NEONATAL INTENSIVE CARE (NICU) RESOURCES:

A Guide to Recommended Practices

2021

Baby-Friendly USA

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INTRODUCTION

Baby-Friendly USA, Inc.

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BABY-FRIENDLY USA, INC. (BFUSA), the national authority for the WHO/UNICEF Baby Friendly Hospital Initiative (BFHI) in the US, has been providing guidance to US maternity facilities and assessing their adherence to the WHO/UNICEF Ten Steps to Successful Breastfeeding since 1997. While the BFHI provides some guidance that is useful for neonatal intensive care units (NICUs), its focus is primarily on improving the infant feeding policies and practices of well-baby maternity services. Several years ago, the BFUSA Board of Directors decided it was important to develop specific "Baby-Friendly" infant feeding guidance for NICUs in the US and appointed a Task Force with expertise in neonatal infant feeding and care to assist in this process.

At this time, BFUSA DOES NOT plan to develop a separate NICU certification process or to expand current Baby Friendly certification into neonatal intensive care units beyond what is now included. However, BFUSA has recognized the potential benefit of supporting NICUs to incorporate Baby Friendly principles into neonatal intensive care. To meet that goal, these resources are offered to assist NICUs with the process of comparing their practices with evidence-based recommendations. Then NICUs can conduct gap analysis and embark on change processes to align with and incorporate useful, evidence-based policies and practices related to the use of human milk and breastfeeding for premature or sick infants and their families.

Several sections are included in these NICU Resources:

SECTION 1:
OVERVIEW OF BABY-FRIENDLY PRACTICES FOR THE NICU
with recommended practices listed for the Ten Steps, the Guiding Principles and The International Code[1]

SECTION 2:
PRACTICES REVIEW
for analyzing how well a NICU is applying the recommended practices including instructions and a tool for reviewing practices

SECTION 3:
CLINICAL GUIDANCE WITH REFERENCES
consisting of rationale summaries and suggested strategies for implementing the recommended practices; includes references and Bibliography

SECTION 4:
SUPPORT DOCUMENTS AND APPENDICES
providing additional resources for use in the review and planning process

[1] World Health Organization, "International Code of Marketing of Breast-milk Substitutes," 1981. Available: http://www.who.int/nutrition/publications/code_english.pdf. [Accessed 26 September 2020].

AUTHORSHIP, ACKNOWLEDGMENTS, and CITING THIS WORK

AUTHORSHIP

This work reflects the culmination of the BFUSA NICU Task Force which included neonatologists (MDs), nurses (RNs), lactation consultants or counselors (IBCLCs, LCs), dietitians (RDs), speech therapists (SLPs), occupational therapists (OTs), and assessment specialists, some of whom were parents of children who had required NICU care. A concerted effort was made to include individuals with perspectives that included expertise in clinical care in different disciplines, research, academia, education, administration, as well as from a variety of geographical areas and NICUs of varying sizes in hospitals with and without maternity services. A full list of the Task Force, including the Chair and all the members and their affiliations, can be found in Appendix F.

During the second phase of the development of the "NICU Resources", Phyllis Kombol, MSN, RNC-NIC, IBCLC, played the key role in designing the "Overview" and "Support" sections, preparing the "Clinical Guidance with References" section, updating the references in the Bibliography, and streamlining and finalizing all the NICU Resource materials. Ann Brownlee, MA, PhD, BFUSA board member and consultant with WHO and UNICEF on BFHI, worked on finalizing the "Practices Review Tool", following the guidance of the NICU Task Force, and edited and provided feedback on all the "NICU Resources" drafts. Lawrence Gartner, MD, neonatologist and BFUSA board member, played a valuable role as medical expert and in reviewing and editing the documents as well.

ACKNOWLEDGMENTS

BFUSA would like to express its appreciation to Kathleen Marinelli, MD, IBCLC, FABM, FAAP, who chaired our NICU Task Force from 2013-2017. BFUSA acknowledges the Neo-BFHI consortium, whose pioneering work found in the "Neo-BFHI Core Document"[2] was studied by our working group and helped inform the initial efforts of the BFUSA NICU Task Force. Gratitude is offered for the reviews by clinical experts from a number of professional associations including the American Academy of Pediatrics (AAP), the American College of Obstetricians and Gynecologists (ACOG), the United States Lactation Consultant Association (USLCA), the National Association of Pediatric Nurse Practitioners (NAPNAP) and by staff of the Carolina Global Breastfeeding Institute and Breastfeed LA. The reviews of Jane Morton, MD, pediatrician (Stanford University Medical Center) and Nancy Wight, MD, neonatologist (Sharp Mary Birch Hospital for Women and Newborns) are also gratefully acknowledged.

CITING THIS WORK

Baby-Friendly USA, Inc. "BFUSA Neonatal Intensive Care (NICU) Resources: A Guide to Recommended Practices". Albany, NY: Baby-Friendly USA, 2021.

[2]K. Nyqvist, R. Maastrup, M. Hansen, et al,. "Neo-BFHI: The Baby-friendly Hospital Initiative for Neonatal Wards," Nordic Quebec Working Group, 2015.

10 STEPS FOR SUCCESSFUL BREASTFEEDING, ADAPTED FOR NICU SETTINGS

These Steps were adapted from the the original Ten Steps to Successful Breastfeeding.

Changes reflect the NICU environment and care priorities, while retaining the core principles of The Baby-Friendly Hospital Initiative.

STEP 1 Have a written infant feeding policy and protocols for the NICU that include the use of human milk and breastfeeding that are routinely communicated to all health care staff involved in the care of NICU parents and infants.

STEP 2 Educate and train all staff working with NICU infants and their families in the knowledge, competence and skills necessary to implement the NICU-related infant feeding policy and protocols.

STEP 3 As early as possible, discuss with families whose infants are at risk for admission to the NICU the initiation and management of lactation, and the benefits of human milk and breastfeeding.

STEP 4 Place stable infants skin-to-skin on their mothers as soon as feasible. Facilitate and support extended, ongoing skin-to-skin care by parents or support persons without unjustified restrictions.

STEP 5 Show parents how to initiate and maintain lactation at the earliest possible time and initiate breastfeeding with infant readiness and stability as the only criteria.

STEP 6 Give infants no food or drink other than human milk, unless medically indicated.

STEP 7 Allow and encourage parents and support persons to be with their infants and participate in their feeding and care, with unrestricted access, 24 hours a day, unless there are justifiable reasons for separation.

STEP 8 Encourage cue-based infant-driven oral feeding with breastfeeding as early as possible, with no weight or gestational age restrictions.

STEP 9 For infants who are expected to breastfeed, use alternatives to bottle feeding whenever possible until the infants have been given the opportunity to develop some breastfeeding skills. Use nipple shields and pacifiers only for therapeutic reasons.

STEP 10 Prepare parents for continued lactation and breastfeeding after NICU discharge by having written follow-up plans and ensuring access to specialized clinical lactation support services and groups knowledgeable about the needs of post-NICU infants.

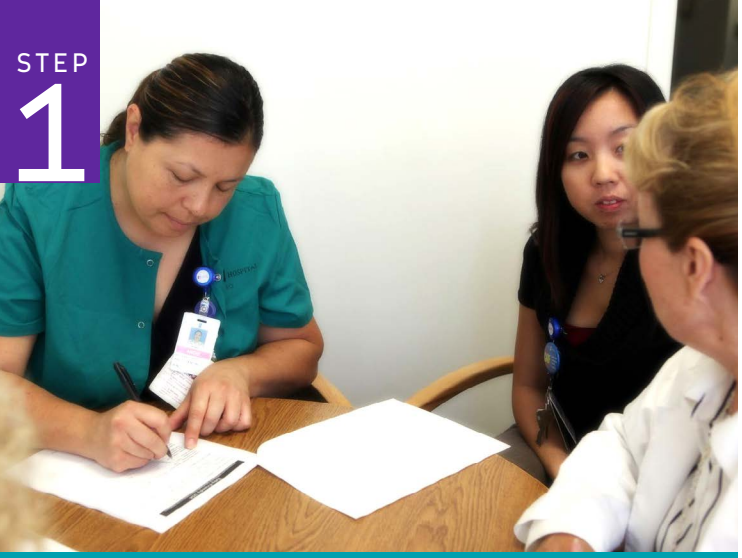
SECTION 1

OVERVIEW OF RECOMMENDED PRACTICES FOR THE NICU TEN STEPS, GUIDING PRINCIPLES AND THE INTERNATIONAL CODE

This Overview provides lists of the recommended practices related to each of the steps, three overarching guiding principles and compliance with The International Code of Marketing of Breast-milk Substitutes.

Recommended Practices for achieving each of the NICU Ten Steps are presented as a list after the step. These Recommended Practices are also part of the Practices Review Tool, useful for a NICU to identify areas of strengths as well as gaps they may want to address. Further discussion of rationale and suggestions for implementation for each of the Steps and Recommended Practices are explored in the Clinical Guidance section.

STEP 1



Have a written infant feeding policy and protocols for the NICU that include the use of human milk and breastfeeding that are routinely communicated to all health care staff involved in the care of NICU parents and infants.

STEP 1 | RECOMMENDED PRACTICES:

1.1 The NICU's infant feeding policy and protocols incorporate practices for the NICU Steps 1 through 10 and the International Code of Marketing of Breast-milk Substitutes, as specified in the BFUSA NICU Preliminary Policy Review (Appendix B).

1.2 The NICU has developed and implemented a data gathering and monitoring system to give appropriate feedback on adherence to the policy and essential infant feeding data. Refer to Appendix A for key data to include.

1.3 All NICU staff members and health providers with hospital privileges have received orientation regarding the policy's content.

1.4 The NICU Ten Steps and a statement indicating the facility's compliance with the International Code of Marketing of Breast-milk Substitutes are displayed in NICU patient care areas where families are likely to see them.

1.5 The posters are displayed in the language(s) most commonly understood by parents of infants in the NICU.

For Step 1: Practice Review, click here

For Step 1: Clinical Guidance, click here

STEP 2

Educate and train all staff working with NICU infants and their families in the knowledge, competence and skills necessary to implement the NICU-related infant feeding policy and protocols.

STEP 2 | RECOMMENDED PRACTICES:

2.1 Plans for training and annual continuing education of regular full-time and part-time staff members and health care providers with privileges involved in NICU care cover content featured in Appendix C: A Brief Guide for Developing Education & Training Plans for NICU Staff.

2.2 Full- and part-time staff and health care providers with privileges working in the NICU and related areas for six months or more have received training and supervised clinical experience as well as annual continuing education related to their job responsibilities, covering the content in Appendix C.

2.3 Competency assessments of these same staff and providers indicate that they have acquired the needed knowledge and skills.

2.4 Students, interns and other temporary (including per diem) personnel or trainees who rotate through the NICU receive orientation and training commensurate with their responsibilities, related to the content in Appendix C.

2.5 The NICU makes applicable education programs available to staff of hospitals, high-risk clinics and obstetric practices that refer patients to the NICU, and to community health workers who provide lactation support following discharge.

2.6 Assistance, including help with positioning and attachment, is offered to parents who intend to breastfeed as soon as the infants are ready to suckle and their conditions and proximity allow.

For Step 2: Practice Review, click here

For Step 2: Clinical Guidance, click here

STEP 3

As early as possible, discuss with families whose infants are at risk for admission to the NICU the benefits, initiation and management of lactation and breastfeeding.

STEP 3 | RECOMMENDED PRACTICES:

3.1 The facility has a plan for providing NICU-related education about lactation and breastfeeding to families at risk of having infants admitted to the NICU (see Appendix D: A Brief Guide for Developing Plans for NICU Parent Education Focused on Infant Feeding Issues).

3.2 Pregnant patients who are hospitalized or otherwise at risk of having infants admitted to the NICU have an adequate understanding of the topics listed in Appendix D, with consideration of what is appropriate to their situations.

3.3 Information is discussed with families in a culturally-sensitive manner, taking into consideration their literacy levels, any language barriers, cultural backgrounds, previous breastfeeding experiences and intended plans for infant feeding.

3.4 Printed and/or electronic educational material is provided to and reviewed with all families with infants known to be at risk for admission to the NICU.

For Step 3: Practice Review, click here

For Step 3: Clinical Guidance, click here

STEP 4

Place stable infants skin-to-skin on their mothers as soon as feasible. Facilitate and support extended, ongoing skin-to-skin care by parents or support persons without unjustified restrictions.

STEP 4 | RECOMMENDED PRACTICES:

4.1 Parents of preterm or sick infants are informed on admission of their infants into the NICU of the importance and benefits of early and extended skin-to-skin (STS) care (sometimes referred to as Kangaroo Care).

4.2 Preterm or sick infants are placed STS on their mothers (birthing parents) as soon after birth or as soon after arrival in the NICU as their conditions and proximity allow.

4.3 Parents of stable preterm or sick infants are encouraged to provide STS care both throughout the NICU stay and continuing after discharge for as long and as often as possible, without unjustified restrictions or interference.

4.4 When mothers are unable or unavailable to provide STS care for their infants, staff encourage and assist them to designate others such as a partner, family member or designated support person to provide it, giving guidance on issues that should be considered when making the decision.

For Step 4: Practice Review, click here

For Step 4: Clinical Guidance, click here

STEP 5

Show parents how to initiate and maintain lactation at the earliest possible time and initiate breastfeeding with infant readiness and stability as the only criteria.

For Step 5: Practice Review, click here

For Step 5: Clinical Guidance, click here

STEP 5 | RECOMMENDED PRACTICES:

5.1 Parents are advised about the value and importance of human milk to their infants' health and the need for colostrum as soon as feasible after birth.

5.2 Parents with infants in the NICU are offered appropriate assistance with milk expression as soon as infants' and parents' conditions allow. The possible practices for assistance with milk expression vary depending on the circumstances as outlined here:

- **5.2.1** If the infants' condition or care will not allow the infants to breastfeed, assistance with hand expressing colostrum is offered to the parents; if possible, within an hour but no later than six hours from birth (possibly while infants are being held skin-to-skin if that is feasible).
- **5.2.2** If infants are doing some but not all feedings effectively at the breast, assistance with milk expression by hand and/or pump is offered as soon as possible but no later than six hours after birth.
- **5.2.3** If infants are admitted to the NICU some period of time after birth, this assistance is offered as soon as feasible after admission.

5.3 Assistance and instructions to breastfeed and/or express milk at least eight times or more every 24 hours, including at least once during the night, are provided to establish and maintain milk production.

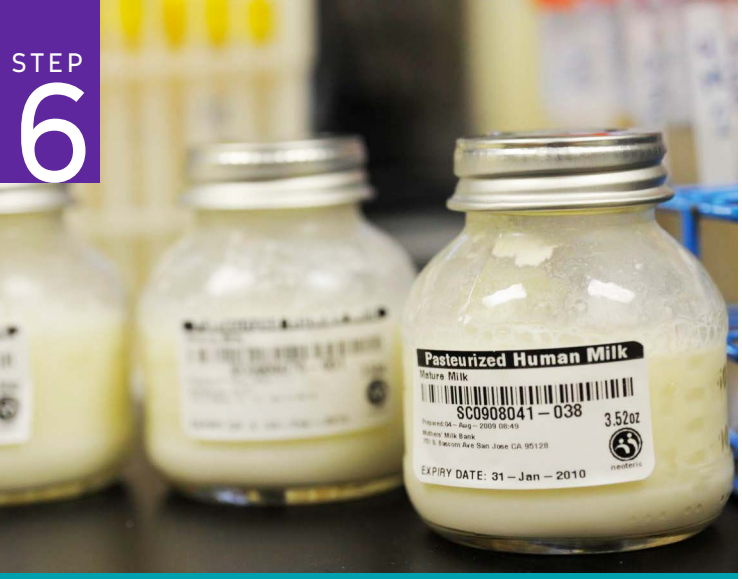
5.4 Expressed milk is given to infants as soon as they are medically ready, before any supplementation with human milk substitutes. If "Mothers' Own Milk" is not available, the use of donor milk is considered before human milk substitutes.

5.5 NICU staff monitors each family's progress with establishing and maintaining milk production and provides focused, individualized support to those who need assistance with management of any difficulties.

5.6 Infant feeding readiness cues and physiological stability, rather than age or weight, are the only infant criteria for offering pre-term or sick infants the breast/chest to initiate suckling.

5.7 Assistance, including help with positioning and attachment, is offered to parents who intend to breastfeed as soon as the infants are ready to suckle and their conditions and proximity allow.

STEP 6



Give infants no food or drink

other than human milk,

unless medically indicated.

STEP 6 | RECOMMENDED PRACTICES:

6.1 Human milk (preferably mothers' own milk or donor human milk when mothers' own milk is unavailable) is the preferred feeding for infants in the NICU.

6.2 Parents' fully informed infant feeding decisions along with the risks and benefits are discussed, documented and their decisions are respected.

6.3 The unit has consistently applied evidence-based protocols for the identification, storage, handling and feeding of all human milk to maximize the safety and preserve the qualities of the milk.

6.4 Parents who will be using any human milk substitutes or additives receive written instructions and are individually taught before discharge how to safely prepare, store and give feedings to their infants.

6.5 The unit has clear protocols/recommendations based on current evidence for when there is a clinical need for alternatives or additives (such as fortifiers) to the mothers' own or donor human milk.

For Step 6: Practice Review, click here

For Step 6: Clinical Guidance, click here

STEP 7

Allow and encourage parents and support persons to be with their infants and participate in their feeding and care, with unrestricted access, 24 hours a day, unless there are justifiable reasons for separation.

STEP 7 | RECOMMENDED PRACTICES:

7.1 The parents and support persons are encouraged to be with their infants as early, as often and as long as possible, unless there are justifiable reasons for separation.

7.2 The parents are counseled concerning the reasons it is helpful and appropriate for them and/or other support persons to be with their infants and participate progressively in the infants' feeding and care as much as possible, day and night.

7.3 The parents and support persons designated by them are provided with support and practical assistance to help them to be involved in providing their infants' feeding and care.

For Step 7: Practice Review, click here

For Step 7: Clinical Guidance, click here

STEP 8

Encourage cue-based infant-driven oral feeding with breastfeeding as early as possible, with no weight or gestational age restrictions.

STEP 8 | RECOMMENDED PRACTICES:

8.1 Parents or designated support persons are guided to observe and respond to the infants' feeding cues, behaviors and responses during all oral feedings, regardless of feeding method.

8.2 Medications and other treatments are administered and procedures are scheduled to cause the least possible interference with infants' feeding cues.

8.3 The NICU has a protocol which guides decisions concerning the appropriate transition from gavage to oral feeding, addressing issues of medical indications and infant readiness and how to ensure that feeding progression is cue-based and infant-driven, rather than predetermined by gestational age or weight.

8.4 The parents are included as partners in selecting and implementing strategies for introduction and progression of oral feedings, which includes breastfeeding in accordance with the mothers' goals.

For Step 8: Practice Review, click here

For Step 8: Clinical Guidance, click here

STEP 9

For infants who are expected to breastfeed, use alternatives to bottle feeding whenever possible until the infants have been given the opportunity to develop some breastfeeding skills. Use nipple shields and pacifiers only for therapeutic reasons.

STEP 9 | RECOMMENDED PRACTICES:

9.1 Parents and support persons are counseled on the use of bottles with nipples before breastfeeding competence is established as potentially interfering with optimal breastfeeding.

9.2 Pacifiers are used for comfort and soothing infants who cannot suckle or be comforted at the breast/chest or for oral motor stimulation and development.

9.3 If infants are expected to breastfeed, the first nutritive sucking experience is at the breast, rather than with bottles and artificial nipples.

9.4 Nipple shields are used for justifiable therapeutic reasons with skilled lactation support, ongoing evaluations of need and a plan for transitioning from their use.

9.5 Parents are involved with NICU staff in creating a plan for transitioning from gavage feeding to oral feeding/breastfeeding that provides infants with the opportunity to practice and develop at least some breastfeeding skills before bottles and artificial nipples are introduced when breastfeeding is the mothers' intention.

9.6 The plans for progressive breastfeeding/oral feedings are documented and communicated to all healthcare providers caring for the infants.

For Step 9: Practice Review, click here

For Step 9: Clinical Guidance, click here

STEP
10

Prepare parents for continued lactation and breastfeeding after NICU discharge by having written follow-up plans and ensuring access to specialized clinical lactation support services and groups knowledgeable about the needs of post-NICU infants.

STEP 10 | RECOMMENDED PRACTICES:

10.1 Families who have chosen to provide breast milk and/or breastfeed are counseled regarding the importance of continuing exclusive human milk feeding (with fortification, as indicated) and/or breastfeeding for the first six months corrected gestational age, whenever possible.

10.2 Individualized written discharge instructions include the plan for feeding after NICU discharge which has been jointly developed with the parents/family.

10.3 Prior to NICU discharge, families are provided with information concerning the signs of infant feeding issues requiring assistance from qualified health care providers.

10.4 Prior to NICU discharge, families are provided with written information concerning follow-up feeding support services, especially those that offer specialized support for post-NICU families.

10.5 If infants being discharged from the NICU have in their feeding plans any fortifiers or specialized breastmilk substitutes, clear written instructions are provided to parents on how they can obtain those foods in the community.

10.6 Discharge feeding plans are shared with follow-up healthcare providers for periodic re-evaluation, based on infants' growth.

