




**Lactation in the Neonatal intensive Care Unit:
Physician Engagement is Well-Worth the Effort**

Christine Bixby, MD, FAAP, IBCLC
Caroline Steele, MS, RD, CSP, IBCLC



Disclosures


- Christine Bixby, M.D. has nothing to disclose.
- Caroline Steele has been on speakers' bureaus for Mead Johnson Nutrition and Abbott Nutrition.



Programs Objectives



Following this program, the learner will be able to:

- Define the importance of breastmilk especially in the preterm population.
- Define the benefits of engaging physicians in the support of breastfeeding and lactation support in the NICU.
- Describe the methods utilized in our NICU to increase physician engagement in lactation by defining a physician champion, increasing physician education and defining the role of a lactation supportive NICU physician.





Benefits of Breastmilk in the NICU

- Breastmilk with the proper fortification is the standard
- Neurodevelopmental benefits
 - Higher IQ
 - Improved visual development & reduced risk of ROP
- GI benefits
 - Empties faster from the stomach
 - Factors may stimulate GI growth, motility, & maturation
 - Decreased incidence of GI infections including NEC & gastroenteritis
- Reduced risk of childhood diseases (including SIDS, leukemia, asthma, type I DM, allergies, ADHD, otitis media)
- Reduced risk of adult diseases (including type II DM, obesity, obstructive sleep apnea)

Barriers to Lactation in the NICU

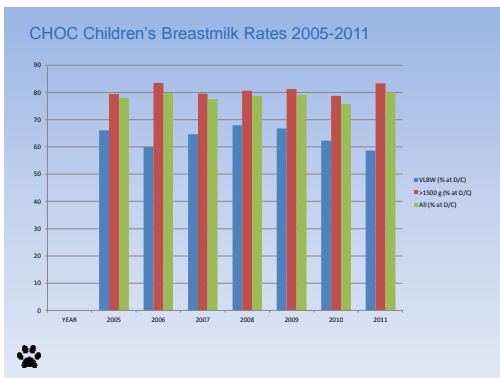
- Mothers of preterm infants have lower BF initiation rates
- VLBW mothers are least likely to initiate & maintain lactation
- Pregnancy related maternal medical complication
- Separation
- Lack of privacy within the unit
- Inadequate pump after mother discharged home
- Stress of having a baby in the NICU
- NICU culture itself including physician knowledge & engagement

Identifying the Need for a Physician Champion at CHOC


- Internal data at CHOC Children's showed:
 - Total NICU breastmilk availability at D/C constant 2005-2011
 - However, availability for the VLBW had decreased
- Identified need for a culture change throughout the unit requiring bedside RN and physician commitment for success



Why Physician Involvement?


- Physician orders (including use of breastmilk, donor milk, and/or formula) drive patient care
 - Physician involvement ensures a consistent team message
- Physician support of lactation has been demonstrated to increase a mother's likelihood to breastfeed
 - Lends credence to the importance
 - Perceived as a higher level of authority

Lu M et al., *Obstet Gynecol*. 2001 Feb;97(2):290-5.
 Holmes AV, et al. *Breastfeed Med*. 2012 Dec;7(6):403-8.
 Paterson, SS, et al. *J Hum Lact*. 1998;14:300-15.
 Breastfeeding and the use of human milk: an analysis of the American Academy of Pediatrics 2012 Breastfeeding Policy Statement. *Breastfeed Med*. 2012 Oct;7(5):323-4. Epub 2012 Sep 4.
 Moushavi F, et al. *Am J Obstet Gynecol*. 2015; Mar;211(3):58-64.
 Powers N, et al. *J Perinatol*. 2005;23:10-13.

Personal BF Experience Among Physicians


- Greatest predictor of self-confidence = personal/spousal BF
- Physician mothers who actively promoted BF among their pts and hospital staff, BF 4 months longer than physician mothers who did not actively promote BF
- Reasons for physician mothers not promoting BF:
 - Avoidance of "being judgmental"
 - Not putting pressure on other mothers
 - Not making mothers feel guilty
 - Reported feeling pressure, guilt, or judgment when they themselves had to start supplementation or discontinue BF



Friedel GL, et al. *JAMA*. 1995;273(8):472-476.
 Galton M. *BF Med*. 2013;8(1):21-27.

