Supply_Tracking.xlsx - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View

Clipboard Font Alignment Number Styles Cells Editing

Q29

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
	Name (Last, First)	Status of Lactation (Competent, Needs Assistance, Not Sure)	Date of Contact xx/xx/xxxx	Preferred Mode Contact (Phone, Text, In-Person)	NICU Pod	Date of Birth (DOB)	Birth Weight (BW in kg)	Gestational Age (GA)	CGA	DOL	Pump Brand	Pump Type	Volume (in oz.)	Power/Super Pumping	Galactagogue Used (List type and N/A if not)	Galactagogue Start Date	Notes
1																	
2	*Doe, Janice	Needs Assistance	xx/xx/xxxx	Phone: 915-333-3333	A	xx/xx/xxxx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
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Sheet1 Sheet2 Sheet3

Ready

Lactation Resources

Staff

◆ Psychologist

- Susan Myers Michos - 984-974-3851 - CB # 7160

• NCCC Family Support Specialist

- ncccfab@unch.unc.edu

Electronic Resources

◆ Free Mobile Tracking Apps

- **MyPremie** (iOS/Android – Spanish and English)
- **MyMedla** (iOS/Android)
- **Pump Log** - (iOS)
- **Mommy Log** - (iOS)
- **Breastfeeding Feed Pump Track** - (Android)

Community Resources

◆ WakeMed Mothers' Milk Bank

- 1900 Kildaire Farm Road
Cary, NC 27518
919-350-8599
E-mail: mothersmilkbank@wakemed.org

◆ Women, Infants, and Children Program (WIC) Orange County

- **Piedmont Health Services, Inc.**
300 W. Tryon St. P.O. Box 8181
Hillsborough, NC 27278
919-245-2381
- **Carrboro - Chapel Hill Community Health Center**
301 Lloyd St.
Carrboro, NC 27510
919-942-8741

NCCC Materials

- ◆ Mom's Pumping Log
- ◆ Breastfeeding Resource Booklet

EVALUATION OF MATERIALS

Evaluation of Materials

	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
(CHECK ONE BOX ON EACH LINE)	▼	▼	▼	▼	▼
1. The lactation tracking and follow-up materials presented will help resolve lactation challenges in NCCC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The lactation tracking and follow-up materials presented are easy to implement at the NCCC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The content of the lactation tracking and follow-up materials are relevant to the needs of NCCC mothers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The content of the lactation tracking and follow-up materials are clear and easy to understand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Overall, the lactation tracking and follow-up materials presented will improve lactation in NCCC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. How useful are the following lactation tracking and follow-up materials in the NCCC?

	Very Useful	Useful	Neutral	Somewhat Useful	Not at All Useful
(CHECK ONE BOX ON EACH LINE)	▼	▼	▼	▼	▼
Lactation Follow-up cards (Phone and NCCC)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Troubleshooting Lactation Challenges NCCC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Milk Supply Tracking Spreadsheet Phone Follow-up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lactation Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Do you have any suggestions to improve the materials?

REFERENCES:

1. Allen, J., & Hector, D. (2005). Benefits of breastfeeding. *New South Wales public health bulletin*, 16(4), 42-46.
2. Rea, M. F. (2004). Benefits of breastfeeding and women's health. *Jornal de Pediatria*, 80(5), s142-s146.
3. Callen, J., & Pinelli, J. (2005). A review of the literature examining the benefits and challenges, incidence and duration, and barriers to breastfeeding in preterm infants. *Advances in Neonatal Care*, 5(2), 72-88.
4. Lucas, A. (1990-12). Breast milk and neonatal necrotising enterocolitis. *The Lancet (British edition)*, 336(8730-8731), 1519-1523.
5. Schanler, R. J., Shulman, R. J., & Lau, C. (1999). Feeding strategies for premature infants: beneficial outcomes of feeding fortified human milk versus preterm formula. *Pediatrics*, 103(6), 1150-1157.
6. Schanler, R. J., Lau, C., Hurst, N. M., & Smith, E. O. B. (2005). Randomized trial of donor human milk versus preterm formula as substitutes for mothers' own milk in the feeding of extremely premature infants. *Pediatrics*, 116(2), 400-406.
7. Buckley, K. M., & Charles, G. E. (2006). Benefits and challenges of transitioning preterm infants to at-breast feedings. *International breastfeeding journal*, 1(1), 1.