10.7 Staff ensures that the parents and infants receive breastfeeding/infant feeding assessment and support suitable for NICU infants after discharge (preferably two to four days after discharge and again the second week, and ongoing as needed), at the facility or in the community by skilled breastfeeding support persons.

10.8 If sufficient specialized support is not available for NICU graduates and their parents, the NICU facilitates the development of these skills or community resources (e.g., support groups, peer mentors, lactation clinic, home health services, helpline, etc.).

For Step 10: Practice Review, click here

For Step 10: Clinical Guidance, click here

3 GUIDING PRINCIPLES

These Three Guiding Principles were identified as over-arching philosophy for all NICU care. The NICU Task Force adapted them from NEO-BFHI and identified sub-principles. Because they reflect philosophy of care and are not easily measured, they are not specifically assessed in the Practices Review Tool.

GUIDING PRINCIPLE 1:

The facility focuses on the needs of the individual families and their unique situations and experiences.

- **GP1.1** Families are treated with sensitivity, empathy and respect for their parental roles.
- **GP1.2** Parents and families are supported in making informed decisions about infant feeding, milk production and breastfeeding. They receive individualized, evidence-based support for carrying out their decisions.
- **GP1.3** Infant feeding decisions made by parents and staff, with the reasons for them, are documented in the medical records.

For Guiding Principle 1: Clinical Guidance, click here

GUIDING PRINCIPLE 2:

The facility provides family-centered care within a supportive environment.

- **GP2.1** Parents and families are involved as partners in the care of their infants to whatever extent possible from birth and throughout the infants' NICU stay.
- **GP2.2** The presence of parents, along with their support persons, is encouraged and welcomed at all times.
- **GP2.3** Support and accommodations are provided, as feasible, to enable parents and families to rest/sleep and eat near the NICU so they can be with their infants as much as they desire.
- **GP2.4** An individualized, developmentally supportive environment is provided that facilitates skin-to-skin holding and breastfeeding as soon and as often as the infants and parents are able.

For Guiding Principle 2: Clinical Guidance, click here

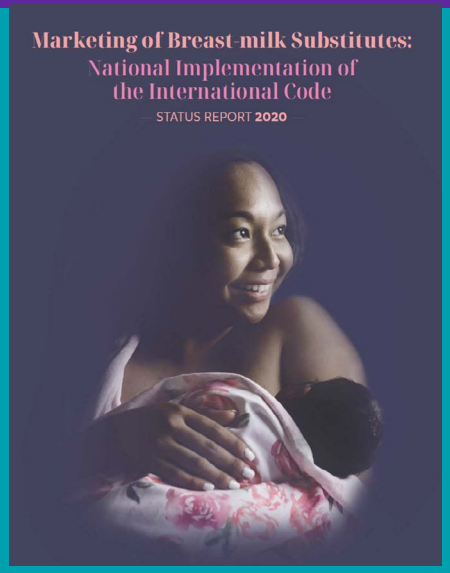
GUIDING PRINCIPLE 3:

The NICU coordinates with the health care system to ensure continuity of care from pregnancy until after infants are discharged.

- **GP3.1** Evidence-based and consistent lactation and breastfeeding support is provided by the NICU in coordination with the entire institution from pregnancy, if applicable, to follow-up care after discharge from the NICU.
- **GP3.2** Infants' medical management and families' preferences are documented at each stage and shared with all health care providers, institutions and organizations involved in lactation and breastfeeding support.

For Guiding Principle 3: Clinical Guidance, click here

THE INTERNATIONAL CODE OF MARKETING OF BREAST-MILK SUBSTITUTES[3]



The International Code of Marketing of Breast-milk Substitutes and relevant World Health Assembly resolutions are integrated into Step 1 of the most recent version of the Ten Steps to Successful Breastfeeding. They are listed here to allow for separate consideration, although they are expected to be part of the NICU's Infant Feeding Policy. (Step 1)

[3] World Health Organization, "International Code of Marketing of Breast-milk Substitutes," 1981. Available: http://www.who.int/nutrition/publications/code_english.pdf. [Accessed 26 September 2020].

THE FACILITY UPHOLDS THE INTERNATIONAL CODE IN THE NICU

CODE 1: No materials that promote breast-milk substitutes, bottles, nipples, pacifiers or other infant feeding supplies are displayed in the NICU or related areas or distributed to parents (even prenatally) or staff.

CODE 2: Unless in use, supplies of breast-milk substitutes, bottles, nipples, pacifiers and other infant feeding products are kept and stored out of view of parents and the general public.

CODE 3: Employees of manufacturers or distributors of breast-milk substitutes, bottles, nipples, pacifiers or other infant feeding supplies have no direct or indirect contact in the hospital with parents at risk of having infants in the NICU or parents with infants in the NICU.

CODE 4: No families at risk of having infants in the NICU, parents or families with infants in the NICU are given marketing materials or samples or gift packs by the NICU that include breast-milk substitutes, bottles, nipples, pacifiers or other infant feeding supplies or coupons for any of the above items.

CODE 5: No educational materials distributed to families of infants in the NICU have any messages that promote or advertise infant foods or drinks other than breast milk.

CODE 6: No educational materials used by the NICU or related areas refer to proprietary products or bear a product logo, unless specific to the parents' or infants' needs or conditions. (For example, information about how to safely use needed products such as formula or breast pumps would be acceptable to give to families needing such products. Marketing information for such products would not be acceptable.)

CODE 7: Neither the NICU nor its staff receive free gifts including food, non-scientific literature, materials or equipment, money or support for breastfeeding education or events from manufacturers or distributors of breast-milk substitutes, bottles, nipples, pacifiers or other infant feeding supplies.

CODE 8: Research funded by manufacturers or distributors of breast-milk substitutes or other commercial entities is allowed, but NICU staff and academic affiliates disclose the receipt of the funds and state how undue influence by the funders is avoided. NICU staff and academic affiliates are independently responsible for initiation, design, analysis and publication of the research, with any potential conflicts of interest declared, and arrangements made for independent peer review.

CODE 9: Any breast-milk substitutes, including special formulas, fortifiers, bottles, nipples, pacifiers and other infant feeding supplies, that are purchased by or for the NICU, are purchased at a fair market price as specified by the BFUSA Guidelines and Evaluation Criteria and accompanying guidance, with records and receipts available for review.

For Code: Practices Review, click here
For Code: Clinical Guidance, click here

SECTION 2

PRACTICES REVIEW

A tool for reviewing current practices related to the NICU Ten Steps is provided. This NICU Practices Review Tool has been developed for the purpose of providing facilities with a method for rating how well they are doing in applying baby-friendly practices in their NICUs. General Instructions appear at the beginning of the tool.

GENERAL INSTRUCTIONS FOR USE OF THE PRACTICES REVIEW TOOL

Using this tool for reviewing practices begins a multi-step process that may occur over an extended period of time.

1. Assemble a small multi-disciplinary team selected for their experience and knowledge of the NICU's infant feeding policies and practices. Include a range of team member perspectives.

2. Establish overall objectives and scope. Determine if the group will concentrate on certain steps for a limited time (months) or conduct an overall review of practices. Culture change involving all 10 steps may be a complex and multi-year process.

3. Agree on a working timeframe. The group may want to identify two or three steps to focus on initially for a few months. These could be priority targets, steps that fit with other concurrent quality improvement projects, weak points, or "low hanging fruit" where successful changes will encourage future improvement activities.

4. Gather data. Use actual data from internal administrative or quality improvement activities where possible (comprehensive/ongoing data collection or sampling), or data reported to external agencies such as the Joint Commission or Vermont Oxford Network. Where data is unavailable, make realistic estimates in order to accurately portray the current situation.

5. Analyze the data to highlight strengths and recognize challenges present in current policies and practices.

6. Record the Precise Percentage, if available, for each of the Recommended Practices. Click the area of the rating scale that best indicates the range currently achieved on each of the Recommended Practices, based on available data or estimates.

7. Use the Additional Information column of the rating table to note how the data was gathered or estimated and to make comments about prioritizing practices needing improvement as well as to suggest possible strategies that could be implemented.

8. The **"ACTION PLAN TEMPLATE" FOUND IN APPENDIX E** may be used to organize a plan of action that includes objectives and rationale, specific tasks, time frames and evaluation strategies needed to achieve desired improvements.

Facility Name: _____

Date: _____

Address: _____

Name of the NICU Conducting Review : _____

Reviewers: _____

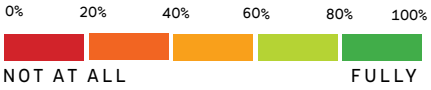
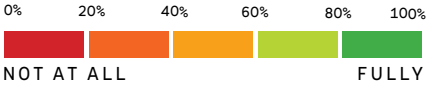
THIS TOOL HAS A RATING SCALE which may be used to indicate the percentage range achieved (PRECISE or estimated) on each of the RECOMMENDED PRACTICES. Since this is a "self-appraisal tool", these percentages may be estimates, based on whatever evidence the reviewers have available at the time.

THE ADDITIONAL INFORMATION COLUMN allows reviewers to list what data sources have been used, how estimates were made if precise percentages were not available, and/or suggestions concerning what actions can be considered to improve the practices. A sample **"ACTION PLAN" IS AVAILABLE IN APPENDIX E.**

THIS PDF TOOL MAY BE SAVED on unit- or facility-specific electronic devices with a self-defined file name. Save often while entering data. When all information has been entered, the completed form can be saved with the current date and compared when used again at a later time.

STEP 1

Have a written infant feeding policy and protocols for the NICU that include the use of human milk and breastfeeding that are routinely communicated to all health care staff involved in the care of NICU parents and infants.

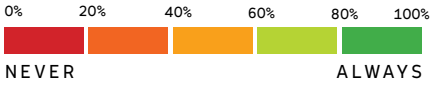
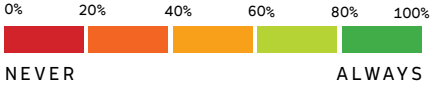
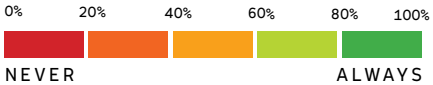
NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
1.1	The NICU's infant feeding policy and protocols incorporate practices for the NICU Steps 1 through 10 and the International Code of Marketing of Breast-milk Substitutes, as specified in the BFUSA NICU Preliminary Policy Review (Appendix B).	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
1.2	The NICU has developed and implemented a data gathering and monitoring system to give appropriate feedback on adherence to the policy and essential infant feeding data. Refer to Appendix A for key data to include. *continued next page*	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:

STEP 1: *continued from last page*

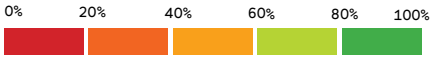
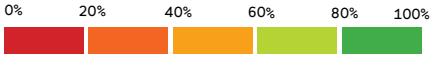
NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
1.3	NICU staff members and health providers with hospital privileges have received orientation regarding the policy's content.	PRECISE % if available: 0% 20% 40% 60% 80% 100% NOT AT ALL FULLY Click to self appraise	DATA SOURCE: COMMENTS:
1.4	The NICU Ten Steps and a statement indicating the facility's compliance with the International Code of Marketing of Breast-milk Substitutes are displayed in NICU patient care areas where families are likely to see them.	PRECISE % if available: 0% 20% 40% 60% 80% 100% NONE ALL Click to self appraise	DATA SOURCE: COMMENTS:
1.5	The posters are displayed in the language(s) most commonly understood by parents of infants in the NICU.	PRECISE % if available: 0% 20% 40% 60% 80% 100% NONE ALL Click to self appraise	DATA SOURCE: COMMENTS:

STEP 2

Educate and train all staff working with NICU infants and their families in the knowledge, competence and skills necessary to implement the NICU-related infant feeding policy and protocols.

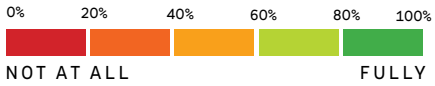
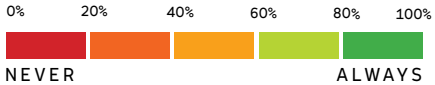
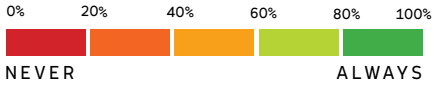
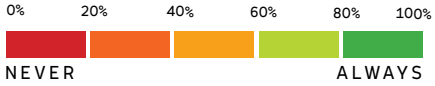
NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
2.1	Plans for training and annual continuing education of regular full-time and part-time staff members and health care providers with privileges involved in NICU care cover content featured in Appendix C: A Brief Guide for Developing Education & Training Plans for NICU Staff.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
2.2	Full- and part-time staff and health care providers with privileges working in the NICU and related areas for six months or more have received training and supervised clinical experience as well as annual continuing education related to their job responsibilities, covering the content in Appendix C.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
2.3	Competency assessments of these same staff and providers indicate that they have acquired the needed knowledge and skills. *continued next page*	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:

STEP 2: *continued from last page*

NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
2.4	Students, interns and other temporary (including per diem) personnel or trainees who rotate through the NICU receive orientation and training commensurate with their responsibilities, related to the content in Appendix C.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
2.5	The NICU makes applicable education programs available to staff of hospitals, high-risk clinics and obstetric practices that refer patients to the NICU, and to community health workers who provide lactation support following discharge.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:

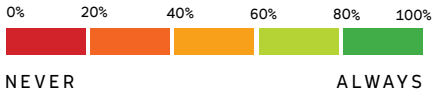
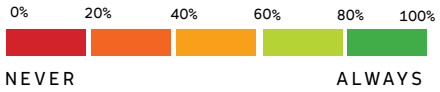
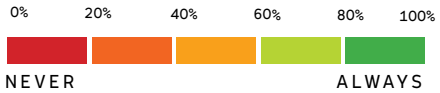
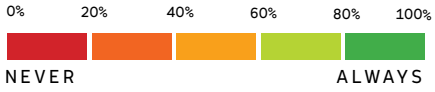
STEP 3

As early as possible, discuss with families whose infants are at risk for admission to the NICU the benefits, initiation and management of lactation and breastfeeding. *If a facility does not provide care during pregnancy for families who are at risk of having infants admitted to the NICU: Not Applicable (skip Step 3)*

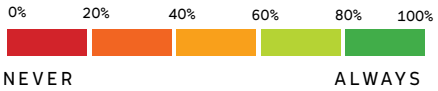
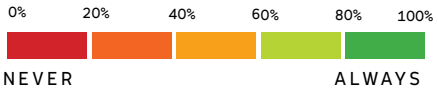
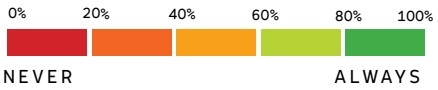
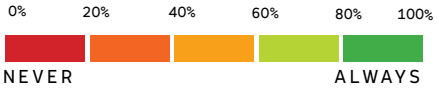
NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
3.1	The facility has a plan for providing NICU-related education about lactation and breastfeeding to families at risk of having infants admitted to the NICU (see Appendix D: A Brief Guide for Developing Plans for NICU Parent Education Focused on Infant Feeding Issues).	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
3.2	Pregnant patients who are hospitalized or otherwise at risk of having infants admitted to the NICU have an adequate understanding of the topics listed in Appendix D, with consideration of what is appropriate to their situations.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
3.3	Information is discussed with families in a culturally-sensitive manner, taking into consideration their literacy levels, any language barriers, cultural backgrounds, previous breastfeeding experiences and intended plans for infant feeding.	PRECISE % if available:  Click the colored bar to self appraise	DATA SOURCE: COMMENTS:
3.4	Printed and/or electronic educational material is provided to and reviewed with all families with infants known to be at risk for admission to the NICU.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:

STEP 4

Place stable infants skin-to-skin on their mothers as soon as feasible. Facilitate and support extended, ongoing skin-to-skin care by parents or support persons without unjustified restrictions.

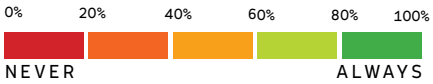
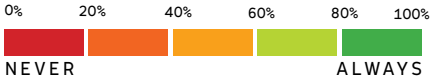
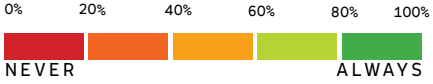
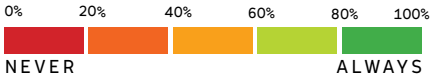
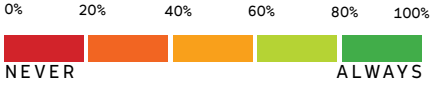
NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
4.1	Parents of preterm or sick infants are informed on admission of their infants into the NICU of the importance and benefits of early and extended skin-to-skin (STS) care (sometimes referred to as Kangaroo Care).	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
4.2	Preterm or sick infants are placed STS on their mothers (birthing parents) as soon after birth or as soon after arrival in the NICU as their conditions and proximity allow.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
4.3	Parents of stable preterm or sick infants are encouraged to provide STS care both throughout the NICU stay and continuing after discharge for as long and as often as possible, without unjustified restrictions or interference.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
4.4	When mothers are unable or unavailable to provide STS care for their infants, staff encourage and assist them to designate others such as a partner, family member or designated support person to provide it, giving guidance on issues that should be considered when making the decision.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:

STEP 5 — Show parents how to initiate and maintain lactation at the earliest possible time and initiate breastfeeding with infant readiness and stability as the only criteria

NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
5.1	Parents are advised about the value and importance of human milk to their infants' health and the need for colostrum as soon as feasible after birth.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
5.2	Parents with infants in the NICU are offered appropriate assistance with milk expression as soon as infants' and parents' conditions allow. The possible practices for assistance with milk expression vary depending on the circumstances as outlined here:		
	5.2.1 Parents of stable preterm or sick infants are encouraged to provide STS care both throughout the NICU stay and continuing after discharge for as long and as often as possible, without unjustified restrictions or interference.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
	5.2.2 If infants are doing some but not all feedings effectively at the breast, assistance with milk expression by hand and/or pump is offered as soon as possible but no later than six hours after birth.	PRECISE % if available:  Click the colored bars to self appraise	DATA SOURCE: COMMENTS:
	5.2.3 If infants are admitted to the NICU some period of time after birth, this assistance is offered as soon as feasible after admission.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS

continued next page

STEP 5: *continued from last page*

NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
5.3	Assistance and instructions to breastfeed and/or express milk at least eight times or more every 24 hours, including at least once during the night, are provided to establish and maintain milk production.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
5.4	Expressed milk is given to infants as soon as they are medically ready, before any supplementation with human milk substitutes. If "Mothers' Own Milk" is not available, the use of donor milk is considered before human milk substitutes.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
5.5	NICU staff monitors each family's progress with establishing and maintaining milk production and provides focused, individualized support to those who need assistance with management of any difficulties.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
5.6	Infant feeding readiness cues and physiological stability, rather than age or weight, are the only infant criteria for offering preterm or sick infants the breast/chest to initiate suckling.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
5.7	Assistance, including help with positioning and attachment, is offered to parents who intend to breastfeed as soon as the infants are ready to suckle and their conditions and proximity allow.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:

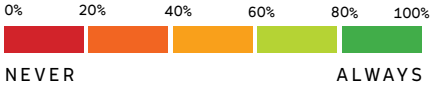
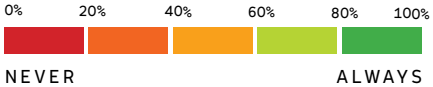
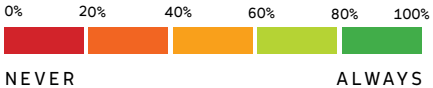
STEP 6 Give infants no food or drink other than human milk, unless medically indicated.

NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
6.1	Human milk (preferably mothers' own milk or donor human milk when mothers' own milk is unavailable) is the preferred feeding for infants in the NICU.	PRECISE % if available: 0% 20% 40% 60% 80% 100% NEVER ALWAYS Click to self appraise	DATA SOURCE: COMMENTS:
6.2	Parents' fully informed infant feeding decisions along with the risks and benefits are discussed, documented and their decisions are respected.	PRECISE % if available: 0% 20% 40% 60% 80% 100% NEVER ALWAYS Click to self appraise	DATA SOURCE: COMMENTS:
6.3	The unit has consistently applied evidence-based protocols for the identification, storage, handling and feeding of all human milk to maximize the safety and preserve the qualities of the milk.	PRECISE % if available: 0% 20% 40% 60% 80% 100% NEVER ALWAYS Click to self appraise	DATA SOURCE: COMMENTS:
6.4	Parents who will be using any human milk substitutes or additives receive written instructions and are individually taught before discharge how to safely prepare, store and give feedings to their infants.	PRECISE % if available: 0% 20% 40% 60% 80% 100% NEVER ALWAYS Click to self appraise	DATA SOURCE: COMMENTS:
6.5	The unit has clear protocols/recommendations based on current evidence for when there is a clinical need for alternatives or additives (such as fortifiers) to the mothers' own or donor human milk.	PRECISE % if available: 0% 20% 40% 60% 80% 100% NEVER ALWAYS Click to self appraise	DATA SOURCE: COMMENTS:

For Step 6 Clinical Guidance, click here

STEP 7

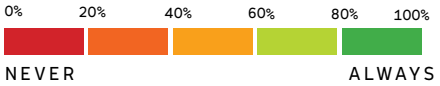
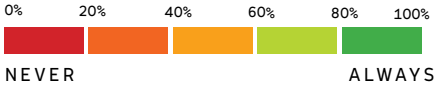
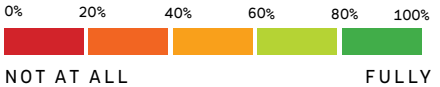
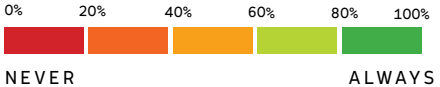
Allow and encourage parents and support persons to be with their infants and participate in their feeding and care, with unrestricted access, 24 hours a day, unless there are justifiable reasons for separation.

NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
7.1	The parents and support persons are encouraged to be with their infants as early, as often and as long as possible, unless there are justifiable reasons for separation.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
7.2	The parents are counseled concerning the reasons it is helpful and appropriate for them and/or other support persons to be with their infants and participate progressively in the infants' feeding and care as much as possible, day and night.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
7.3	The parents and support persons designated by them are provided with support and practical assistance to help them to be involved in providing their infants' feeding and care.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:

For Step 7 Clinical Guidance, click here

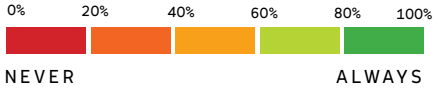
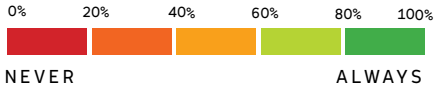
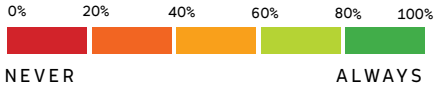
STEP 8

Place stable infants skin-to-skin on their mothers as soon as feasible. Facilitate and support extended, ongoing skin-to-skin care by parents or support persons without unjustified restrictions.

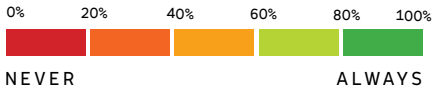
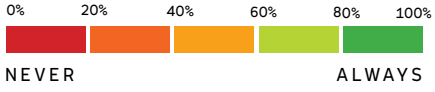
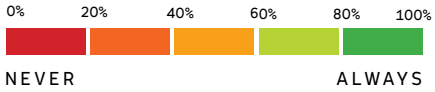
NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
8.1	Parents or designated support persons are guided to observe and respond to the infants' feeding cues, behaviors and responses during all oral feedings, regardless of feeding method.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
8.2	Medications and other treatments are administered, and procedures are scheduled to cause the least possible interference with infants' feeding cues.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
8.3	The NICU has a protocol which guides decisions concerning the appropriate transition from gavage to oral feeding, addressing issues of medical indications and infant readiness and how to ensure that feeding progression is cue-based and infant-driven, rather than predetermined by gestational age or weight.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
8.4	The parents are included as partners in selecting and implementing strategies for introduction and progression of oral feedings, which includes breastfeeding in accordance with the mothers' goals.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:

STEP 9

For infants who are expected to breastfeed, use alternatives to bottle feeding whenever possible until the infants have been given the opportunity to develop some breastfeeding skills. Use nipple shields and pacifiers only for therapeutic reasons.

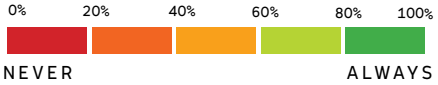
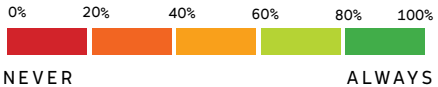
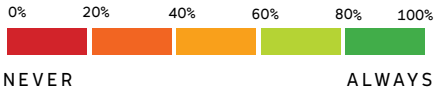
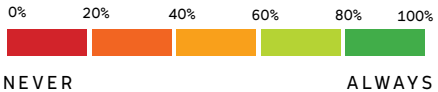
NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
9.1	Parents and support persons are counseled on the use of bottles with nipples before breastfeeding competence is established as potentially interfering with optimal breastfeeding.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
9.2	Pacifiers are used for comfort and soothing infants who cannot suckle or be comforted at the breast/chest or for oral motor stimulation and development.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
9.3	If infants are expected to breastfeed, the first nutritive sucking experience is at the breast, rather than with bottles and artificial nipples. *continued next page*	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:

STEP 9: *continued from last page*

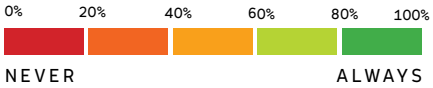
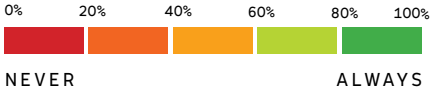
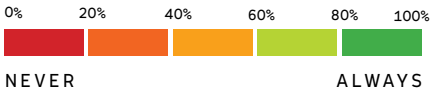
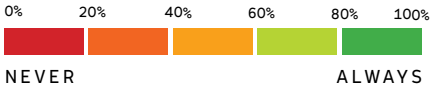
NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
9.4	Nipple shields are used for justifiable therapeutic reasons with skilled lactation support, ongoing evaluations of need and a plan for transitioning from their use.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
9.5	Parents are involved with NICU staff in creating a plan for transitioning from gavage feeding to oral feeding/breastfeeding that provides infants with the opportunity to practice and develop at least some breastfeeding skills before bottles and artificial nipples are introduced when breastfeeding is the mothers' intention.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
9.6	The plans for progressive breastfeeding/oral feedings are documented and communicated to all healthcare providers caring for the infants.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:

STEP 10

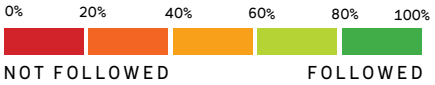
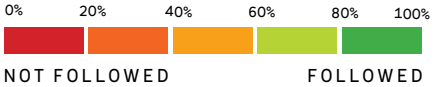
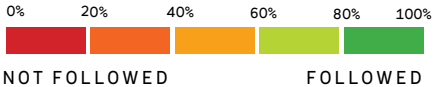
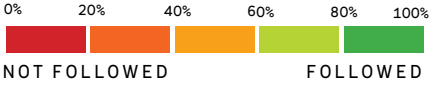
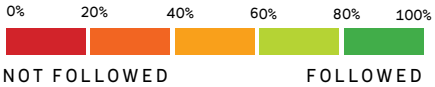
Prepare parents for continued lactation and breastfeeding after NICU discharge by having written follow-up plans and ensuring access to specialized clinical lactation support services and groups knowledgeable about the needs of post-NICU infants.

NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
10.1	Families who have chosen to provide breast milk and/or breastfeed are counseled regarding the importance of continuing exclusive human milk feeding (with fortification, as indicated) and/or breastfeeding for the first six months corrected gestational age, whenever possible.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
10.2	Individualized written discharge instructions include the plan for feeding after NICU discharge which has been jointly developed with the parents/ family.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
10.3	Prior to NICU discharge, families are provided with information concerning the signs of infant feeding issues requiring assistance from qualified health care providers.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
10.4	Prior to NICU discharge, families are provided with written information concerning follow-up feeding support services, especially those that offer specialized support for post-NICU families. *continued next page*	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:

STEP 10: *continued from last page*

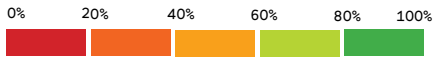
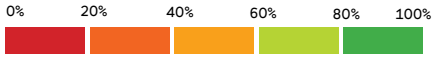
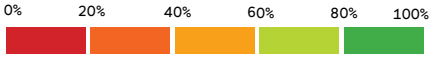
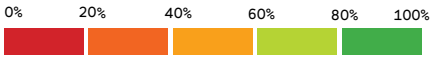
NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
10.5	If infants being discharged from the NICU have in their feeding plans any fortifiers or specialized breast milk substitutes, clear written instructions are provided to parents on how they can obtain those foods in the community.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
10.6	Discharge feeding plans are shared with follow-up healthcare providers for periodic re-evaluation, based on infants' growth.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
10.7	Staff ensures that the parents and infants receive breastfeeding/infant feeding assessment and support suitable for NICU infants after discharge (preferably two to four days after discharge and again the second week, and beyond as needed), at the facility or in the community by skilled breastfeeding support persons.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
10.8	If sufficient specialized support is not available for NICU graduates and their parents, the NICU facilitates the development of these skills or community resources (e.g., support groups, peer mentors, lactation clinic, home health services, helpline, etc.).	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:

THE INTERNATIONAL CODE OF MARKETING OF BREAST-MILK SUBSTITUTES[4]

NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
CODE 1	No materials that promote breast-milk substitutes, bottles, nipples, pacifiers or other infant feeding supplies are displayed in the NICU or related areas or distributed to parents (even prenatally) or staff.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
CODE 2	Unless in use, supplies of breast-milk substitutes, bottles, nipples, pacifiers and other infant feeding products are kept and stored out of view of parents and the general public	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
CODE 3	Employees of manufacturers or distributors of breast-milk substitutes, bottles, nipples, pacifiers or other infant feeding supplies have no direct or indirect contact in the hospital with parents at risk of having infants in the NICU or parents with infants in the NICU.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
CODE 4	No families at risk of having infants in the NICU, parents or families with infants in the NICU are given marketing materials or samples or gift packs by the NICU that include breast-milk substitutes, bottles, nipples, pacifiers or other infant feeding supplies or coupons for any of the above items.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
CODE 5	Assistance, including help with positioning and attachment, is offered to parents who intend to breastfeed as soon as the infants are ready to suckle and their conditions and proximity allow. *continued next page*	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:

[4]World Health Organization, "International Code of Marketing of Breast-milk Substitutes," 1981. [Online]. Available: http://www.who.int/nutrition/publications/code_english.pdf. [Accessed 26 September 2020].

CODE OF MARKETING: *continued from last page*

NO.	RECOMMENDED PRACTICES	RATING	ADDITIONAL INFORMATION
CODE 6	No educational materials used by the NICU or related areas refer to proprietary products or bear a product logo, unless specific to the parents' or infants' needs or conditions. (For example, information about how to safely use needed products such as formula or breast pumps would be acceptable to give to families needing such products. Marketing information for such products would not be acceptable.)	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
CODE 7	Neither the NICU nor its staff receive free gifts including food, non-scientific literature, materials or equipment, money or support for breastfeeding education or events from manufacturers or distributors of breast-milk substitutes, bottle, nipples, pacifiers or other infant feeding supplies.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
CODE 8	Research funded by manufacturers or distributors of breast-milk substitutes or other commercial entities is allowed, but NICU staff and academic affiliates disclose the receipt of the funds and state how undue influence by the funders is avoided. NICU staff and academic affiliates are independently responsible for initiation, design, analysis and publication of the research, with any potential conflicts of interest declared, and arrangements made for independent peer review.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:
CODE 9	Any breast-milk substitutes, including special formulas, fortifiers, bottles, nipples, pacifiers and other infant feeding supplies that are purchased by or for the NICU, are purchased at a fair market price as specified by the BFUSA Guidelines and Evaluation Criteria and accompanying guidance, with records and receipts available for review.	PRECISE % if available:  Click to self appraise	DATA SOURCE: COMMENTS:

SECTION 3

CLINICAL GUIDANCE WITH REFERENCES

This Clinical Guidance section is designed to be a companion piece to the Practices Review Tool, to help when exploring strategies to improve NICU practices. For each step there is a Rationale Summary and then a table listing Recommended Practices identical to those in the Practices Review Tool. Then Clinical Guidance: Suggested Strategies are provided in the second column offering suggestions/options for implementing the recommended practices.

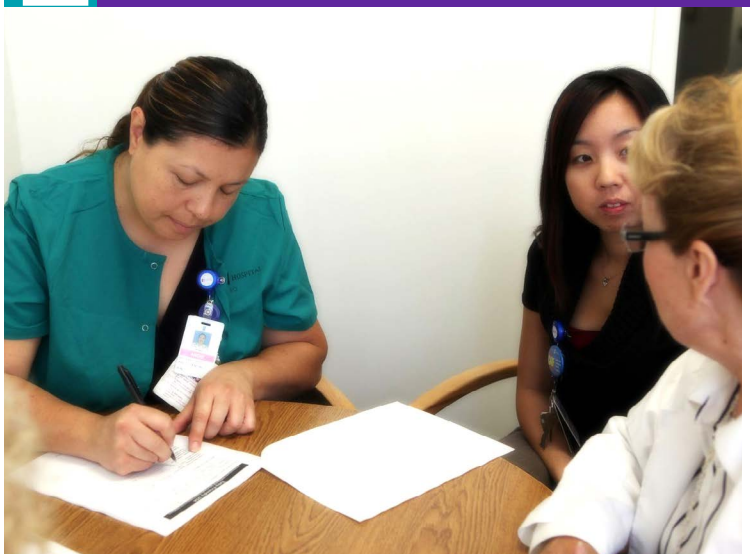
It is important to recognize that these are examples of a variety of practical approaches that may be useful. These suggested strategies are neither exclusive nor required in any way but rather are offered to assist in problem solving and implementation of practice changes that may assist the NICU in moving toward evidence-based care aligned with the BFUSA NICU 10 Steps. The final two parts of this Clinical Guidance section contain suggested strategies related to the Three Guiding Principles and The International Code.

Readers are also referred to the most recent WHO BFHI document about application of BFHI to small, sick or premature newborns [1].

A Bibliography is included at the very end of this section.

STEP 1

Have a written infant feeding policy and protocols for the NICU that include the use of human milk and breastfeeding that are routinely communicated to all health care staff involved in the care of NICU parents and infants.



RATIONALE SUMMARY

The policy and protocols of each NICU set the stage for how daily practices demonstrate the value and importance of breastfeeding and the use of human milk (mothers' own and donor milk [2]) in the unit whenever medically appropriate [3]. These elements can be incorporated into general policies regarding infant feeding in the NICU and should be aligned with policies and protocols related to infant feeding and breastfeeding throughout the facility [2, 4]. Elements within the policy should indicate what kinds of monitoring and documentation will be conducted to ensure consistent application of the policy and protocols into routine practice [5]. Because the policy should include all topics of the NICU 10 Steps [6], and will address multidisciplinary practices, its development, implementation and monitoring should all be the collaborative work of a broadly defined multidisciplinary team [7].

STEP 1

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
1.1	NICU staff members and health providers with hospital privileges have received orientation regarding the policy's content.	▪ There may be a single overarching infant feeding policy or multiple policies/protocols that collectively include these elements. ▪ Multidisciplinary teams developed for leadership and general guidance on clinical practices (e.g., shared governance structures) may already exist in the facility. They can be used to assist with development or improvement of infant feeding policies and protocols, to address barriers to effective implementation and ensure consistency and sustainability of recommended changes [8]. ▪ If the facility where the NICU is located has a birthing unit or service or has arrangements with other facilities that transfer high-risk infants to the unit, collaboration among managers from these entities can ensure compatible policies. ▪ The NICU team working on policy development can review recent studies related to policy recommendations to ensure that they are evidence based [9] and reflect the 10 Steps [6].
1.2	The NICU has developed and implemented a data gathering and monitoring system to give appropriate feedback on adherence to the policy and essential infant feeding data. Refer to Appendix A for key data to include.	▪ Evaluate current data collection systems related to feedings for usefulness to drive and monitor change. ▪ Data collected for other purposes such as internal or collaborative quality improvement projects, Vermont Oxford Network (VON) or other monitoring/reporting requirements may be used [10].
1.3	All NICU staff members and health providers with hospital privileges have received orientation regarding the policy's content.	▪ Staff who are in the unit regularly would need to be most familiar with the policy and its implementation. ▪ All staff who rotate through the unit even for short periods of time (per diem, travel staff) would need a working knowledge of the key aspects of the policy that give guidance on how they should perform their duties. ▪ Depending on the individual's role, orientation to the content of the policy could include a variety of educational strategies (See Appendix C).
1.4	NICU staff members and health providers with hospital privileges have received orientation regarding the policy's content.	▪ There may be a single overarching infant feeding policy or multiple policies/protocols that collectively include these elements. ▪ Multidisciplinary teams developed for leadership and general guidance on clinical practices (e.g., shared governance structures) may already exist in the facility. They can be used to assist with development or improvement of infant feeding policies and protocols, to address barriers to effective implementation and ensure consistency and sustainability of recommended changes [8]. ▪ If the facility where the NICU is located has a birthing unit or service or has arrangements with other facilities that transfer high-risk infants to the unit, collaboration among managers from these entities can ensure compatible policies. ▪ The NICU team working on policy development can review recent studies related to policy recommendations to ensure that they are evidence based [9] and reflect the 10 Steps [6].
1.5	The NICU has developed and implemented a data gathering and monitoring system to give appropriate feedback on adherence to the policy an essential infant feeding data. Refer to Appendix A for key data to include.	▪ Evaluate current data collection systems related to feedings for usefulness to drive and monitor change. ▪ Data collected for other purposes such as internal or collaborative quality improvement projects, Vermont Oxford Network (VON) or other monitoring/reporting requirements may be used [10].

STEP 2

Educate and train all staff working with NICU infants and their families in the knowledge, competence and skills necessary to implement the NICU-related infant feeding policy and protocols.

RATIONALE SUMMARY

Education of all members of the NICU staff that have any contact with infants, parents or families is the foundation for creating consistent communication [11], family education and care. Breastfeeding support needs to be provided by all staff, not just a few specialist lactation professionals [12, 13, 14, 15]. This is vitally important because many parents complain of inconsistency [16]. From the initial education (knowledge) and training (skills), as beliefs, values and attitudes change, the NICU evolves into a culture where the use of human milk and breastfeeding are actively promoted as the norm and preferred feeding method [6, 17, 18].

Consistency and continuity are challenged when families are referred from one service or facility to another. Offering referral sources the same education and training the NICU staff receives can promote seamless messaging and care. This is especially important because there are time-sensitive interventions that are required at the initiation of NICU care. Annual refresher education and training can aid in maximizing consistency, address areas of identified challenges, identify potential quality improvement project topics and update knowledge and skills in this rapidly changing field. Because most families of infants in NICU interact with caregivers who are outside the NICU staff, it is essential that education, scripting and reinforcing the culture of valuing human milk and breastfeeding extend beyond the walls of the NICU itself.

STEP 2

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
2.1	NICU staff members and health providers with Plans for training and annual continuing education of regular full-time and part-time staff members and health care providers with privileges involved in NICU care cover content featured in Appendix C: A Brief Guide for Developing Education & Training Plans for NICU Staff.	▪ Facilities can develop their own programs or adapt those already in existence to meet their specific needs. ▪ A number of well-established programs of lactation and breastfeeding education that have developed curricula useful for implementation of the Baby Friendly Hospital Initiative (BFHI) have components that are specific to NICU breastfeeding support [19]. Other programs specific to NICU care contain components that directly relate to supportive lactation and breastfeeding practices [20]. ▪ An overview of the NICU 10 Steps would be helpful in the initial orientation for all new NICU employees so they will be aware of the NICU feeding philosophy and of the scope of training they can expect to receive within the first six months of employment (relative to their role in the NICU).
2.2	Full- and part-time staff and health care providers with privileges working in the NICU and related areas for six months or more have received training and supervised clinical experience as well as annual continuing education related to their job responsibilities, covering the content in Appendix C.	▪ See Appendix C for suggestions on timing, length, frequency and inclusion of multidisciplinary team members. ▪ New staff and trainees would need to have this training in a timely fashion as they start to take on caregiving roles in the NICU, since infant feeding-related skills are so integral to the care of infants in the NICU and their families. ▪ While electronic media and computer-based education can provide some of the basic education, there could also be well-designed evidence-based, live, in-person, interactive components which include supervised clinical practice demonstrating application of knowledge and skills [21, 22]. (See Appendix C for suggestions.) ▪ Educational programs that include staff members from a variety of disciplines can facilitate teamwork and collaborative problem solving across specialties within the multidisciplinary team. ▪ Training may not happen all at one time. Some will likely be included in initial orientation while other parts may occur in phases as staff members take on full role responsibilities. ▪ The assignment of responsibilities for educational record keeping will likely follow whatever methods and systems are in place at the facility for other required initial training and annual continuing education topics (CPR, safety, infection prevention, etc.).
2.3	Competency assessments of these same staff and providers indicate that they have acquired the needed knowledge and skills. *continued next page*	▪ Consider how competency assessment can be designed so that it is focused on what different staff members may need based on their roles and job responsibilities [23]. For example, physicians and nurse practitioners may need more emphasis on how to write feeding orders to maximize use of mothers' own milk but also to use pasteurized donor milk when indicated. Nurses would have more focus on identification of lactation risk factors, the mechanics and evaluation of feeding (including breastfeeding) and teaching parents to how to feed the infant [24], while physical or occupational therapists may need education about how their therapies might need to be adjusted or scheduled in relation to infant feedings. ▪ Design clinical skills education or clinical experiences so that they are commensurate with role responsibilities [24, 25, 26] . Suggestions for clinical skills are also listed in Appendix C.