Impact of Physician Support


- Study of 1620 women through 12 months PP
 - 41% failed to BF beyond 6 weeks
 - A perceived neutral attitude was significantly associated with not BF beyond 6 weeks.
- Halpern et al found significantly more infants BF if pediatricians encouraged BF compared to those who were indifferent
- Newton reported hospital BF rates doubled when a prenatal lactation discussion group led by an obstetrician was initiated
- Haider found that 80% of women BF after attending a group on BF conducted by a physician compared to only 20% among those who did not attend



O'Connell AM, et al. *Birth*. 2003;30(2):94-100.
 Lu M, et al. *Obst & Gyn*. 2001;97(2):290-295.

UCLA Study of Physician Impact on BF


- 2017 parents w/children <3 years surveyed
- Duration of BF
 - 34.4% did not initiate BF
 - 12.4% BF <1 month
 - 53.2% BF >1 month
- 73.2% reported having been encouraged by physicians/nurses
 - Women who were encouraged **by their physician** to BF were 4x more likely to initiate BF when controlling for all other factors
 - Authors concluded that provider encouragement significant increases the likelihood of initiating BF



Lu M, et al. *Obst & Gyn*. 2001;97(2):290-295.

Physician Knowledge and Behavior

- Medical school and residency curricula may not prepare physicians to address BF problems
- Physician knowledge is critical to improving BF rates
 - Family practice physicians particularly are in a unique situation to manage BF problems as they care for mother and baby
- BF curriculum for physicians has been shown to improve:
 - BF knowledge
 - Beliefs about BF
 - BF rates



Holmes AV, et al. *BF Med*. 2012;7(6):403-408.

Changing Physician Behavior

- Meta-analysis of 14 reviews
- Intervention methods in the studies:
 - Audit & feedback
 - Computerized decision support systems
 - CME
 - Financial incentives
 - Local opinion leaders
 - Marketing
 - Passive dissemination of information
- 71% of studies showed positive change in physician behavior when exposed to active forms of education and multifaceted interventions



Masonfin F, et al. *AJMC*. E-pub January 20, 2015

Dartmouth Medical BF Management Program

- Implemented a program for residents and faculty
 - Content based on *What Every Physician Should Know About Breastfeeding (ABM)*
 - Evaluated both ↑ in physician knowledge & clinical BF outcomes
- BF knowledge and attitude/beliefs scores increased significantly in the group receiving the curriculum
 - BF knowledge ↑ more in those who attended more sessions
- 3-6 month follow up
 - 21 of the 37 changes physicians had committed to make had been implemented with complete or partial success
- Pts of physicians who had high levels of participation in the program had higher rates of BF at 4 & 6 mos
 - 36% and 30% respectively compared to 11% & 9% for any BF
 - Rates of full BF of 26% compared to 5%

Holmes AV, et al. *BF Med* 2012;7(6):403-408.

Use of "Commitment to Change" Forms

- Shown that when physicians write down practice changes they want to implement during CME events, they are significantly more likely to use the knowledge to change care
- Top 5 practice changes planned from the Dartmouth program
 - Increase prenatal counseling to BF
 - Increase other counseling and pt education
 - Increase referrals to community support for BF
 - Increase referrals to hospital lactation services
 - Use LactMed database for medication questions



Holmes AV, et al. *BF Med* 2012;7(6):403-408.
Hawthornthwaite M, et al. *Paed* 2002;11(10):659-663.
Barron M, et al. *J Hum Lact* 2006;22:105.

Examples of Interactive Learning Options for Physicians

- Case-based seminar for PGY-1 residents as part of nursery/inpatient peds rotation to cover basics
- Grand Rounds based on ABM Protocol #14: BF-Friendly Physician's Office, Part 1: Optimizing Care for Infants & Children
- Inpatient rounds with IBCLC and time in outpatient lactation clinic for PGY-2 residents
- Workshop with structured clinical encounters and role-playing
- Resident Noon Conference curriculum
- Journal Club for PGY-2 and PGY-3 residents



Holmes AV, et al. *BF Med* 2012;7(6):403-408.
Curriculum materials available from
alison.v.holmes@choc.org

Physician Program Examples

- AAP BF Promotion in Physicians' Office Practices (BPPOP III)
- LLLI Annual Seminar for Physicians on BF
 - Cosponsored by ACOG and AAFP
- Wellstart International modules
- ABM protocols
- ILCA guide to selecting a lactation course as well as a Directory of Lactation Course Providers
- UCSD Extension BF Education
- Lactation Education Resources (lactationtraining.com)