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
2.4	Students, interns and other temporary (including per diem) personnel or trainees who rotate through the NICU receive orientation and training commensurate with their responsibilities, related to the content in Appendix C.	▪ Create a culture that provides consistent messaging and support so that everyone who has contact with patients/families in NICU is part of the multidisciplinary team providing support and encouragement. ▪ The team should include any students, interns and other trainees who rotate through the NICU. They may be able to receive basic education and training regarding breastfeeding support as part of their introduction to their NICU-based responsibilities [27]. This education and training, beginning from their pre-existing knowledge base, could be provided by their clinical educator, mentor or supervisor, or could be provided by a member of the lactation service staff or the NICU staff who has expertise in how the trainee's role is related to implementation of the NICU infant feeding policy.
2.5	The NICU makes applicable education programs available to staff of hospitals, high-risk clinics and obstetric practices that refer patients to the NICU, and to community health workers who provide lactation support following discharge .	▪ Education and reinforcement of a culture that values human milk and breastfeeding should extend beyond the NICU to include all staff and departments that may have contact with NICU infants or families. ▪ Managers in referral practices and facilities could be notified about classes/inservices so that their staff could participate in appropriate sessions. ▪ If the numbers of staff from referral practices and facilities are large, a few key staff could attend and then replicate the education and training with their own staff (using the train-the-trainer model). ▪ Computer-based training and education plans may be shared among the various facilities and practices.

STEP 3

As early as possible, discuss with families whose infants are at risk for admission to the NICU the benefits, initiation and management of lactation and breastfeeding. *If a facility does not provide care during pregnancy for families who are at risk of having infants admitted to the NICU: Not Applicable (skip Step 3)*

RATIONALE SUMMARY

Routine prenatal care is expected to include education about breastfeeding. Specific risk factors may be identified during prenatal care that indicate higher potential for infants to require NICU care. As soon as those risk factors are identified, education should be provided to the pregnant patient and partners/family [28] about the value, importance and potential for providing mothers' own milk in cases where the infants may not be able to breastfeed soon after birth [29]. That gives the families an opportunity to be prepared for what they might do to participate in a unique way in their infants' development and recovery. Mothers who are already planning to breastfeed may be mentally and emotionally prepared for the requirements and processes related to lactation and breastfeeding and may even have previous breastfeeding experience. However, those plans and expectations may require modification related to the infants' ability to contribute or participate in the process. For mothers who had not planned to breastfeed or supply breast milk, this education presents a new opportunity for the family to reconsider how providing the premature or otherwise "at risk" infant the mothers' own or human milk may be especially beneficial to both the mother and infant [30, 31]. NICU staff should be prepared to provide education in factual, convincing and effective ways attuned to the health literacy skills of the mother and family and their preferred learning style [32], while respecting each mother's personal situation, perspective and her right to make her own informed decision [33].

STEP 3

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
3.1	The facility has a plan for providing NICU-related education about lactation and breastfeeding to families at risk of having infants admitted tthe NICU (see Appendix D: A Brief Guide for Developing Plans for NICU Parent Education Focused on Infant Feeding Issues).	▪ Consider how the facility can create a system so that as soon as the pregnancy is identified as "high risk", specialized staff consistently provide the education and counseling needed. ▪ Health care team members who provide antenatal NICU consults ideally should be knowledgeable about how to appropriately include or reinforce the importance of human milk for infants in the NICU in their conversations with mothers and families during the antenatal consults.
3.2	Pregnant patients who are hospitalized or otherwise at risk of having infants admitted to the NICU have an adequate understanding of the topics listed in Appendix D, with consideration of what is appropriate to their situations.	▪ It is important for the staff to be particularly sensitive and supportive during this very challenging period. ▪ This could be approached from the perspective of "what you can do..." for this time when patients sometimes feel overwhelmed or helpless. ▪ Scripts, discussions and role-play practice sessions may be useful, in addition to outlines of the basic information, to help the staff prepare for an engaging educational process. ▪ Either individualized 1:1 education or group (antenatal/high-risk obstetric or NICU parent support groups) discussions can be used, based on staff availability, number of individuals requiring the education, as well as preferences of the families and caregivers. There is evidence that peer support and group education/discussions are effective for NICU families [34]. ▪ Assessment of adequate understanding of the information provided during pregnancy could include asking for "teach back" responses from the patient, eliciting questions during follow-up visits or asking other staff involved in patients' care to gently probe for understanding, questions or concerns. ▪ Evaluation or audit tools can gather information about the effectiveness of these educational strategies and identify opportunities for improvement.
3.3	Information is discussed with families in a culturally-sensitive manner, taking into consideration their literacy levels, any language barriers, cultural backgrounds, previous breastfeeding experiences and intended plans for infant feeding. *continued next page*	▪ Consider reviewing the facility's or NICU's census data to identify the key cultural groups (geospatial, racial, demographic, place of birth/origin) represented among the families served. Meeting with representative leaders in the community to discuss birth and breastfeeding norms and acceptance of evidence-based recommendations may be helpful to determine how best to work with families of various groups [35, 36]. ▪ Families' previous infant feeding plans and experience, current knowledge and concerns, as well as cultural perspectives could be used to individualize interventions and education. ▪ Education about cultural humility, diversity, equity and inclusion See Appendix C for all staff would be helpful, focusing at least on the major cultural groups present in the patient population. It would also be useful to have translators (or electronic translation services), as well as culturally similar staff or peer support. ▪ Pay attention to non-verbal communication norms for different cultural groups (tone of voice, rate of information/conversation, use of gestures/touch, facial expressions, eye contact, etc.). ▪ Relationship-based care can be an effective framework as it focuses on creating a caring and healing environment of care through respectful personal interactive and compassionate relationships with patients and families [37].

STEP 3

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
3.4	The NICU makes applicable education programs available to staff of hospitals, high-risk clinics and obstetric practices that refer patients to the NICU, and to community health workers who provide lactation support following discharge.	▪ Information may be printed, supplied by take-home videos or shared electronically via internet links. Phone calls (voice or video) or text messaging may also be considered, depending on what modes of communication are available and typically used at that facility and by the population served. ▪ Education is more likely to be effective if not limited to distribution of materials alone. Conversations with families about breastfeeding and the use of human milk can be used to introduce and reinforce the materials provided. ▪ Personal experiences and opinions of staff members are not as relevant as evidence-based messaging and communication. ▪ When evaluating materials to use, consider how well the materials are designed to fit the reading and comprehension levels and educational background of families typically served by the institution. ▪ Also consider the needs of non-English speaking patients who receive care at the facility. An approved medical phone translating service is recommended if trained medical interpreters are not available, rather than using family members to translate.

STEP 4

Place stable infants skin-to-skin on their mothers as soon as feasible. Facilitate and support extended, ongoing skin-to-skin care by parents or support persons without unjustified restrictions.

RATIONALE SUMMARY

A large body of research is available on the benefits of skin-to-skin (STS) contact, Kangaroo Mother Care (KMC) and Kangaroo Care (KC) for sick or preterm infants immediately after birth and in the early weeks and months of life [38, 39, 40, 41, 42, 43, 44, 45]. In much of the literature these terms are used interchangeably, although there are distinctions in some definitions, with KMC referring to continuous skin-to-skin holding while KC or STS may indicate intermittent care of this nature. We use the generic term skin-to-skin (STS) in this document to indicate all of these types of care and holding. The essential elements of all versions of this are the skin and body contact between the infant and mother. The differences mainly relate to exactly how it is done [46], with whom, the availability of breastfeeding as a component and the duration or continuity of the intervention. STS can be of great benefit for many infants requiring NICU care by stabilizing temperature, cardiorespiratory function [47], metabolic processes related to liver function and glucose regulation [48]. It improves weight gain [49] and may aid in colonization of the infant with microorganisms that support a normalized microbiome. STS is also helpful for management of physiologic effects of stress [45, 50, 51] by decreasing pain perception and agitation and by promoting restful sleep. For the mother, it stimulates maternal hormonal mechanisms to initiate and sustain milk production [52, 53, 54]. The use of STS (ideally continuous and sustained) as part of NICU care should be normalized and used to the maximum extent possible for these reasons and to improve long term outcomes [48, 55, 56], assist with bonding and attachment [57], boost parent engagement [58] and participative care [59, 60]. It supports infant emotional/mental health [61] and sets the stage for improved feeding regardless of method [62], including breastfeeding [48, 63, 64].

The application of this intervention will require creativity and willingness to delay bathing infants [65] and change from previous reliance on a warmer, incubator or bassinette as the usual expected location for infant caregiving [20, 66]. When the mother is not available, or her own health care needs limit her availability, fathers or alternate support persons should be considered as potential providers of STS [77, 78]. Environmental supports, space, privacy and appropriate furniture can make it more comfortable and feasible. Each NICU will need teamwork to safely move [69] and position the infant as well as to determine how to educate families about the rationale for STS.

STS should be integral to unit policies, philosophies and routine practices, taking into consideration the variety of infant and family situations and NICU environments [26]. How NICU teams attend high-risk deliveries and how they provide stabilization care should be modified to promote STS immediately after birth when feasible. Even when the infant cannot receive STS care immediately after birth it should be initiated as early and as often as possible, without unjustifiable restrictions, both throughout the hospital stay and after hospital discharge [56, 70, 71].

STEP 4

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
4.1	Parents of preterm or sick infants are informed on admission of their infants into the NICU of the importance and benefits of early and extended skin-to-skin (STS) care (sometimes referred to as Kangaroo Care).	▪ Consider how to provide early education about the value of this intervention. Setting expectations that this will happen prepares parents and families to participate in STS.
4.2	Preterm or sick infants are placed STS on their mothers (birthing parents) as soon after birth or as soon after arrival in the NICU as their conditions and proximity allow. *continued next page*	▪ This will be dependent on an infant's condition as well as their mother's location and condition. An infant admitted to NICU care who is late preterm, small for dates or having brief/transient complications with transition to extrauterine life may have their recovery aided by concentrated early STS contact. If stable, an infant with congenital anomalies, surgical conditions or extreme prematurity who would not clinically be expected to feed may still benefit from STS. An infant with life-threatening instability may need interventions (resuscitation, insertion of airway, intravenous or arterial lines, etc.) that require justifiable a delay. ▪ Medically justifiable delay of STS care for ELBW (less than 1000 grams) infants may result from minimum stimulation protocols that delay holding for a certain number of days, minimizing head turning or repositioning during that time to decrease the risk of intracranial bleeding. ▪ Some NICUs may delay STS when arterial lines (peripheral or umbilical), chest tubes and/or use of pressor medications or oscillator/jet ventilation are needed, based on the training/skills of the staff and safety protocols of the unit. Other NICUs, where training and safety protocols are in place to provide STS even when these care modalities are in use, may not delay STS. Efforts should be made to increase staff training to levels that ensure safe transfer and STS holding in these relatively higher-risk situations whenever possible [69]. ▪ For some infants who are stable, STS care may begin in the delivery room if specialized NICU staff members can remain available to ensure initial and ongoing safety and to monitor infants' conditions and responses. ▪ Well-thought-out policies could define categories of infants for whom uninterrupted STS could be extended in the expectation that it could result in an infant's first feeding at breast. For example, a late preterm infant might show alertness and feeding readiness similar to term infants' typical behavior patterns that result in the first breastfeeding within 1-2 hours after birth [72], whereas a more preterm infant may have medical needs that warrant interruption of the STS session before a feeding is likely to occur. ▪ STS sessions of at least 60-90 minutes duration allow for the hormonal cascade related to stress reduction, physiologic stabilization, the promotion of restful sleep by allowing for full uninterrupted sleep cycles, as well as stimulation of mothers' milk production and release whether or not infants show readiness for breastfeeding. This is particularly relevant for mothers of infants who are not expected to breastfeed yet due to prematurity or another medical condition. ▪ Limiting the number of times infants are moved by extending the duration of STS is one way to minimize stress for infants. Duration of STS may be limited based on parents' ability to attend to their own biological needs within the NICU environment (rest room, food/fluids, comfort and movement). Nursing staff may help maximize duration of STS by reminding the parents to anticipate and proactively manage their biological and comfort needs prior to the start of the STS session. ▪ Safety protocols should be in place to detect and assist infants who show decompensation (e.g., Sudden Unexpected Postnatal Collapse) [73]. Minimally, these protocols require monitoring and/or continual observation by a trained staff member during the transition to extrauterine life in the first few hours after birth. These protocols should also specify how the staff instruct families and model "safe sleep" strategies [74].

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
4.3	Parents of stable preterm or sick infants are encouraged to provide STS care both throughout the NICU stay and continuing after discharge for as long and as often as possible, without unjustified restrictions or interference.	▪ Parent education can include instruction regarding the proper positioning of infants to protect the airway and promote comfort, the benefits of STS throughout the time of prematurity and/or illness and the value of STS continuing throughout infancy to support development. ▪ Principles and techniques of safe transfer methods and continued monitoring of position and physiologic condition of infants by trained and skilled NICU staff [73] allow safe STS as often and as long as possible. ▪ It is important for the staff to be well versed in recognizing and interpreting to the family the signs of stress and stability in infants. If an infant cannot be made comfortable enough to rest, has a medical crisis or their vital signs show decompensation that cannot be recovered with adjustments of position/supports, etc., the situation may warrant interruption of the STS session [69, 73]. However, discomfort or instability following STS does not necessarily signify causality. Some infants who are unstable will improve while STS. Infant decompensation after STS may be reinterpreted from "The infant was tired/stressed by STS" to "The infant was more stable/comfortable during STS than when separated from the parent". ▪ Whenever feasible, multiples should be held together. NICU staff can assist with the logistics to facilitate this. ▪ Protocols and recommendations for special situations related to STS are most useful when based on evidence and regularly re-evaluated and updated to facilitate safe STS and encourage the use of this care modality.
4.4	When mothers are unable or unavailable to provide STS care for their infants, staff encourage and assist them to designate others such as a partner, family member or designated support person to provide it, giving guidance on issues that should be considered when making the decision.	▪ Family education should include the rationale for why the mother (birth parent) is the first choice for providing STS and information about appropriate alternate providers of STS. ▪ The father or another family member or support person of the mother's choosing (perhaps a grandparent) may be enlisted to provide STS when the mother is not able to do so. The NICU staff can help by providing information to help choose appropriate substitutes and what legitimate reasons there might be for exclusion (e.g., illness, geographic remoteness from the NICU, lack of availability for appropriate durations because of other obligations, inability to tolerate providing STS for any reason). ▪ When infants are transported to specialized facilities at some distance from where they were born, or in cases where mothers are very ill or unstable, creativity may be required to accommodate the challenges. If a mother is acutely ill but their infant is stable, the NICU team might work out a system for bringing the infant to the mother. ▪ There may be times when mothers' condition or location does not allow for them to be able to provide STS (or maybe even to make the decision about alternative STS providers). STS policies can address how this will be handled, recognizing that the benefits of STS for infants are significant.

STEP 5

Show parents how to initiate and maintain lactation at the earliest possible time and initiate breastfeeding with infant readiness and stability as the only criteria.

RATIONALE SUMMARY

Initiation of milk production is a time-sensitive process. For a relatively well infant whose condition allows for oral feedings early during their NICU stay, direct breastfeeding should be facilitated as early and as often as the mothers' and infants' conditions and proximity allow. For infants who may not be able to initiate direct breastfeeding, hand expression of colostrum during the first hour of life for oral care or dropper/spoon feeding to the infant has been shown to improve their overall health and development. It also improves subsequent maternal milk production. Encouraging and sensitively assisting mothers (with partner/family support) to initiate and sustain a robust milk production should begin in the first hours (first hour if at all possible) [75, 76, 77, 78, 79], even if the mother may plan to formula feed later or is unsure what her feeding decision will be once the infant can suckle. The availability of mothers' own milk will make it possible for infants to receive human milk as the main substrate component of feedings [54, 80, 81].

Practicing direct breastfeeding in the NICU will also require support and rethinking the rationale for having infants practice bottle feeding in the early stages of oral feeding before breastfeeding is established [82], even under the direction of skilled feeding specialists and pacing the flow. There are indications that, given unrestricted access, infants can begin introductory/pre-feeding activities at the breast and may be able to effectively breastfeed (show evidence of milk transfer) earlier than previously expected [83]. Preterm infants are more physiologically stable during early breastfeeding than early bottle-feeding sessions [84]. Thus, infant feeding readiness cues and physiologic stability rather than weight or gestational age should be the only criteria for beginning breastfeeding. Systems in the NICU for collaborating with the mothers' care providers to begin these processes are important, as are strategies for providing the education, practical support and problem solving to enable mothers to initiate and maintain lactation so that they can potentially reach their breastfeeding goals [29, 33, 85, 86, 87, 88, 89, 90, 91, 92].

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
5.1	Parents are advised about the value and importance of human milk to their infants' health and the need for colostrum as soon as feasible after birth.	▪ It is important that families of infants in the NICU be given consistent messages from the NICU staff about the value and importance of maternal milk for the health of the infants [93, 94, 95, 96], supporting and encouraging the mother to supply her milk unless there is a true medical contraindication. ▪ It is critical for this to be addressed before birth or as soon after birth as possible, preferably in the first hour after birth. Early initiation of lactation, preferably in the first hour with expression of colostrum, is important for successful milk production. The explicit advice of medical care providers may be most convincing, and NICUs have opportunities to provide support and address barriers [97].
5.2	Parents with infants in the NICU are offered appropriate assistance with milk expression as soon as infants' and parents' conditions allow. The possible practices for assistance with milk expression vary depending on the circumstances as outlined here:	▪ Coordination and collaboration between various NICU care providers and the staff providing care for mothers (birthing parents) is required to start the milk expression process. Because of the importance of mothers' own milk for the benefit of the infant, offering assistance with initiation of lactation even to families who were unsure or not planning to breastfeed is indicated, and must be done sensitively. All those involved in the care of infants and mothers should be on board with this as a priority, using appropriate counseling scripts or other consistent messaging.
	5.2.1 If the infants' condition or care will not allow the infants to breastfeed, assistance with hand expressing colostrum is offered to the parents; if possible, within an hour but no later than six hours from birth (possibly while infants are being held skin-to-skin if that is feasible). **5.2.2** If infants are doing some but not all feedings effectively at the breast, assistance with milk expression by hand and/or pump is offered as soon as possible but no later than six hours after birth. **5.2.3** If infants are admitted to the NICU some period of time after birth, this assistance is offered as soon as feasible after admission. *continued next page*	▪ Because timing is critical to milk production outcomes [78], it is best when assistance with milk expression is initiated by the labor and delivery staff as soon as possible after delivery. In some cases, this could be done while infants are being held skin-to-skin [52, 98], but otherwise should be done as soon as separation occurs. ▪ Sensitivity to mothers' bio-psycho-social and cultural situations should be balanced with the recognition that early initiation is more likely to result in a larger volume of milk being expressed than if the process is started after several hours have elapsed. Early initiation also makes it easier to sustain milk production [98, 99]. ▪ Hand expression combined with use of a breast pump in the first days can be effective for collecting small volumes of colostrum. Massage and thorough milk removal from the breasts stimulate increasing production. ▪ It will be important to have appropriate equipment and supplies (with instructions for use and cleaning [100], readily available at all locations where they are needed (where mothers are cared for and in the NICU). This includes pumps, pump kits, oral syringes or other methods for capturing small amounts of milk until it can be given to infants, labels/labeling systems to ensure that the correct milk is given to each infant and possibly also comfort and cleaning supplies (basin, dish soap, olive oil for lubrication, etc.). ▪ When infants are transported away from the birth hospital, the transport team can be effective collaborators in this process by instructing and encouraging mothers to begin milk expression if they have not already done so, supporting and encouraging them if they already have and transporting any available colostrum or milk along with the infants. ▪ If the transport team is based in the NICU where infants will be admitted, they can leave printed instructional materials from the NICU with the mother to reinforce and expand on the initial education they have provided and to reinforce the value the NICU places on mothers' own milk for the health of their infants. ▪ Whenever possible, mothers can express milk while in proximity to their infants (at infants' bedside even if holding is not possible) to facilitate hormonal responses that support milk production [52]. Having an electric pump at infants' bedside helps with this, along with attention to providing for parental comfort and privacy. ▪ The NICU staff can collaborate with LCs to assist the family to procure appropriate equipment for home use (pumps, milk storage containers, labels, etc.).

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
5.3	Assistance and instructions to breastfeed and/or express milk at least eight times or more every 24 hours, including at least once during the night, are provided to establish and maintain milk production.	▪ Scripting suggestions, guided practice and ideas for different ways to offer this information may be useful, recognizing that the information will be presented progressively as families are ready [101]. ▪ Mothers should be counseled to start milk expression promptly and continue as regularly as possible [102]. ▪ Supportive monitoring of milk expression patterns and milk production are especially useful in the first two weeks after birth in order to facilitate mothers' production "coming to volume" of the expected 500 ml or more per day [89]. ▪ Nighttime milk expression should not be skipped because the biggest spike of prolactin occurs at night and nighttime breast stimulation (pumping/feeding) supports the production of larger volumes of milk. One break of a maximum of four to five hours once in each 24 hours may be taken if desired, as long as milk is expressed at least eight times in each 24 hours [102, 103]. ▪ The addition of more frequent pumping sessions (often called "bookend pumping", cluster pumping or "power pumping") or adding breast compression and hand expression can be recommended to help maximize milk production and reach the goal of eight or more sessions in each 24 hours [104]. It is not critical to set an exact schedule for milk expression sessions although there is some evidence that longer intervals are likely to decrease milk production. Shorter intervals can increase volume and fat content in the milk [105]. ▪ Family members can be engaged to assist mothers who are ill or for any reason are not able to initiate and sustain the activity required to express milk.
5.4	Expressed milk is given to infants as soon as they are medically ready, before any supplementation with human milk substitutes. If "Mothers' Own Milk" is not available, the use of donor milk is considered before human milk substitutes.	▪ Small amounts of colostrum may be collected to use for oral care (often called Oral Immune Therapy) before infants are ready for oral or even trophic feedings. It is important to capture droplets in ways that facilitate maximum usability (syringe, dropper, spoon; not on a swab because the tiny amount of colostrum is absorbed into the swab) [106, 107, 108, 109, 110]. ▪ Small volumes of mothers' milk used for trophic feeding provide an important gut sealing effect and significantly contribute to gut maturation as well as the establishment of protective intestinal flora [51, 111]. ▪ Oral care with colostrum, "oropharyngeal therapy" [112, 113] , trophic feedings or nutritive feedings may be initiated as soon as admission procedures have been accomplished if infants have achieved cardiovascular stability, within the first hours or first day of life whenever feasible. ▪ Mothers' milk (odor, taste) may also be used as an infant comfort measure [51]. ▪ The NICU should have protocols regarding acceptable delay of feedings or use of donor human milk if there is a delay in availability of mothers' own colostrum/milk because of the increased risks related to the unfed gut.
5.5	NICU staff monitors each family's progress with establishing and maintaining milk production and provides focused, individualized support to those who need assistance with management of any difficulties. *continued next page*	▪ It is important that NICUs have systems in place for monitoring each mother's progress, milk production and effectiveness and comfort with following the pumping/milk expression instructions [114, 115, 116]. ▪ Frequent conversations between the staff and families can help identify any difficulties, and NICU nurses should be able to provide basic problem solving for common difficulties [13, 117, 118]. ▪ NICU-specific IBCLCs should be available to explore options if nursing staff cannot help the resolve an issue [12, 14, 119, 120].