Setting the Stage for Unit Change

- Physician champion identified
- Dedicated time approved by NICU Medical Director
- Leadership alignment
 - Physician champion and Clinical Nutrition & Lactation Director met to ensure alignment and consistency of vision before creating the Lactation Quality Improvement (QI) team
 - QI team goals and strategies discussed
- Approval for official Lactation Medical Director position
 - Reinforced the importance of lactation as a medical intervention
 - Provided "authority" to bring forth and drive initiatives



Roles & Responsibilities of the Lactation Medical Director

- Obtained additional education in lactation
 - Culminating in successfully passing the IBCLC exam in 2015!
- Became co-leader of the Lactation QI Team in order to represent the physician perspective on issues and initiatives
- Responsible for educating the neonatologists
- Responsible for disseminating information and soliciting feedback from neonatologists regarding initiatives



CHOC Lactation Quality Improvement (QI) Team

- Formed September 2012
- Goals:
 - Identifying barriers to lactation
 - Identifying best practices to improve lactation rates
 - Optimize available resources
 - Improve staff education
 - Improve patient/family education
- Structure
 - Monthly meetings to review progress and work on initiatives
 - Initial team members included lactation medical director (neonatologist), lactation consultants, and NICU dietitians
 - Next expanded to include NICU CNS & feeding therapists (OT/SLP)
 - Now also includes bedside RNs and NICU nurse educator
 - Others (including NICU NP) as ad hoc or virtual (email) members



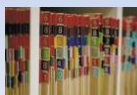
Initial QI Team Efforts (Staff Focused)

- Staffing Adjustments (Nov 2012)
 - Staffing shifted to provide 2 lactation FTEs for the NICU.
- ELBW Lactation Intervention Study (May 2013)
 - Stay tuned for the next session to learn more!
- Loaner Pump Program Enhancements (July 2013)
 - Delegated loaner pump program to the dietetic technicians to streamline the check out process & ensure proper paperwork allowing the program to continue.



Initial QI Team Efforts (Physician Focused)

- Defined the physician's role in NICU lactation
- Education to physicians
- Lactation Rounds
- Enhancements to EMR around breastmilk ordering & location of lactation information
- Antenatal consult scripting



Physician Education

- Online breastfeeding course
- Didactic lectures
 - Breastfeeding and lactation basics
 - Importance of human milk
- Modeling of physician expectations
 - Initially by the Lactation Medical Director
 - Next by other neonatologists committed to supporting breastfeeding



Lactation Rounds

- Initially twice weekly
- Attending physician and NICU lactation consultants to review lactation status of current patients
- Goal to emphasize the importance of lactation (to the mother, physicians, and staff)
- LC could share concerns with physician so that he/she could then reinforce the message with the mother
- Once importance hard-wired, rounds moved to virtual rounds where the LC provides information to the physician electronically for follow up



EMR Enhancements—Order Updates



EMR Enhancements—Order Updates

DISCERN ALERT

This patient already has an active order for Breastmilk. If you would like this as a back up to breastmilk, please MODIFY existing breastmilk order and add as the last field *

Alert Action

Cancel Enamel order

OK



EMR Enhancements—Lactation Summary Page



EMR Enhancements—Lactation Summary Page, cont'd.



EMR Enhancements—Physician Daily Note

- "Lactation Support" added as a field on the daily note
- Reinforced updating regularly to give a clear picture as to lactation status, milk supply, and actual breastfeeding
- Ensured lactation as a focal point during daily bedside rounds

Antenatal Scripting

- To provide consistent messaging between MD and RN
- Theme: *Your Milk is Medicine*
- Focus on benefits of breastfeeding/providing breastmilk
- Discuss "Lactation Bundle" with supplies & resources
 - Stay tuned for tomorrow morning to learn more about the bundle!
- Hand expression
- Pumping guidelines
 - Within 6 hours of delivery
 - 8 or more times daily via double electric pumping
 - Hands-on pumping