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
5.6	Infant feeding readiness cues and physiological stability, rather than age or weight, are the only infant criteria for offering preterm or sick infants the breast/chest to initiate suckling.	▪ Individualization of care regarding oral feedings may include concrete evaluation of feeding readiness cues and tolerance on a feeding-by-feeding basis [121, 122, 123, 124]. ▪ There have been reports that infants who would not have been expected to be able to feed based on weight or gestational age have done so [83]. ▪ In nearly every case, when infants are ready for non-nutritive sucking and eventually for oral feeding, this can and optimally should be done at the mothers' breast.
5.7	Assistance, including help with positioning and attachment, is offered to parents who intend to breastfeed as soon as the infants are ready to suckle and their conditions and proximity allow.	▪ The staff can collaborate with families to maximize opportunities for infants to be fed at breast as their cues and abilities develop [125, 126]. ▪ Creative scheduling, attention to what times of day an infant is most active and alert, and clear communication with parents can maximize the opportunities for their best feeding quality. ▪ The staff can provide privacy, comfort measures and supports (chair that reclines, footrest, pillows, etc.). ▪ A variety of positions may be tried to see what will work best at a given feeding, recognizing the value of "biological nurturing" or "laid back breastfeeding" [127] as a way to promote infants' effective use of primitive reflexes and to control milk flow with the least challenge to suck-swallow-breathe coordination. ▪ Effective latch, assisted by supportive positioning, should be evaluated as part of the feeding assessment [91], with suggestions for adjustments or techniques to maximize effective and sustained latch throughout the feeding. ▪ If infants have significant history of respiratory compromise, mothers (especially mothers who have generous milk production) may be instructed to express most of the milk available a short time before the breastfeeding practice session so their infants' experience at breast results in a small volume and controlled flow of milk. This can help with suck-swallow-breathe coordination. ▪ Pre- and post-feeding test weights can be used to evaluate volume of intake at breast [92], allowing adjustment of feeding protocols. Although feeding behavioral assessment [91] is helpful, overall breastfeeding assessment will be most accurate when combined with test weights. This combined assessment more accurate than a breastfeeding quality scoring/rating system alone or estimate of volume based on number of minutes of sucking at the breast which could have the unintended effect of compromising infants' growth if optimistic "estimates" of intake lead the NICU staff to give less than the volume needed for adequate growth [90]. Test weight results can help mothers recognize signs of effective breastfeeding behaviors and notice signs of progress as infants take more volume. Appropriate equipment, techniques to minimize inaccuracies and supportive counseling scripts about expected results/progress can make this a positive experience. Families can be taught to assess feeding behaviors and perform test weights, giving another opportunity for participation and involvement in infants' care [91, 92, 128].

STEP 6

Give infants no food or drink other than human milk, unless medically indicated.

RATIONALE SUMMARY

Whenever possible, using exclusively human milk [129, 130], preferably the mothers' own milk, is particularly important for infants in the NICU [2, 131]. Mothers' own milk provides unique nutrients and optimal immune supports including the transfer of stem cells [132], antibodies, immune cells and oligosaccharides with antimicrobial properties [133]. It supports infants' brain development [134, 135, 136], immune system [137], gut maturation a diverse microbiota [111, 138, 139]. Human milk feeding, including donor milk [140], promotes protective sealing of open intracellular junctions in infants' gut, digestion and enhanced nutrient uptake [141, 142, 143], and results in better short- and long-term health [144] and cost outcomes [94], [145, 146, 147, 148, 149, 150, 151]. Human milk (ideally exclusive [130]) also has anti-inflammatory effects that provide additional protections from chronic conditions associated with illness or prematurity (Retinopathy of Prematurity, Bronchopulmonary Dysplasia) [81], [152, 153, 154, 155]. Human milk decreases the likelihood of some of the most severe complications of prematurity (e.g. death, Necrotizing Enterocolitis, sepsis) [94, 95, 96], [145, 146, 147, 148, 149, 150, 156, 157, 158, 159]. There is evidence that mothers' own milk, especially in its least processed state (raw) [160] is superior to pasteurized donor human milk because it provides immunity specific to the pathogens in the mothers' and infants' mutual environment and helps develop diverse gut microbiota [111]. Receiving mothers' own milk is particularly important in the early days and weeks for preterm or sick infants. Ongoing quality assessment should include systematic monitoring of key indicators such as the use of human milk during critical periods [112], exclusivity of human milk feeding, the dose or proportion of human milk over time and use of donor milk and/or non-human milk products [116, 155, 161, 162].

There is evidence to support some human milk processing (freezing and/or pasteurization) and modification practices (fortification) for VLBW and ELBW infants [163, 164]. However, these practices are sometimes applied more broadly than is supported by the evidence [165]. Unless fortifiers based on human milk are used, fortification introduces bovine protein. Other processing such as freezing or pasteurization alters immune properties. Light exposure and even the transfer of human milk between containers creates nutrient loss [166] and potential for contamination. While there are certain subsets of the population of NICU infants who will need maximal nutritional manipulation, there should generally be a preference and systematic progression toward feeding of mothers' own milk in its least processed state [167, 168, 169, 170] and directly at the breast whenever possible. Timely, clear and effective communication and collaboration acknowledge and respect mothers' feeding goals and expectations [171, 172].

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
6.1	Human milk (preferably mothers' own milk or donor human milk when mothers' own milk is unavailable) is the preferred feeding for infants in the NICU.	▪ It is helpful when, from earliest contact with families, care providers explicitly state the preference for human milk (specifically mothers' own milk) unless there are clear contraindications [97]. ▪ Consider using pasteurized donor human milk (PDHM) for defined subsets of NICU infants, as clinically indicated and available, when the initiation of feeding or oral care/Oral Immune Therapy, is indicated but there is no mothers' own milk available [131, 162, 173]. ▪ When mothers will not be able to provide colostrum within the first six hours after NICU infants' birth, the provision of trophic feeds of PDHM could be considered as infants' first feeding and continued until mothers' own milk is available, especially for highest risk infants. ▪ Protocols are most helpful if they clearly state the indications for additives, fortifications or alternatives to mothers' own milk (or PDHM). These protocols should be evidence based and applied consistently. ▪ Practices and systems should be in place to promote the continued availability of mothers' own milk throughout and beyond the hospital stay [174]. ▪ Contact between families of infants in NICU and the NICU staff should routinely include topics related to the processes of mothers providing their milk (value, encouragement, methods of expression, production, order of use, storage/location to ensure accessibility for infants' use, etc.).
6.2	Parents' fully informed infant feeding decisions along with the risks and benefits are discussed, documented and their decisions are respected.	▪ In order to promote fully informed decisions, care providers can explain to families why mothers' own (or other human milk) is preferred and why additives, alterations or alternatives may be required for individualized care. The benefits of giving maternal milk, even if there is no plan to breastfeed later, can also be discussed. When mothers indicate they do not plan to supply milk or breastfeed, their reasoning might gently be explored, and additional information offered if the decision is based on misinformation. ▪ This education could involve use of consistent, well-written scripts, guides and/or audiovisual materials that are culturally appropriate and easy for families to understand. ▪ Families' decisions and preferences should be respected once it has been fully explained why and how mothers' own milk can contribute to infants' protection, wellbeing, growth and recovery as well as the risks and benefits of other options.
6.3	The unit has consistently applied evidence-based protocols for the identification, storage, handling and feeding of all human milk to maximize the safety and preserve the qualities of the milk. *continued next page*	▪ NICU feeding protocols and education for staff and parents include storage and handling guidance, as well as processes for reliable identification of milk used in the NICU [175]. This may include electronic systems for milk identification/verification or a method using two unique identifiers to ensure that the correct milk is being administered to the correct infant. ▪ Protocols specify evidence-based order of milk use (e.g., preference for using colostrum first, first in-first out, fresh milk when available). ▪ If feasible, use centralized milk preparation, multidisciplinary collaboration and electronic systems. [176] ▪ NICU quality of care monitoring programs may check on consistency of application of these protocols [54, 166].

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
6.4	Parents who will be using any human milk substitutes or additives receive written instructions and are individually taught before discharge how to safely prepare, store and give feedings to their infants.	▪ Instructions should include safe preparation, storage and feeding of formula as well as any medications, vitamins, nutritional supports or fortifiers to be added to mothers' milk as medically indicated [177]. ▪ Clear, evidence-based protocols and consistent practices should be developed to define which infants are likely to need fortification following discharge. Include recommendations and strategies for how to encourage and support maximal feeding at breast while fortification is necessary. ▪ Protocols for safe use of powdered formula, if indicated, address risks related to powdered formula not being sterile.
6.5	The unit has clear protocols/ recommendations based on current evidence for when there is a clinical need for alternatives or additives (such as fortifiers) to the mothers' own or donor human milk.	▪ Contraindications to using mothers' milk, PDHM use, indications for alternatives/additives and adjustments (fortification that is standard, targeted or individualized) [178, 179, 180], should be based on current references. ▪ Tracking human milk alternatives/additives can be part of the NICU's quality monitoring program [116, 181]. .

STEP 7

Allow and encourage parents and support persons to be with their infants and participate in their feeding and care, with unrestricted access, 24 hours a day, unless there are justifiable reasons for separation.

RATIONALE SUMMARY

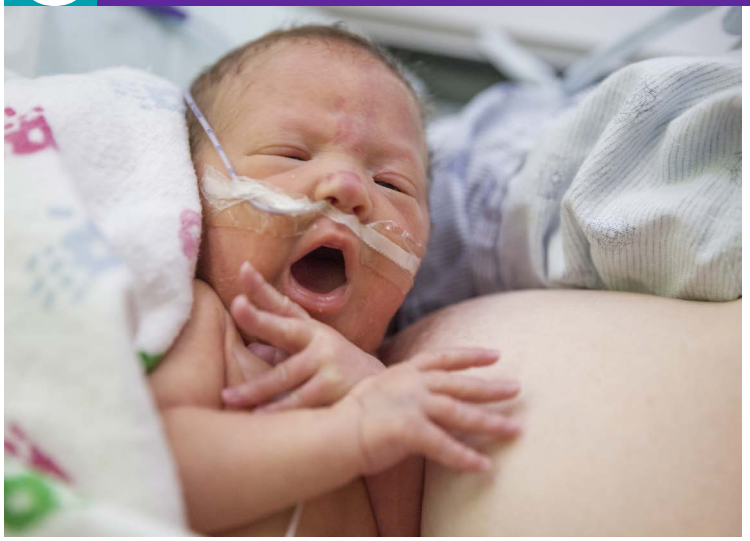
In the typical hospital environment for well infants, rooming-in is the norm. However, when an infant is sick or premature, the medical care needs of the infant often result in at least some separation of mothers and infants [182]. The NICU caregivers' challenge is to minimize separation and minimize the effects on the infants [183] and the families when separation occurs [52,76] since separation may result in decreased parental confidence [34, 59, 61 , 184], poor sleep quality [103], altered parent-infant relationships [185, 186], decreased bonding [57] and increased maternal postpartum mood disorders [56]. The importance of proximity must be emphasized to facilitate involving mothers (parents) in the care of NICU infants [187, 188, 189, 190, 191, 192]. Finding ways to facilitate parental presence [193], sustain parental engagement [58] and parent-infant relationships [194] and normalizing families' active involvement in caring for their infants is the focus of this step [24, 195, 196, 197, 198, 199].

The type of neonatal care environment will affect how these Recommended Practices can be implemented. Practices will differ based on whether the unit is an open bay design or individual rooms, the amount of space available and the degree of privacy possible in the physical environment. Making progress and doing the best that can be done within the limitations that exist are acceptable, recognizing that the spirit of the principle is being upheld as much as is possible.

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
7.1	The parents and support persons are encouraged to be with their infants as early, as often and as long as possible, unless there are justifiable reasons for separation.	▪ Concerns about making the time around change of shift report "off limits" to protect confidentiality may be handled creatively, based on the design of the NICU, without excluding parents. Parental participation and involvement in care is supported by their presence and participation during these staff transitions. ▪ Exceptions may be made during emergencies such as a surgical procedure, code, death or other crisis of an infant in near proximity, particularly if the environment cannot be adapted adequately to ensure compassionate privacy. ▪ Staff members' responsibilities may reduce their availability to families at certain times (report for change of shift, other care needs), which can be communicated. The presence of families during these times ensures that infants' needs for comfort can be met. ▪ Justifiable separation might legitimately be recommended for medical care needs or for the physical, emotional and psychological wellbeing of parents. ▪ If mothers are patients in the same facility where their infants are in the NICU, sometimes staff providing care for the mothers can perform assessments, administer medications, provide teaching, etc. while the mothers are at their infants' bedsides in the NICU. This allows mothers to be with their infants for longer uninterrupted periods of time.
7.2	The parents are counseled concerning the reasons it is helpful and appropriate for them and/or other support persons to be with their infants and participate progressively in the infants' feeding and care as much as possible, day and night.	▪ Staff members can help parents to be with and contribute to the care and feeding of their infants, promoting their role as active caregivers and participants rather observers or visitors [198, 200, 201]. ▪ Staff can help parents understand that their presence and active involvement are integral to the care and wellbeing of their infants [71]. ▪ Technology such as bedside cameras can help sustain the parent-infant relationship during times when separation cannot be avoided [194].
7.3	The parents and support persons designated by them are provided with support and practical assistance to help them to be involved in providing their infants' feeding and care.	▪ Accommodation for mothers' comfort, privacy and physical needs may include such things as a chair with footrest or a footstool, blankets/pillows for relaxation and comfort, privacy screen or curtains, a breast pump at the infants' bedsides, access to food and fluids as well as suggestions for healthy low-cost food sources and/or a refrigerator or cooler in which the parents may store food. ▪ Some NICUs will have places for families to stay in proximity to their infants. This may be in infants' room, in a nearby room, or in a nearby facility such as a "Ronald McDonald House" or similar subsidized/recommended lodging. Access to appropriate parking (ideally free, low cost or subsidized) is especially helpful for mothers who travel a significant distance to be with their infants. ▪ Creative practical assistance or problem solving for care of other siblings could also be a feature of this support. ▪ Staff can guide families to provide care such as: holding and touching (infant massage [202]), talking, singing or reading to infants, soothing, comforting, temperature taking, diaper changing, weighing, bathing, dressing, etc., as appropriate, considering the infants' medical care needs. Parental involvement in feeding can begin with doing oral care using colostrum or holding a gavage tube with or without skin-to-skin holding. ▪ Documentation of parent education includes information about health literacy, preferred language and learning/communication styles [32], their preferences or patterns such as when they typically can be present and how long they can stay, as well as what caregiving they have done and can do with help or independently. ▪ Ongoing conversations need to occur between the NICU staff and the parents as situations and goals change so that caregiving plans can be adjusted as needed [203]. ▪ When parents cannot be present, they can be encouraged to designate other support persons to be with their infants in order to participate in caregiving. Family caregivers may be able to do skin care, massage, oral stimulation, give oral medications or help with other treatments. ▪ Fathers and grandparents need to be included in supportive services and education because they are involved in infants' care as part of family-centered care, but may have different perspective and needs from the mothers [28, 199, 204].

STEP 8

Encourage cue-based infant-driven oral feeding with breastfeeding as early as possible, with no weight or gestational age restrictions.



RATIONALE SUMMARY

The variety of infant conditions and circumstances in the NICU patient population, some of which put the infant at risk for ongoing feeding problems [205], will necessitate a wide range of oral feeding techniques and methods [206]. Maximizing family-infant contact is a crucial part of this step because separation is a serious barrier to families becoming the primary providers of feedings for infants in NICU settings [207], and specifically to feeding directly at their mothers' breasts. Even before infants are developmentally or medically ready to feed orally, early intervention [208] or non-nutritive sucking (including non-nutritive sucking at the breast [209]) may be incorporated into care [210]. When infants are alert, licking, sucking, rooting or trying to move toward mothers' breast during STS holding, these cues demonstrate infants' readiness for feeding practice [211], regardless of weight or gestational age [116, 212]. NICU staff and families will need to accurately recognize and respond to infants' stress cues within a feeding practice session as well [213]. Stress cues are signs of fatigue or physiologic decompensation indicated by changes in state, behavior, muscle tone, color, heart rate, respiration or oxygen saturation [214, 215]. These stress cues may indicate that an individual infant is not ready for further oral feeding practice, needs to take a break or feeding practice should be discontinued for that particular session.

To best support a normal developmental trajectory of oral feeding skills (including feeding directly at the breast) [216], feeding pace and progression should be based on infants' responses [116, 214, 217, 218, 219] with regard to volume, timing, retention, cardiopulmonary status, etc. Although outcome studies are not conclusive [220], strict schedules, protocols or volumes controlled entirely by the feeder rather than by the infant are not as developmentally supportive of infants' individual oral feeding successes and progress [123, 221, 222, 223]. Feeding should be at the breast whenever possible [63, 116, 224, 225], unless expressly indicated by a mother to be in conflict with her goals and preferences, as there is evidence that feeding of expressed milk by bottle misses some of the advantages of direct breastfeeding [226]. Close collaboration and effective and timely communication with families are essential in moving toward infants' readiness for discharge from the NICU [82], feeding at the breast [125] as well as reaching mothers' feeding goals and expectations [24, 29, 44, 86, 126, 203].

STEP 8

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
8.1	Parents or designated support persons are guided to observe and respond to the infants' feeding cues, behaviors and responses during all oral feedings, regardless of feeding method.	▪ It is important that NICU staff be well versed in recognizing, interpreting and teaching about infant feeding readiness cues, behaviors and responses [116, 227]. ▪ There could be a specific system or protocol in place for teaching these cues, behaviors and responses to family members who likely will be part of the infants' feeding process after hospital discharge. ▪ All oral feedings, even bottle or formula feeding, should be responsive and infant-driven.
8.2	Medications and other treatments are administered and procedures are scheduled to cause the least possible interference with infants' feeding cues.	▪ Because feeding behaviors and infant readiness are so critical to infants' performance, tolerance and feeding quality, the NICU staff should have systems, methods and a culture in place to maximize infants' performance, with other activities/procedures arranged to be least disruptive to feedings.
8.3	The NICU has a protocol which guides decisions concerning the appropriate transition from gavage to oral feeding, addressing issues of medical indications and infant readiness and how to ensure that feeding progression is cue-based and infant-driven, rather than predetermined by gestational age or weight.	▪ The NICU could consider having explicit systems for assessing and documenting infant cues and indications of feeding readiness (e.g., a numerical or behavioral descriptive scale) [121, 122]. ▪ Feeding protocols should expressly include parental involvement as well as breastfeeding in accordance with mothers' goals ▪ Whenever infants show readiness, non-nutritive sucking at breast should be allowed and encouraged as much as possible unless there is a medical contraindication (strict fluid restriction, harm likely to come from even small extra volumes of intake, etc.). ▪ Infants may indicate unexpected readiness for pre-feeding practice/non-nutritive sucking by licking, rooting, reaching, nuzzling and sucking hands/fingers when in proximity to the breast or while being held skin-to-skin [83]. NICU staff members who are educated and skilled on cue-based feeding can be prepared to teach families these signs of readiness and appropriate responses to these early cues [228]. Until infants have had opportunities to consistently latch and transfer some milk from the breast (indicated by test weights [92]), the remainder of any volume of feeds needed after breastfeeding could be given by gavage. ▪ As infants demonstrate feeding competence, a protocol for progression and more infant-controlled frequency and duration of oral feedings can be facilitated, possibly through the use of 12- or 24-hour minimum volumes, allowing for the possibility that some feedings might be more efficient than others and that progress is likely to be variable [229, 230, 231]. ▪ Adjustment of the frequency of feedings, feeding intervals and feeding duration based on infant cues acknowledges that feeding effectiveness will be maximized when based on infant readiness and stamina. ▪ Some NICUs have used sensorimotor interventions to promote feeding readiness [208, 232, 233] ▪ Awareness of risks of ongoing feeding difficulties may help identify infants in need of specialized feeding interventions/follow-up care or alteration in typical discharge criteria [205, 234, 235, 236, 237]. ▪ On-demand feeding (where infants' feeding cues determine feeding patterns) may be allowed for term infants from time of admission and/or for other NICU infants when medically appropriate.
8.4	The parents are included as partners in selecting and implementing strategies for introduction and progression of oral feedings, which includes breastfeeding in accordance with the mothers' goals.	▪ Minimizing separation and maximizing effective and timely communication will be especially helpful for facilitating families' engagement in assisting with infants' feeding progression in the NICU. ▪ Collaboration with parents in order to take advantage of infants' patterns of alertness and feeding readiness is critical to progressing towards eventual exclusive/maximal breastfeeding. Staff may be able to use creative observation and problem-solving skills to this end.