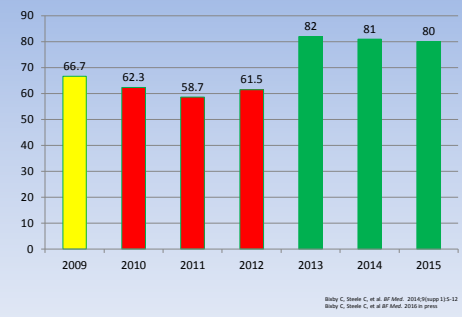


Outcomes in the CHOC VLBW Population

- Breastmilk availability at discharge for the VLBW was evaluated and compared to historical data.
- Breastmilk availability at project initiation = 58.7%
- Breastmilk availability at discharge increased by 38% to final rate of 81%

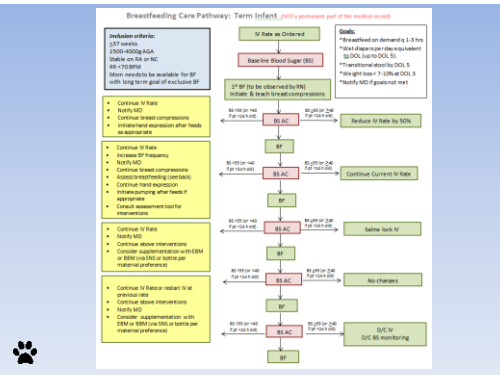


% of VLBW Infants with Breastmilk Available at Hospital Discharge



Current Initiatives—Direct Breastfeeding

- Some data suggests that < half of mothers of VLBW infants who provide expressed milk go on to direct BF
- Admission to the NICU may result in hospital practices that don't promote direct BF term or late preterm infants
- CHOC initiatives in progress to increase direct BF:
 - Breastfeeding Guidelines with order set for the term infant admitted to the NICU (pilot starting)
 - Emphasizing first feed at breast with all patients
 - Evaluation of optimal fortification at discharge to optimize direct BF while considering nutritional needs
 - Considering increasing use of SNS to promote more direct BF



BF Care Pathway—Order Set

Order Set	Criteria	Instructions
1	None	None
2	None	None
3	None	None
4	None	None
5	None	None
6	None	None
7	None	None
8	None	None
9	None	None
10	None	None
11	None	None
12	None	None
13	None	None
14	None	None
15	None	None
16	None	None
17	None	None
18	None	None
19	None	None
20	None	None
21	None	None
22	None	None
23	None	None
24	None	None
25	None	None
26	None	None
27	None	None
28	None	None
29	None	None
30	None	None
31	None	None
32	None	None
33	None	None
34	None	None
35	None	None
36	None	None
37	None	None
38	None	None
39	None	None
40	None	None
41	None	None
42	None	None
43	None	None
44	None	None
45	None	None
46	None	None
47	None	None
48	None	None
49	None	None
50	None	None
51	None	None
52	None	None
53	None	None
54	None	None
55	None	None
56	None	None
57	None	None
58	None	None
59	None	None
60	None	None
61	None	None
62	None	None
63	None	None
64	None	None
65	None	None
66	None	None
67	None	None
68	None	None
69	None	None
70	None	None
71	None	None
72	None	None
73	None	None
74	None	None
75	None	None
76	None	None
77	None	None
78	None	None
79	None	None
80	None	None
81	None	None
82	None	None
83	None	None
84	None	None
85	None	None
86	None	None
87	None	None
88	None	None
89	None	None
90	None	None
91	None	None
92	None	None
93	None	None
94	None	None
95	None	None
96	None	None
97	None	None
98	None	None
99	None	None
100	None	None

Current Initiatives—Physician Education

- Didactic Lectures
 - Grand Rounds
 - Resident Noon Conference
 - Fellows Didactic
- NICU Residents all rotate with Lactation Consultants
- Elective 2 week resident rotation in Clinical Nutrition & Lactation which includes lactation specific rotations
- Direct support for resident physicians or their spouses for personal lactation support



Discussion/Conclusions

- One cannot expect the reported increase in breastmilk at discharge by engaging physicians alone, but through a comprehensive multi-disciplinary team.
- However, physicians have a multi-faceted role in supporting lactation in the NICU.
- This can be achieved by:
 - Identifying a physician champion
 - Educating the current and junior physicians
 - Making breastmilk/lactation part of the daily rounding experience
 - Actively encouraging lactation in the antepartum, peripartum, and NICU encounters with mothers
- Physician engagement in lactation is well worth the effort and can support the lactation program in many areas, including, but not limited to the bedside.