STEP 9

For infants who are expected to breastfeed, use alternatives to bottle feeding whenever possible until the infants have been given the opportunity to develop some breastfeeding skills. Use nipple shields and pacifiers only for therapeutic reasons.

RATIONALE SUMMARY

For healthy term infants, the routine introduction of artificial nipples and supplemental bottle feeding is not recommended in the first weeks because of potential interference with breastfeeding by impacting sucking patterns or changing infants' contribution to breast stimulation and milk removal [238, 239, 240]. Cuddling or comfort nursing is recommended rather than using pacifiers until breastfeeding is well established [241].

While it may not be realistic for some NICU infants to be exclusively breastfeeding prior to discharge from the NICU, care providers can maximize the infants' opportunities to breastfeed while decreasing reliance on bottle feeding as the sole (or even preferred) alternative during the learning process [82]. When NICU infants are ready to begin to practice oral feeding, it is preferable to assist mothers to offer the breast frequently [125] for practice. Because bottle feeding expressed mothers' milk does not confer all of the benefits of direct breastfeeding [115, 226] , offering the breast is worthwhile and so should be supported and encouraged through culturally-sensitive counseling and care [124]. The goal of early and repeated experience at the breast, often beginning with STS [64], is to have infants demonstrate at least some milk transfer effectiveness at the breast before beginning bottle feeding [33, 86, 116, 216, 224, 242]. Alternative feeding methods should be considered for additional volume or for when mothers are not able to be present for oral feedings. This could be tube feeding if medically indicated. Other alternative oral feeding methods such as cup [242, 244, 245], spoon, syringe, dropper, finger feeding devices [246], nursing supplementer system or specialty device for cup feeding could be considered [246], as they may keep infants from developing preference for bottle nipples (sensations, immediacy of milk flow, flow characteristics, etc.). NICU staff should be skilled in the use of at least some alternative feeding methods, as well as both standard and specialty bottles with thoughtful and consistent selection of appropriate nipples [247], which could be indicated when infants begin to show readiness for more oral feedings than maternal availability, for administering medications or nutrient supplements or for when thickened feedings are required. Appropriate bottle-feeding techniques such as paced feeding, eye contact and cuddling infants while feeding demonstrate responsiveness to infants. Modeling these techniques helps parents whose infants require a variety of feeding methods at and after discharge.

Non-nutritive sucking for preterm or sick infants is an effective way to provide calming and soothing as well as to manage pain or stress and to enhance digestion during tube feeding [210, 248], assist with development of sucking skills [232] and may have different impact on breastfeeding than with well infants [249, 250]. Use of pacifiers may be very appropriate in the NICU for non-nutritive sucking when parents are unavailable. Whenever parents are present, they can be assisted to provide comfort through holding and providing non-nutritive sucking at the mothers' breast rather than with pacifiers. Non-nutritive sucking on a parent's clean finger is justifiable because of the similarity to therapeutic oral stimulation which may enhance oral feeding performance [251].

NICU staff should also be able to effectively help mothers with the basics of breastfeeding [211, 252] and have lactation consultants with NICU expertise available for problem management. Nipple shields have legitimate therapeutic uses in the NICU [115, 253] but should be used only when necessary by personnel skilled and educated in their use and with appropriate follow-up care [254].

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
9.1	Parents and support persons are counseled on the use of bottles with nipples before breastfeeding competence is established as potentially interfering with optimal breastfeeding	▪ Consider at least some alternative feeding methods, depending on infants' condition (e.g., degree of prematurity, expected length of stay, other medical issues, etc.) and mothers' availability. ▪ NICU staff should receive education and training in a variety of alternative feeding devices and methods and then should be able to teach parents about the rationale and techniques for using them. ▪ For some term or near-term infants who latch well but are unable to transfer a reasonable volume of milk (because of low milk production or limited milk release) the use of a nursing supplementer may be an appropriate option. ▪ Syringe or dropper feeding may be used for small volumes and limited periods of time with infants controlling the pace of feeding and the volumes delivered. ▪ Once breastfeeding is established with as much competence as possible based on mothers' availability and infants' capability, standard or specialty bottle/nipple systems may be required with attention to using appropriate flow rates that promote sucking patterns similar to breastfeeding.
9.2	Pacifiers are used for comfort and soothing infants who cannot suckle or be comforted at the breast/chest or for oral motor stimulation and development.	▪ The first preference for non-nutritive comforting suckling should be at the breast whenever possible since it includes warmth, skin contact, cuddling, holding and taste/smell sensory input which capitalizes on the supportive parent-infant relationship. However, this is not always possible either due to infants' condition or parents' availability. ▪ While pacifier use in healthy term infants is not recommended because of the potential for interference with breastfeeding, many infants in NICU can benefit from non-nutritive pacifier sucking experience. ▪ Pacifier size and style should be selected based on infants' size, condition, tolerance, preference and development. ▪ Parents can be encouraged to comfort and support their infants during procedures. They may be able to soothe with their voice or by holding STS (e.g., during cranial ultrasound or heel stick). For other procedures such as physical exam, placement of a feeding tube, IV starts or blood draws when holding or STS are not possible, parents may be able to comfort and calm their infants by wrapping their hands around them. This form of containment holding is sometimes referred to as "hand hugs". ▪ While parents may be accustomed to comforting older infants in ways not well-tolerated by some preterm infants (e.g., stroking and patting), they can be taught developmentally appropriate touching skills or infant massage [202]. ▪ NICU staff who help parents recognize signs of infant stress and relaxation promote appropriate responses.
9.3	If infants are expected to breastfeed, the first nutritive sucking experience is at the breast, rather than with bottles and artificial nipples. *continued next page*	▪ As with any breastfeeding aid, it is important that there be skilled lactation assessment and assistance to determine the need for a nipple shield. ▪ Nipple shield use can help previously bottle-fed infants back to breast by providing an oral stimulus more like what was experienced with an artificial nipple.

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
9.4	Nipple shields are used for justifiable therapeutic reasons with skilled lactation support, ongoing evaluations of need and a plan for transitioning from their use.	▪ As with any breastfeeding aid, it is important that there be skilled lactation assessment and assistance to determine the need for a nipple shield. ▪ Nipple shield use can help previously bottle-fed infants back to breast by providing an oral stimulus more like what was experienced with an artificial nipple. ▪ For preterm infants who have not developed buccal fat pads or oral muscle strength, the shield may help them sustain latch. Their feeding efforts can be directed toward creating the necessary variation in intraoral pressures for effective milk transfer. ▪ When a shield is used, consider making a specific plan for follow-up care that includes anticipating when infants might "outgrow" the need for the shield, timing and techniques for attempting feedings without the shield, as well as processes for eliminating it. ▪ Skilled clinical lactation support throughout the hospital stay and after discharge may be needed to monitor mothers' milk production, infants' feeding progression and weight gain patterns as well as strategies for discontinuing use of the shield.
9.5	Parents are involved with NICU staff in creating a plan for transitioning from gavage feeding to oral feeding/ breastfeeding that provides infants with the opportunity to practice and develop at least some breastfeeding skills before bottles and artificial nipples are introduced when breast-feeding is the mothers' intention.	▪ The NICU staff has systems that promote awareness and communication of the mothers' intentions. ▪ The use of a plan (or protocol) ensures consistency and continuity which facilitates communication between parents and NICU staff and among different NICU staff members. ▪ The plan may be individualized to identify times mothers are likely to be present for feedings, specifying how to maximize infants' feeding readiness (e.g., STS holding before feeding time) and expected feeding times/schedules. ▪ Different infants will require varying amounts of practice to develop effective breastfeeding skills.
9.6	The plans for progressive breastfeeding/oral feedings are documented and communicated to all healthcare providers caring for the infants.	▪ Effective communication and documentation allow all staff members to collaborate in order to maximize the infants' breastfeeding/ feeding success.

STEP 10

Prepare parents for continued lactation and breastfeeding after NICU discharge by having written follow-up plans and ensuring access to specialized clinical lactation support services and groups knowledgeable about the needs of post-NICU infants.

RATIONALE SUMMARY

Discharge feeding instructions should take into account how far the infant and mother have been able progress toward normalization of feedings at the breast. After a NICU stay, it is extremely variable whether the dyad is likely to meet expectations set for healthy term infants: "Exclusive breastfeeding is recommended up to six months of age, with continued breastfeeding along with appropriate complementary foods up to two years of age or beyond" [88, 255, 256, 257]. For mothers, the potential for progression to full breastfeeding depends on the extent to which they have established and sustained adequate milk production during their infants' NICU stay and any separation from their infants. For infants, it will also depend upon gestational age and maturity, medical complications and nutritional requirements for appropriate growth. Depending on infants' conditions and length of NICU stay, progression to full breastfeeding may take just a few days, a week, or may be a slow/gradual transition that will take extended time; it may not occur at all [116, 258].

Mothers of NICU graduates will need follow-up for medical and lactation-specific care, as well as community-based breastfeeding support in order to continue to move toward meeting their breastfeeding goals [259], which may have changed during their infants' NICU stay. Sometimes mothers who did not intend to breastfeed supplied milk during part or all of their infants' NICU stay, but do not plan to continue after their infants' discharge. They may need assistance with decreasing or stopping milk production. More commonly, mothers who had intended to fully breastfeed may not have been able to establish or sustain milk production. Sensitive care and guidance may help them grieve the loss of their ideals. Even mothers who have been able to sustain abundant milk production may have infants who are unable to feed effectively orally or at the breast, or who require specialized feedings other than or in addition to their mothers' milk. These wide ranges of NICU outcomes require knowledgeable, skilled, creative collaboration among the healthcare team during and after infants' hospitalization. Great compassion along with respect for mothers' abilities and priorities are especially valuable for these families.

The LC in a NICU environment needs specialized lactation and NICU knowledge and skills along with the full cooperation and partnership of the entire health care team to develop strategies for best breastfeeding outcomes [7, 54, 236]. Families may need post-hospital community supports such as parent-to-parent groups [260], outpatient lactation appointments, home health and public health services for ongoing breastfeeding help and feeding progression [235, 236, 261, 262, 263]. The NICU may be able to offer collaborative education and training to those who will provide community-based breastfeeding support or may consider developing services to provide needed supports if the services in the community are not able to meet the needs of NICU infants' families after discharge [264].

STEP 10

	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
10.1	Families who have chosen to provide breast milk and/or breastfeed are counseled regarding the importance of continuing exclusive human milk feeding (with fortification, as indicated) and/or breastfeeding for the first six months corrected gestational age, whenever possible.	▪ The recommendation of six months exclusive breastfeeding will sometimes need to include fortification of expressed human milk, depending on the infants' specific conditions. However, the extension of breastfeeding and/or human milk feeding (with fortification as indicated) for at least six months may be even more important for these high-risk infants than for normal term newborns. ▪ Solids should normally be delayed until six months adjusted age, or longer if infants do not show developmental readiness (extinction of extrusion reflex, sitting up independently, interest in family mealtimes, etc.). Continuation of breastfeeding throughout at least infants' first year along with the gradual addition of family foods matches the AAP recommendation [2] for full term/well infants.

10.2	Individualized written discharge instructions include the plan for feeding after NICU discharge which has been jointly developed with the parents/ family.	▪ Specific instructions may be in a separate discharge feeding plan or may be incorporated into a comprehensive discharge instruction summary. In either case, there should be information about:
		  ▪ How much/how often infants should be feeding (volume and frequency)
		  ▪ How often/how long to feed at the breast
		  ▪ Techniques or devices to use (e.g., breast compression, nipple shield, etc.)
		  ▪ How much/how often to give additional milk if required
		  ▪ How to give additional milk (bottle/nursing supplementer, etc.) if required
		  ▪ How to adjust milk expression [265].
		  ▪ When/how to progress toward more feedings at breast (if not all feedings at breast at discharge)
		  ▪ When/how to access follow-up support and from whom
		▪ Some families may find a home scale useful and acceptable to evaluate feeding effectiveness/intake at breast or weight gain [128].
		▪ It is also helpful to include comments about infants' weight gain pattern and weight at discharge, along with how the feeding plan may need to be adjusted as they gain weight.

10.3	Prior to NICU discharge, families are provided with information concerning the signs of infant feeding issues requiring assistance from qualified health care providers.	▪ Issues that may need to be addressed include distinguishing normal spitting up from worrisome vomiting, acceptable variability in volume/length of feeding, length of intervals between feedings or feeding frequency, managing feeding refusal, expected frequency of wet diapers, expected frequency and consistency of stools, signs of respiratory distress with feedings, etc. and in which circumstances it would be important to seek professional help [235, 236, 266].
10.4	Prior to NICU discharge, families are provided with written information concerning follow-up feeding support services, especially those that offer specialized support for post-NICU families. *continued next page*	▪ Feeding-related resources may include infants' primary care providers, lactation resources available through an outpatient lactation services provider with expertise concerning NICU graduates, the health department/WIC program, parent support or parent-to-parent groups [6]. ▪ Care providers who have specialized experience and skills in assisting with breastfeeding-related topics for NICU graduates are especially well-qualified for this follow up. ▪ Referrals to generic breastfeeding or mother-to-mother support may need to include some cautions if those groups are not familiar with the unique breastfeeding-related issues that may be encountered by the NICU graduates and their families. ▪ When mothers have a generous supply of stored milk, there is an opportunity to explore the process and possibility of donating excess milk to a local milk bank since NICUs rely on milk banks for PDHM [267].

NO.	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
10.5	If infants being discharged from the NICU have in their feeding plans any fortifiers or specialized breastmilk substitutes, clear written instructions are provided to parents on how they can obtain those foods in the community.	▪ The NICU staff needs to know how much these specialized products cost and how long it takes for families to access them in the community so that appropriate supplies are provided at discharge for treatment continuity. ▪ Discharge feeding instructions should address how to access needed products through on-line ordering, retail outlets or WIC programs [116].
10.6	Discharge feeding plans are shared with follow-up healthcare providers for periodic re-evaluation, based on infants' growth.	▪ The NICU staff can inquire about families' selection or preference of a follow-up medical care provider for infants nearly ready for discharge. Referral lists and guidance may be provided if necessary. ▪ Collaborative practice models and established communication patterns can guide how the discharge feeding plan is shared with follow-up care providers (electronically shared medical records, fax, mailed hard copy, etc.) ▪ It is useful for families to have a printed copy to carry along to any follow-up appointments or lactation consultations so that the discharge feeding plan is readily available.
10.7	Staff ensures that the parents and infants receive breastfeeding/infant feeding assessment and support suitable for NICU infants after discharge (preferably two to four days after discharge and again the second week, and ongoing as needed), at the facility or in the community by skilled breastfeeding support persons.	▪ The first follow-up appointment should include a weight check. At this visit, a complete breastfeeding assessment would ideally be performed by the examiner or a staff member with clinical lactation expertise. ▪ If the medical follow-up appointment is not likely to include a feeding assessment and the facility has a lactation service or clinic whose staff members have expertise in providing support for NICU graduates, the family could also be referred to this clinic. ▪ These early and ongoing appointments and feeding assessments are important for prompt identification of challenges encountered during transition to the home environment and 24-hour family care. This is a time for families to clarify instructions and eliminate misunderstandings [177]. Care providers can reinforce priorities and help families with creative solutions to problems they have encountered. ▪ NICUs that are not able to offer this feeding assessment and support could provide specific referrals to skilled breastfeeding support persons in the community familiar
10.8	If sufficient specialized support is not available for NICU graduates and their parents, the NICU facilitates the development of these skills or community resources (e.g., support groups, peer mentors, lactation clinic, home health services, helpline, etc.).	▪ If specialized help is not available in the community of the NICU and/or is lacking in the families' communities, there may be opportunities for the NICU staff to provide education and guidance for interested professionals, service organizations or community groups. ▪ Services the NICU could consider developing include support groups, a lactation clinic, home health services, a helpline or clinics with specialized feeding therapist professional services (e.g., OT, SLP, RD, nutritionists).

INTRODUCTION

One of the initial expansions of the Baby Friendly Hospital Initiative into the NICU was proposed and developed by the Nordic and Quebec Working Group **[268, 269]**. It has since been refined into the Neo-BFHI The Baby-Friendly Hospital Initiative for Neonatal Wards **[270]**, the application of which has recently been studied **[271]**. This Working Group recognized the challenges that affect lactation and breastfeeding during the hospitalization of sick or premature infants. These include mother-infant separation, expressing milk to initiate and maintain lactation, compromised milk production, barriers to infant-mother/parent bonding and the concept of "vulnerable mothers". The Group also stressed the need for family-centered care and continuity of care both during the hospitalization and between facilities and caregivers over time. They added three statements of overall philosophy to their neonatal Ten Steps and chose the term "guiding principles" to emphasize that they are general principles and attitudes essential for all aspects of care. Their Three Guiding Principles focus on respect for mothers, a family-centered approach and continuity of care, all of which are meant to be basic foundational tenets of the 10 Steps. These Guiding Principles are applicable to all infants and families regardless of whether they choose to provide mothers' milk. Important concepts of these principles have been adapted and are explored here for the culture and caregiving practices of the United States.

These Guiding Principles are general statements that reflect overall philosophy. For a NICU to incorporate Baby-Friendly principles, the culture of the unit will need to have similar philosophical underpinnings reflected in the facility's policies, staff education and the materials distributed to families. Because they are very general and broad in scope, they are not easily measurable and so are not included in the BFUSA NICU "Practices Review Tool".

To address examples of how the Guiding Principles might be operationalized or demonstrated, this document includes some Recommended Practices within each of the Three Guiding Principles. Some suggestions and options for implementation are offered. These suggestions are based on possible approaches to putting these Guiding Principles into practice. The suggestions may also help NICU s taff identify how these principles may already be incorporated into their current caregiving models and policies.

GUIDING PRINCIPLE 1:
The facility focuses on the needs of the individual families and their unique situations and experiences.

RATIONALE SUMMARY

Parental role achievement is a primary developmental task for families of new infants. During pregnancy, the mother begins a relationship with the imagined ideal child. That relationship continues to develop in the early days and weeks after infants' birth for the entire family through the processes of bonding and attachment. The birth of preterm or sick infants requiring a NICU stay—and thus separation from parents—is recognized as a source of parental stress and loss [184], even to the point of causing psychological stress and trauma reactions [30, 272]. NICU admissions can have long-term impact on family [273] because they interrupt bonding, attachment, caregiving, parental role attainment and breastfeeding [75].

Health care staff who treat all family members, especially mothers of NICU infants, with sensitivity, empathy and respect are supporting the role attainment process. Individualized care takes into account each family's situation and customizes care to support informed decision making and implementation of those decisions. Caregiving and breastfeeding are facilitated, parents are more satisfied [9] and more effective at transitioning to their parental roles when NICUs implement best practices for focusing on the needs of individual mothers, infants, families and their situations [258]. Appropriate documentation helps with clear communication of family situations, mothers' priorities and decisions along with what actions the staff members and families will take to follow through on those decisions.

NO.	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
GP 1.1	Families are treated with sensitivity, empathy and respect for their parental roles. *continued next page*	▪ Train staff in effective communication, listening skills and motivational interviewing [274], teaching the staff ways to communicate empathy, respect, warmth, optimism and non-judgmental attitudes toward the families [274] using relationship-based care [27]. ▪ Use role play, simulation and small group work to practice and refine these skills and to brainstorm together on possible solutions to the challenges [25]. ▪ The staff has a system for appropriate contact with parents even if parents are not physically present. Communication is initiated by staff if not initiated by parents (e.g., HIPAA-compliant video system). ▪ Include social, behavioral and interactive information along with medical data when discussing infants' care and status with parents and among staff. ▪ Refer to the family members by their preferred name/title; refer to the infant by name. ▪ Use the language of families' preference with translation services as needed. ▪ Elicit and listen therapeutically and empathetically to mothers' birth stories. ▪ Collaborate with families on problem solving. ▪ Honor, validate and communicate the mothers' preferences and perspectives to multidisciplinary staff in order to facilitate coordinated care. ▪ Explore complicating factors in each mother's life and health and refer as appropriate [275]. ▪ Support bonding, attachment, parental role attainment [75, 276], collaborative decision making and active participation of parents in care [201, 277]. ▪ Support parents in assuming caregiving roles and assist them to reach their goals in caring for their infant [24, 57, 61, 225]. ▪ Facilitate peer/family support [278]. ▪ Include family in care planning meetings or rounds at the bedside whenever possible. ▪ Identify and address stresses and perceived trauma using psychological assessments and resources. ▪ Provide emotional support using social services, religious/spiritual and psychological services [274].

NO.	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
GP 1.2	Parents and families are supported in making informed decisions about infant feeding, milk production and breastfeeding. They receive individualized, evidence-based support for carrying out their decisions.	▪ Pace information flow and adjust literacy level of verbal and written information provided to parents [32, 35]. ▪ Include in medical records mothers' goals identified antenatally and ensure that the goals are passed along to NICU staff if/when infants are admitted to the NICU. ▪ Periodically review short- and long-term parental feeding goals and needs as well as how they may be changing [126, 203, 279]. ▪ Foster informed decision making and respect for the decisions parents make [33, 201]. ▪ Assist parents to have realistic expectations and provide encourage along with accurate interpretations of NICU infants' feeding performance and progress. ▪ Listen to parents, recognizing their unique situations and perspectives (racial, demographic, geographic [35, 36, 280] and their expertise in interpreting their infants' behavior.
GP 1.3	Infant feeding decisions made by parents and staff, with the reasons for them, are documented in the medical records.	▪ Include in the medical record the parents' goals and progress throughout the antenatal period, infants' hospitalization and discharge. ▪ Focus on parental goals and concerns during the NICU stay and follow-up period [99, 258, 281]. ▪ Parental decisions regarding feeding care are documented in the medical record to promote consistency of care across time and staff (see also GP 3).

GUIDING PRINCIPLE 2:
The facility provides family-centered care within a supportive environment.

RATIONALE SUMMARY

Family-centered care in the NICU encompasses the basic principles of dignity, respect, information sharing, participation and collaboration. These principles can be implemented through facilitation of maximal parental presence, appropriate education [282], effective communication and collaborative decision making [283]. Bonding and attachment and the development of parental roles occur through progressive participation in infant caregiving [186]. Supporting mothers to establish and sustain milk production as a unique contribution to their infants' care sets the stage for breastfeeding.

When care and environment are centered on the convenience of caregivers or even focused on infants alone, there is a risk of isolating infants from their families. This creates a barrier to normal development of family roles/relationships and can prevent families from understanding and participating in their infants' changing care needs. These barriers may also eliminate the possibility of mothers reaching their breastfeeding goals.

Historically, the NICU environment itself created challenges for family-centered care because of space constraints and lack of accommodations for families. Even when environmental changes are made to be more supportive of family presence and caregiving, it is the perspective and attitudes of the staff members that are most important in determining how families experience the NICU [192], [284], how individualized developmental support is implemented [285] and how breastfeeding progresses [198].

While a social environment of supportive attitudes, multidisciplinary relationships and peer support are critical, the physical environment of the NICU must also support family-centered care as well as the individualized development of infants [183], [286]. As the optimal environment for NICU infants is in direct contact with the mother's body, the NICU environment must facilitate skin-to-skin (STS) holding. Space, privacy, appropriate equipment and furniture are components, as are programs specifically designed to support NICU infants' families [211], [282, 287, 288].

NO.	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
GP 2.1	Parents and families are involved as partners in the care of their infants to whatever extent possible from birth and throughout the infants' NICU stay. *continued next page*	▪ Educate parents antenatally (providing a NICU tour if possible) and at time of transport or admission [195, 289]. ▪ Include the family (siblings, support persons) as defined and desired by parents [67, 290]. ▪ Support parent-infant bonding, relationship and attainment of parental roles [34, 189, 195, 291, 292]. ▪ Apply effective, clear and consistent communication strategies [11, 67, 196, 290] including technology-based modalities to keep parents in contact with their infants even when they cannot be physically present [194]. ▪ An integrated multidisciplinary team approach promotes consistent information/teaching [21, 67, 189, 293]. ▪ Consider giving parents and other frequent family caregivers identification badges with easily visible names and preferred titles, such as Mom, Dad, Grandparent, etc. ▪ Suggest ways families can provide supportive care and comfort (e.g., quietly talking to the infant, containment) and cautions about actions typically used with well or older infants which might be detrimental to preterm or ill infants' wellbeing (e.g., jiggling, patting, rubbing, light touch) [214]. ▪ Promote parental participation in infants' care and feeding [59, 195, 200, 213, 294]. ▪ Provide opportunities for peer parent support [195, 196, 197, 295, 296] along with social/psychological family support, especially for fathers (consider screening all parents for depression/anxiety) [28, 297].

GUIDING PRINCIPLE 2: *continued*

NO.	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
GP 2.2	The presence of parents, along with their support persons, is encouraged and welcomed at all times.	▪ Enable maximal parental presence [193], contact with infants and involvement in care and decisions [44, 58, 59,77, 189, 195, 197, 204, 290, 294, 298, 299, 300, 301, 302]. ▪ Facilitate true collaboration and shared decision making, as well as inclusion of parents in rounds whenever possible [185, 189, 197, 201, 301, 303, 304, 305], while still protecting privacy as required by HIPAA. ▪ Invite parents to be involved in modifications to caregiving practices [197, 306, 307, 308]. ▪ Consider use of such modes as the Family Integrated Care Model [195], Compassionate Family Care Framework-CFCF [211], Family Nurture Intervention-FNI [40, 56], Parent-to-Parent Partnership (March of Dimes) [295] and/or NIDCAP (Newborn Individualized Developmental Care and Assessment Program) [214].
GP 2.3	Support and accommodations are provided, as feasible, to enable parents and families to rest/sleep and eat near the NICU so they can be with their infants as much as they desire.	▪ Apply principles of family-centered care [201, 291, 306, 309, 310, 311]. ▪ Support and encourage mothers in their efforts to establish and maintain milk production [23, 312]. ▪ Optimize use of space to accommodate parents and families to facilitate their participation in caregiving [34, 60, 67, 76, 187, 276, 294, 313, 314, 315, 316]. ▪ Design facilities that allow for parent rest, sleep [103], self-care and participating in infants' care [187, 317].

GP 2.4	An individualized, developmentally supportive environment is provided that facilitates skin-to-skin holding and breastfeeding as soon and as often as the infants and parents are able.	▪ Modify the NICU environment, as much as feasible, so that it is conducive to family-centered care, skin-to-skin (STS) holding, milk expression and breastfeeding [52, 59, 67, 187, 287, 291, 299, 315, 317].
		▪ Invite parents to be involved in suggesting modifications to the NICU environment [306, 307].
		▪ Maximize positive use of the NICU environment even if it is an open bay design [79, 82, 83] Optimally, provide Single Family Rooms (SFR) while attending to safety and minimizing isolation [187, 313, 314, 315, 316, 318, 319].
		▪ Protect privacy for milk expression and breastfeeding [187]. Provide resources for mothers to pump at their infants' bedside before, after or during STS holding [52].
		▪ Make early, frequent (daily), sustained STS holding the standard of care [20, 41, 42, 43, 51, 58, 59, 67, 70, 71, 77, 185, 187, 289, 320], because it facilitates bonding, relationship, psychological and emotional care of parents and infants and infant neurodevelopmental outcomes. Additionally, STS supports milk production, milk expression and breastfeeding which will help mothers reach their breastfeeding goals [38, 52, 68, 70, 211, 212, 287, 321].
		  ▪ Educate parents and staff [26, 195, 306, 307].
		  ▪ Clearly define exclusion criteria, [71, 321], and safety considerations.
		▪ Consider adoption of programs such as March of Dimes' Close to Me [20].
		▪ Facilitate family members' (especially the partners') collaboration, assistance and support for mothers in their milk expression efforts [67, 68].
		▪ Assist mothers with progressive breastfeeding, from non-nutritive suck at breast to direct nutritive breastfeeding, including first oral feedings at breast before introduction of bottle feeding [212, 216].

GUIDING PRINCIPLE 3:

The NICU coordinates with the health care system to ensure continuity of care from pregnancy until after infants are discharged.

RATIONALE SUMMARY

Continuity of care is care delivered over time to individual infants and families [7]. The NICU experience has a number of phases, not all of which are experienced by every family:

- A prenatal care phase, during which parents anticipate the arrival of an infant who may require NICU care (including possible antenatal transfer or transport)
- Birth and delivery room stabilization
- Admission to a NICU in the birth hospital or neonatal transport to a NICU in another hospital
- An intensive care phase, followed by a recovery (intermediate or special care) phase
- Possible transfer back to a local hospital for continued care
- A discharge preparation phase followed by NICU discharge (In some cases, early discharge may occur with continued complex care provided by parents, supported by hospital staff, a home health agency or other health care providers.)
- A follow-up phase

To navigate these complicated stages smoothly, consistent messages must be delivered among multiple caregivers [322] that reflect mothers' input and infants' changing conditions [7]. Continuity of care [7] can be achieved through shared policies and guidelines for infant care and parental roles. Strategies and systems for communication and coordination among providers and with parents will include parent education programs (group activities, individual counseling and printed information) [7]. Parents should perceive that decisions about their infants are based on policies that are shared by all caregivers and to which all are willing to adhere, without conflicting information or advice. This can help parents feel confident that the caregivers know their infants' medical history and current care plans [323].

Continuity in lactation and breastfeeding support for NICU mothers and infants is needed during initiation of lactation, attainment and maintenance of adequate milk production, initiation of breastfeeding and progression toward mothers' attainment of their breastfeeding goals (ideally exclusive breastfeeding for the first six months). There is often a transition phase using other feeding methods and nutritional support practices that need to be interwoven with progressive breastfeeding. Mothers describe challenges such as contradictory advice from different health professionals, frequent changes of strategies and hands-on approaches in breastfeeding counseling, judgmental or critical and uncaring attitudes and the lack of demonstration of empathy [16]. These are at best counter-productive and at worst detrimental to establishing and maintaining trusting relationships among providers and families and the optimal outcomes for the families and infants. In addition, frequent staff changes and lack of coordination among providers are risks to infant safety. Continuity of care increases parents' confidence that their infants are receiving appropriate care.

The family-centered care approach addressed in Guiding Principles 1 and 2 provides a framework that can help facilitate continuity of care by promoting parents' presence and participation as primary caregivers. As the role of staff shifts from direct caregiver to parent educator/coach, and as parents assume increasing amounts of their infants' care, they will become experts on their infants' conditions and can effectively participate in shared decision making [309]. Parents also become more confident in their own expertise, which may act as a safeguard for continuity of care.

NO.	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
GP 3.1	Evidence-based and consistent lactation and breastfeeding support is provided by the NICU in coordination with the entire institution from pregnancy, if applicable, to follow-up care after discharge from the NICU.	▪ Use a multidisciplinary team approach for lactation and breastfeeding support, with representatives of all caregiver groups. ▪ Include input from parents, high-risk antenatal and inpatient clinical care and social service providers, as well as community agencies and providers of follow-up care. ▪ Develop a plan for ensuring continuity of feeding-related care for infants admitted to the NICU. Include all phases of care, from antenatal risk identification through NICU discharge, community-based or home care and follow-up lactation services [7]. Define the roles and responsibilities of various providers for preparing, revising and following the plan of care, as well as how care will be transferred between providers [7]. ▪ Consider how infants will be fed during each phase of care. Coordinate roles of providers, roles of mother/parents and how they will be educated and involved in infant feeding decisions. Ensure that providers' communication with parents and advice on infant feeding is evidence-based and consistent over time. ▪ Address key topics in infant feeding care plans, such as care for which parents may be responsible, when and how that care will be given, and education for parents [7, 309]. ▪ Ensure that the plan of care includes evidence-based lactation and breastfeeding support and addresses how parents/families will be involved in their infants' care and feeding throughout the hospitalization. Plans of care are adjusted as infants' development and condition evolves. Include parents' contributions concerning planning for the tasks they will perform [16] after discharge. ▪ Continuing education for providers includes topics such as continuity of care in the NICU, evidence-based feeding standards, roles and responsibilities, parental involvement and consistent communication.
GP 3.2	Infants' medical management and families' preferences are documented at each stage and shared with all health care providers, institutions and organizations involved in lactation and breastfeeding support.	▪ Document in the medical record infants' medical management, specifically including lactation management and families' preferences at all stages of care. ▪ Communicate parental skills and preferences to all staff for coordination of support throughout the NICU stay. ▪ Share information among the relevant health care providers, institutions and organizations involved in lactation and breastfeeding support during hospitalization, in anticipation of discharge, at discharge and during the follow-up phase post-discharge.

RATIONALE SUMMARY

The purpose of the International Code of Marketing of Breast-milk Substitutes and subsequent r esolutions is to protect and support breastfeeding by limiting inappropriate or unethical marketing of products and supplies related to artificial feeding. Uncontrolled marketing by vendors and companies have contributed to worldwide use of products and feeding patterns that undermine breastfeeding. When these vendors have unlimited access to health-care staff, they can employ marketing strategies such as the provision of gifts, food, services or funds that result in staff members unwittingly becoming promoters of these products. By providing low cost or free supplies to hospitals rather than having hospitals purchase these supplies at fair market value, the companies expect that their products will be introduced to patients and families who then may be influenced to continue using and purchasing that particular brand of products after discharge.

In addition, the provision of samples, discharge "gift packs", literature or educational materials with the logos of such companies are often seen by families as the facility's and staff's endorsement of these products **[324]**. Companies recognize that families are more likely to purchase the familiar brand of other related products since the family may generalize a positive view of the company whose products they saw used in the hospital. Financial support of education and the use of images or words that idealize or normalize artificial feeding in promotional or educational materials may end up compromising breastfeeding. Many health care workers are not aware of The International Code or of what constitutes unethical practices related to breast milk substitutes and supplies that normalize artificial feeding. All staff members who have contact with patients, parents and families should be educated on the purpose of The International Code and on ethical business practices that are required to uphold it **[325, 326]**. Compliance with The Code is part of BFUSA BFHI so NICU staff may want to refer to recommendations in the current Guidelines and Evaluation Criteria **[327]**; application suggestions here are those specific to NICU settings.

NO.	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
CODE 1	No materials that promote breast-milk substitutes, bottles, nipples, pacifiers or other infant feeding supplies are displayed in the NICU or related areas or distributed to parents (even prenatally) or staff.	▪ Provide materials that contain evidence-based information and positive images that support breastfeeding. ▪ Review all materials given to families to eliminate those that have compromising wording or photos of infants being fed by bottle or using pacifiers or formula. Especially notice any materials that are supplied by commercial entities not in compliance with The International Code. ▪ Evaluate the impact of pictures of infants or recognizable brand logos in advertisements or on products. ▪ When formula is needed, consider putting it into generic non-branded containers labeled for the individual infant or removing/covering brand labels and packaging before bringing it to infants' bedside.
CODE 2	Unless in use, supplies of breast-milk substitutes, bottles, nipples, pacifiers and other infant feeding products are kept and stored out of view of parents and the general public.	▪ Develop strategies that result in necessary supplies of these types being stored where they are not visible: inside closets, cupboards or drawers or in a room not accessible to the public. ▪ Products that are in use may be removed from wrappers or prepared in areas that are not accessible to parents or families. ▪ Infants' individual labels can be applied over/instead of brand labels in a "feeding prep" area.
CODE 3	Employees of manufacturers or distributors of breast-milk substitutes, bottles, nipples, pacifiers or other infant feeding supplies have no direct or indirect contact in the hospital with parents at risk of having infants in the NICU or parents with infants in the NICU.	▪ Implement protections to prevent inappropriate vendor access to pregnant patients, parents, families or other support persons of infants in NICU. ▪ Consider a policy requiring vendors of all products to be processed through the purchasing department, have appointments to meet with NICU staff and only make contact for specific necessary purposes.
CODE 4	No families at risk of having infants in the NICU, parents or families with infants in the NICU are given marketing materials or samples or gift packs by the NICU that include breast-milk substitutes, bottles, nipples, pacifiers or other infant feeding supplies or coupons for any of the above items.	▪ Samples or coupons and gift packs that include them have been recognized as effective marketing practices and associated with decreased duration of breastfeeding. It is important that routine distribution be considered unacceptable and unethical. ▪ Provision of clinically necessary supplies to allow for safe continuity of medically indicated therapeutic feedings should be defined by policy. ▪ Hospital logoed packets of materials that promote hospital and community services are highly appropriate.
CODE 5	No educational materials distributed to families of infants in the NICU have any messages that promote or advertise infant foods or drinks other than breast milk. *continued next page*	▪ Family educational material should be free of all advertising. ▪ Eliminate materials that discuss or show use of infant foods (baby food from spoons, jars, pouches, snacks, etc.) or drinks (formula, juices, special water, etc.) if these are shown as being indicated for use during the recommended period of exclusive breastfeeding.

NO.	RECOMMENDED PRACTICES	CLINICAL GUIDANCE: SUGGESTED STRATEGIES
CODE 6	No educational materials used by the NICU or related areas refer to proprietary products or bear a product logo, unless specific to the parents' or infants' needs or conditions. (For example, information about how to safely use needed products such as formula or breast pumps would be acceptable to give to families needing such products. Marketing information for such products would not be acceptable.)	▪ Materials that give instruction for the use of required products (e.g., pumps, feeding devices, fortifiers, additives, vitamins) should be reviewed to ensure that they give only information necessary for their correct use and should not include any promotions or advertising. ▪ Families may become convinced through promotional materials that mothers' milk is substandard or inferior. It could be helpful to provide scripting for staff to highlight NICU infants' greater nutritional needs rather than to describe human milk as "lacking" essential nutrients that the infants require.
CODE 7	Neither the NICU nor its staff receive free gifts including food, non-scientific literature, materials or equipment, money or support for breastfeeding education or events from manufacturers or distributors of breast-milk substitutes, bottles, nipples, pacifiers or other infant feeding supplies.	▪ Since these practices can affect whether the staff is positively disposed to the company or the company's products, it is essential that these be prohibited by policy. ▪ Some professional organizations have elected to limit advertisers and conference vendors or sponsors based on Code compliance. Professionals can make their opinions known to those that have not.
CODE 8	Research funded by manufacturers or distributors of breast-milk substitutes or other commercial entities is allowed, but NICU staff and academic affiliates disclose the receipt of the funds and state how undue influence by the funders is avoided. NICU staff and academic affiliates are independently responsible for initiation, design, analysis and publication of the research, with any potential conflicts of inter est declared, and arrangements made for independent peer review.	▪ Acknowledgement of research funding by commercial organizations should be limited to annual reports, research reports and other professional documents. Acknowledgements of research support should not be exhibited in places seen by families, visitors or the public since this may be misread as endorsing the products of those commercial entities. ▪ Ethical research programs protect the work processes and reporting of results from both intentional and unintentional bias that might favor the funding sources. ▪ Most professional publications, groups and educational organizations now require disclosure of potential conflicts of interest and financial relationships. ▪ Many peer-reviewed journals also require similar statements of disclosure. Some publications have elected to limit advertisers based on Code compliance. Professionals can make their opinions known to those that have not.
CODE 9	Any breast-milk substitutes, including special formulas, fortifiers, bottles, nipples, pacifiers and other infant feeding supplies, that are purchased by or for the NICU, are purchased at a fair market price as specified by the BFUSA Guidelines and Evaluation Criteria and accompanying guidance, with records and receipts available for review.	▪ Review the guidance accompanying the BFUSA Guidelines and Evaluation Criteria to determine how the NICU can best meet The International Code requirements regarding fair market value, as well as accessibility and verification of receipts or records.

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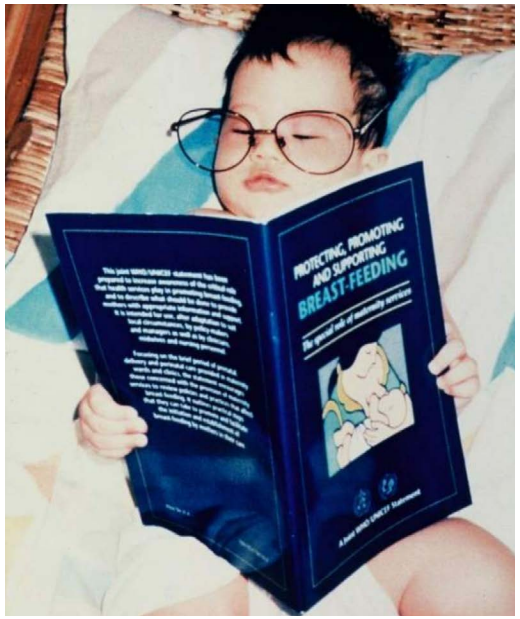

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SECTION 4

SUPPORT DOCUMENTS AND APPENDICES

This Support Documents and Appendices section includes lists of commonly used abbreviations and definitions, data to collect and monitor in the NICU, a preliminary policy review, guides for developing education plans for NICU staff and parents, an Action Plan Template and a list of Task Force participants.

ABBREVIATIONS *Those from Neo-BFHI Core Document are designated in italics.*[5]

AAP	American Academy of Pediatrics
ACOG	American College of Obstetricians and Gynecologists
BFHI	Baby-Friendly Hospital Initiative
BFUSA	Baby-Friendly USA, Inc.; the national authority for the BFHI in the United States of America
BFUSA NICU	Baby-Friendly USA's Neonatal Intensive Care Unit Resources
CGA	Corrected Gestational Age
ELBW	Extremely Low Birth Weight (‹1000 grams)
International Code	*International Code of Marketing of Breast-milk Substitutes and subsequent World Health Assembly resolutions*
IBCLC	International Board Certified Lactation Consultant[6]
KC	Kangaroo Care
KMC	Kangaroo Mother Care
LBW	Low Birth Weight (‹2500 grams
LC	Lactation counselor or consultant (depending on setting, may be peer counselor, breastfeeding counselor/specialist/educator with varying levels of education/experience or IBCLC)
MD	Medical Doctor; physician
NAPNAP	National Association of Pediatric Nurse Practitioners
Neo-BFHI	The Baby-Friendly Hospital Initiative for Neonatal Wards (outside of USA)
NICU	Neonatal Intensive Care Unit
NIDCAP	Newborn Individualized Developmental Care and Assessment Program
NNP	Neonatal Nurse Practitioner
OB	Obstetrician
OT	Occupational Therapist
PC	Peer Counselor (See LC above)
PDHM	Pasteurized donor human milk
RD	Registered Dietitian
RN	Registered Nurse
SLP	Speech and Language Pathologist
STS	Skin-to-Skin
UAC	Umbilical Artery Catheter
UNICEF	The United Nations Children's Fund
USLCA	United States Lactation Consultant Association
VLBW	Very Low Birth Weight (‹1500 grams)
WHO	World Health Organization
WIC	Special Supplemental Nutrition Program for Women, Infants and Children
1:1	One to one; one-to-one

[5] From Neo-BFHI Core Document, 2015 Edition, p. 6.

[6] IBLCE.org

Breastfeeding
Feeding or suckling directly at the breast; may include comfort nursing or non-nutritive suckling at the parent's breast/chest; includes chest-feeding (e.g., nursing by transgender men).

Infant feeding policy or Breastfeeding policy
Overall policy for feeding, breastfeeding and nutrition. The policy may address the implementation of the BFUSA NICU Possible Practices (including the Guiding Principles, the BFUSA NICU 10 Steps and the International Code) alone or in combination with standards related to infant nutrition that the NICU already has in place.

Breast milk feeding
Providing infants with human milk by other feeding methods than directly from the breast (see also human milk feeding).

Breastfeeding protocols
Guides for the implementation of specific breastfeeding-related practices in the NICU.

Clinical staff
Includes staff members providing clinical care for mothers/families and their preterm or sick infants who are being cared for in the NICU or related areas and for those who are pregnant and at risk of giving birth to preterm or sick infants. Clinical staff may include nursing personnel (RNs and other nursing staff), midwives, doctors and any other staff members providing health care for these families and infants.

Cue-based feeding
Feeding practices that are based on infant readiness indicators such as alertness, rooting, orienting toward own or caregivers' hands, pacifier, breast or bottle nipple; sucking on own hands or other objects; pacing as well as pausing when an infant's stress cues are observed.

[7] From Neo-BFHI Core Document, 2015 Edition, pp. 6-8.
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Direct clinical or hands-on care providers
Staff members who actually perform feedings, assist with feedings, make feeding decisions and/or give feeding advice.

Education
Information about what to do and why; didactic knowledge; may be provided in classroom or electronically, individually or in group settings.

Exclusive breast (milk) feeding
For statistical purposes, as proposed by WHO to define infant feeding practices, the infant receives human milk (including expressed milk or donor milk) and allows infants to receive oral rehydration solutions, drops, syrups (vitamins, minerals, medicines), but nothing else.[8] Within BFUSA NICU, this may include the feeding of human milk as the base, with appropriate fortification as clinically indicated for some classifications of preterm/ medically complex infants with increased nutrient needs.

Family
Is defined by the parent(s) and may include significant others and other support persons, not necessarily limited to grandparents, blood relatives, etc.

Father
Mother's (Birthing parent's) partner or significant other (person in "paternal" role, for simplicity here referred to using he, him, his).

Gestational age (Including definitions of preterm and term infants, Corrected Gestational Age)
Time elapsed between the first day of the last menstrual period and the day of delivery. Preterm infants are defined as born alive before 37 weeks of pregnancy are completed. There are sub-categories of preterm birth defined by the WHO.[9] Related groups of infants defined by ACOG[10] may be admitted to the NICU based on gestational age:

- Extremely preterm (‹28 weeks)
- Very preterm (28 to ‹31 6/7 weeks)
- Moderate preterm (32 to 33 6/7 weeks)
- Late preterm (34 to 36 6/7 weeks)

Subgroups of term infants who may be admitted to the NICU:

- Early term = 37-38 6/7 week
- Full term 39-40 6/7 week
- Late Term 41-41 6/7 week
- Post-term › or = 42 weeks

Additionally, infants' size in relation to gestational age may relate to risk categories:

- AGA = Appropriate for gestational age (› 10 and ‹ 90 percentile birth weight)
- LGA = large for gestational age (›90 percentile birth weight)
- IUGR = intrauterine growth restriction
- SGA=Small for gestational age (‹10 percentile birthweight)

"Corrected Gestational Age": post-menstrual age calculated as gestational age at birth + chronological (calendar) age since birth; also sometimes called "adjusted age".

Head/director of nursing

The professional who has the main responsibility for nursing care in the NICU and related areas.

Human milk feeding

Providing infants with human milk by other feeding methods than directly from the breast (see also breast milk feeding).

Kangaroo Care or Kangaroo Mother Care (KC or KMC)

Kangaroo Care or Kangaroo Mother Care are often used interchangeably to refer to skin-to-skin care provided by a parent of a preterm infant (or any infant in NICU). The infant is placed against the parent's naked chest in such a fashion that the infant is held upright and/or prone to maximize contact between ventral skin surfaces. The dyad is then wrapped in a blanket or other clothing to secure the infant against the parent's chest. Ideally, the infant may be held continuously (or almost continuously) in this fashion for multiple hours. Optimally, KMC begins as soon as the infant is judged ready for skin-to-skin contact or holding; sometimes part of stabilization immediately after birth.

When provided by the mother, it may allow for access to the breast for non-nutritive sucking or pre-feeding practice (nuzzling, licking, tasting drops of expressed milk) as well as direct feeding from the breast. Whether or not it includes breastfeeding, it offers benefits such as warmth/temperature regulation, respiratory support/improved oxygenation, cardiovascular stabilization, glucose homeostasis and immune support through colonization with normal flora. Maximal benefits are obtained with continuous or sustained KMC.

[11] BFUSA 2023 GEC "Cultural Humility and Respect: Addressing the Diverse Needs of Patients" p.7.
[12] AAP. Policy statement: Levels of neonatal care. Pediatrics. 2012; 130(3):587-597.

Maternal role

Role of mother or person who is often the primary caregiver.

Mother[11]

Typically refers to individual who has birthed an infant or who is taking on primary "maternal" role, for simplicity here referred to as she/her.

Neonatal unit (NICU) Levels I-IV

Space designated and used for specialized patient care and consultation, monitoring and medical/nursing interventions. May include designated areas in maternity/postpartum units or pediatric units where infants are admitted. Levels of neonatal care are designated:[12]

- **LEVEL I**
  Well newborn nursery: for term or stable late-preterm (35-37 week gestation) infants, or for stabilization of ill or more preterm infants
- **LEVEL II**
  Special care nursery: Level I capabilities plus care for ›/=32 week gestation, ›/=1500 gram, moderately ill or convalescing infants, possibly requiring brief respiratory support, and/or stabilization of more preterm or ill infants
- **LEVEL III**
  NICU: Level II capabilities plus comprehensive care for infants ‹32 weeks and ‹1500 grams, including sustained life support, full range of respiratory support and advanced imaging services
- **LEVEL IV**
  Regional NICU: Level III capabilities plus surgical services, medical and surgical subspecialists, pediatric anesthesiologists, transport and outreach education

Non-clinical staff

These include staff members providing support services or related care for preterm or sick infants and their families who are being cared for in the NICU and related areas, or for those who are pregnant and known to be at risk of giving birth to preterm or sick infants; includes those staff members who have contact with NICU infants/families in some aspect of their work.

Nursing supplementer

A method for supplementation by using a feeding tube device with a bag/bottle to hold milk connected to fine tubing secured to the breast/nipple, delivering supplementation to the infant at the same time as he/she suckles the breast (e.g., SNS, Lact-Aid).

Pacifier
Also called dummy or soother; nipple/teat shaped device for non-nutritive sucking.

Parent as primary caregiver
Role of the parent (mother/father) or significant other who provides an infant with nearly all caregiving (exceptions may apply related to safety/liability for certain medical/technical procedures).

Parent(s)
Those individuals who take primary legal responsibility for the infant's care; may include biological parents, adoptive parents, legal parents if surrogacy is involved, other designated persons who are or will be helping with the care of the infant while in the NICU and/or after discharge.

Paternal role
Role of the parent who is partner to the mother; see definition of father/mother.

Patient care areas associated with the NICU
Typical areas: birthing or labor & delivery units, antenatal units, maternal-fetal medicine clinics, high risk OB units, mother/baby units, NICU parent support areas, milk pumping/expression areas, milk/feeding preparation areas; will vary, depending on the facility.

Postmenstrual age
Corresponds to gestational age plus chronological age.

Postnatal age
Corresponds to the chronological age or time elapsed from birth.

Pregnant women
Individual who will give birth to the infant.

Printed materials/ information
Includes written, pictorial or other type of formats designed to be easily understood by the families served by the facility.

Skin-to-skin
Skin-to-skin contact or skin-to-skin care refers to contact between the infant and his/her mother (parent who birthed the infant). In the case of incapacitation or unavailability of the mother/birth parent, another adult such as the infant's father/other parent or grandparent may hold the infant skin-to-skin. When initiated immediately after birth, the infant is completely dried and placed naked against the mother's/birth parent's naked ventral surface. The infant may wear a diaper and/or a hat, but no other clothing should be between the parent's and infant's bodies. The dyad is then covered with a warm blanket, keeping the infant's head uncovered. STS can be intermittent (generally at least an hour at a time) or continuous. STS should be encouraged throughout the infant's NICU stay and after discharge until at least term adjusted age. In this document, the term skin-to-skin refers generically to this kind of care or holding that is either intermittent or continuous, whether or not it includes access to direct breastfeeding. (See definitions for Kangaroo Care and Kangaroo Mother Care.)

Stable infant
Infants without dramatic/unpredictable changes in heart rate, respiration or oxygen saturation outside of the normal ranges associated with routine care and handling.

Supplementation
Feeding by other means than at the breast; can consist of the mother's own milk, donor human milk or formula.

Tactile contact
Therapeutic intervention provided to the infant using touch, containment or "hand swaddling", stroking, massage, holding, etc.

Training
Applying knowledge and learning how to perform a specific skill, task or behavior; typically requires simulation, clinical skills practice, counseling, rehearsal or competency verification.

Transport
Moving a patient from one location to another. Antenatal/Maternal transport should be considered when possible, so that the preterm or at-risk infant is born in or closest to the best facility to provide anticipated care requirements. Within a facility, safe infant transport may be accomplished in KMC position. When an infant is moved from one facility to another, a designated transport team with specialized equipment should be used.

APPENDIX A: KEY INFANT FEEDING DATA TO COLLECT AND MONITOR IN THE NICU

Data specifically collected and monitored for these steps may be combined with data from internal administrative or quality improvement activities or data reported to external agencies such as the Joint Commission or Vermont Oxford Network.

STEP 1

FACILITY POLICIES

- See "Preliminary Policy Review" in Appendix B.
- Code compliance: assess and document the actions the NICU has taken to assure adherence to applicable aspects of The International Code in the NICU including the cost for feeding supplies, formula and fortifier purchases.

STEP 2

STAFF TRAINING AND COMPETENCY

- Document the dates, content of training and assessment of competence for each staff member providing care or involved in parent/patient contact in the NICU (as defined in Appendix C).
- Document education provided to other staff or community health workers.

STEP 3

INFORMATION TO PARENTS ANTENATALLY OR ON ADMISSION TO NICU

- Prepare a sample of all Infant feeding-related education and materials provided during pregnancy to patients/families at risk of having an infant admitted to the NICU and to parents as soon as infants are admitted to the NICU (see list of key topics in Appendix D).

STEP 4

SKIN-TO-SKIN CARE

- Document in the medical record the timing and duration of skin-to-skin contact throughout the infants' stay in the NICU and the infants' response.

STEP 5

SUPPORT WITH BREASTFEEDING

- Document in the medical record the education and assistance given to families concerning milk expression, positioning and latch, breastfeeding, evaluation of milk transfer/effectiveness of feeding, fortifier use, as well as mothers'/families' feeding-related decisions.

STEP 6

SUPPLEMENTATION

- Document in the medical record the times, amounts and types of feedings (including formula use) and fortifiers/additives given to infants.
- When infants have been given other than human milk, document in the medical record the reasons, the counseling provided to families and their feeding decisions.

STEP 7

FAMILY CONTACT AND INVOLVEMENT IN INFANT CARE

- Document in the medical record the parents' and other designated support persons' participation in caregiving.

STEP 8

RESPONSIVE FEEDING

- Document in the medical record the dates, frequency and duration of oral feedings and types of milk (mothers' milk, donor milk, breastmilk substitutes) and fortifiers or other additives.

STEP 9

USE OF BOTTLES, ARTIFICIAL NIPPLES, PACIFIERS AND NIPPLE SHIELDS

- Document in the medical record the timing and reasons for use of bottles, artificial nipples, pacifiers and nipple shields.

STEP 10

CARE AFTER DISCHARGE

- Maintain a collection of resources and guidance provided to families at the time of the infants' discharge concerning available post-discharge infant feeding support.
- Keep records of any efforts the NICU has made to develop its own specialized in-house breastfeeding/infant feeding support services (e.g. support groups, peer mentors, lactation clinic, home health services, helpline, etc.) for NICU graduates and their parents, or to foster development of these resources in the community.

ADMINISTRATIVE INFORMATION:

Date policy was first adopted	NO ◯	YES ◯
Frequency with which policy will be reviewed and updated (at least annually)	NO ◯	YES ◯
Date of last revision	NO ◯	YES ◯
Staff member(s) responsible for reviewing and updating the policy	NO ◯	YES ◯
Health care professional(s) responsible for implementing the policy	NO ◯	YES ◯
Timeframe for new staff orientation to the policy	NO ◯	YES ◯
Process for orienting new staff to the policy	NO ◯	YES ◯
Availability/accessibility of the policy for all clinical staff to reference	NO ◯	YES ◯
Reference list	NO ◯	YES ◯

GUIDANCE ON THE FOLLOWING TOPICS:

Staff education	NO ◯	YES ◯
Patient/family education	NO ◯	YES ◯
Skin-to-skin eligibility or contraindications	NO ◯	YES ◯
Breastfeeding eligibility or contraindications	NO ◯	YES ◯
Process for obtaining breast pumps	NO ◯	YES ◯
Use of donor human milk	NO ◯	YES ◯
Storage and handling of human milk to ensure safety	NO ◯	YES ◯
Fortification protocols	NO ◯	YES ◯
Code compliance	NO ◯	YES ◯

APPENDIX C: A BRIEF GUIDE FOR DEVELOPING EDUCATION AND TRAINING PLANS FOR NICU STAFF

NICU STAFF WHO SHOULD RECEIVE EDUCATION AND TRAINING

Full- or part-time staff members (including per diem staff) from all disciplines who are involved in providing care in the NICU in any capacity ideally would receive some education and training. Those who provide direct care related to feedings and feeding decision-making should have the most extensive education and training. The NICU Manager/Director should identify the staff members (full- and part-time), physicians, nurses, other health care providers and students involved in the care of NICU infants and their families who will receive training. The training plan should specify how the determination is made concerning which part-time staff members should be trained. For example, it could specify that all staff who work a certain number of times per year in the NICU or related areas, or who are routinely expected to be available to float to the NICU, will receive training.

OTHER HOSPITAL AND CLINIC STAFF WHO SHOULD RECEIVE EDUCATION AND TRAINING

Full- or part-time staff members who are involved in the care of families whose infants are in NICU should receive some education and training. Those who provide direct clinical care related to initiation of milk, supplying milk for infants, the parents' role in feeding the infants, etc. should receive the most comprehensive education and training commensurate with their roles and responsibilities. Those who interact with families of infants in NICU but who are not specifically responsible for clinical care related to initiation of lactation and breastfeeding should have education customized for their roles and responsibilities.

TEMPORARY PERSONNEL, STUDENTS AND INTERNS WHO SHOULD RECEIVE INTRODUCTORY EDUCATION AND TRAINING

Temporary staff, trainees, interns or students of ANY discipline should also have an appropriate introduction to the Baby-Friendly principles and infant feeding policies and practices as they relate to the specific roles and responsibilities of the temporary staff, trainees, students or interns. This could be provided by their clinical educators, mentors or supervisors, or could be provided by members of the lactation service staff or the NICU staff who have expertise in how the trainees' roles relate to implementation of the NICU infant feeding policy. Alternatively, arrangements could be made for the temporary staff, trainees, interns or students to join training sessions being held for regular staff, when convenient and appropriate, considering their roles and responsibilities.

MULTIDISCIPLINARY TEAM EDUCATION AND TRAINING

Staff members from a variety of disciplines could be brought together for at least some basic parts of the educational program. Multidisciplinary team-oriented work on problem solving and implementation is useful for topics where various disciplines have overlapping responsibilities.

EDUCATION AND TRAINING SHOULD BE COMMENSURATE WITH STAFF ROLES AND RESPONSIBILITIES

The topics should cover the skills and knowledge needed for the particular group to support both breastfeeding and non-breastfeeding families with infants in the NICU related to each of the NICU 10 Steps as well as the Guiding Principles and the International Code of Marketing of Breast-milk Substitutes. All staff members should be well versed in cultural humility, diversity, equity and inclusion, appropriate safeguards to privacy and respect for each individual's right to make informed and autonomous decisions.

KEY TOPICS FOR EDUCATION OF FULL-TIME NICU STAFF

TEN STEPS

1. The unit's infant feeding policy and protocols
2. Knowledge, skills and competencies required to implement the feeding policy and protocols
3. Topics and strategies for family education/counseling (Refer to Appendix D for Parent Education)
4. Recommendations and rationale for safe skin-to-skin (STS): positioning, supports, transfers, contraindications/exclusions
5. Benefits, rationale and techniques for assisting with early initiation of feeding at breast if possible, and/or milk expression (manual expression, massage, use of pump), lactation risk factors; prevention, recognition and management of common breast-feeding/lactation-related problems
6. Rationale and methods for preferential/maximal feeding with mothers' own milk, beginning with colostrum oral care; use of donor milk, substitutes, fortification and/or nutritional additives/supports when needed; safe labeling, handling, storage and order of use of human milk and substitutes
7. How to facilitate maximized maternal/family presence and involvement; justifiable/necessary exceptions

continued next page

8. `Rationale and mechanisms for evaluating and responding to infants' feeding readiness, tolerance/effectiveness, progression of oral feedings; rationale and strategies for initiation of non-nutritive suck at breast and first oral feedings at breast
9. `Appropriate use and counseling regarding pacifiers, alternative feeding methods (including bottles), assistive devices (such as nipple shields)
10. Parent education/counseling strategies regarding continued breastfeeding progression, NICU discharge feeding plans, breastfeeding duration, follow-up care and community resources/supports

GUIDING PRINCIPLES

1. Rationale for individualization of care based on mothers'/families' needs and situations
2. Principles, rationale, value of family-centered care
3. Importance and value of maximizing continuity of care

THE CODE

- Rationale and importance of The Code
- Preventing, recognizing and addressing violations, including vendor interactions and research considerations

CULTURAL HUMILITY, DIVERSITY, EQUITY, INCLUSION

- Cultural identity across racial, ethnic, gender groups
- Perspectives of diverse constituency groups, local experts on particular groups specific to the community
- Identification of personal current or previous unconscious biases and misinformation
- Recognition of personal, interpersonal, institutional, structural and cultural barriers to inclusion
- Effects of historical and contemporary exclusion and oppression of minority communities
- Health inequities within perinatal care and health outcomes
- Reproductive justice
- Power dynamics and organizational decision making
- Strategies for communicating more effectively across groups
- Measures to decrease implicit bias at the interpersonal and institutional levels

DEVELOPMENT OF EDUCATION AND TRAINING PLANS

A plan should be developed for each set of staff that will receive the same type of education and training. Each plan should include the following information:

1. The title of the education and training plan
2. Types of staff members or specific groups to be educated and trained
3. Timeframe for initiation of education and training of new staff
4. Individual(s) responsible for planning the staff education and training
5. Individual(s) responsible for conducting the staff education and training
6. Purpose or objectives of each course or session
7. Content, curricula or list of topics/outlines of topics to be covered
8. Types of education sessions (groups or individual)
9. Education sites/venues (classrooms, labs, clinical care area)
10. Educational strategies or methodologies to be used for didactic education, clinical skills training, competency verification
11. Schedule including required number of education hours for each discipline and required hours of supervised clinical infant feeding/breastfeeding support experience in the NICU
12. Method(s) for recording and documenting attendance at training sessions
13. Method(s) for verifying staff competencies and evaluation of the education and training program outcomes
14. Rules for acceptance of training acquired prior to employment or process used to verify previously acquired knowledge, skills and competencies

REQUIRED LENGTH OF EDUCATION AND TRAINING

NICU nurses are required to have the basic BFHI 20-hour training or whatever is required for staff caring for well breastfeeding infants and their families, plus some material specific to the NICU infant population, such as KMC care, safe transport of mother/infant in KMC care, evaluation of feeding readiness, effectiveness and tolerance, etc. Physicians, similarly, would be expected to have the same requirements as for BFHI plus some additional material specific to NICU. In some settings, there may be the option for having a course that is already NICU-specific.

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ASSESSING KNOWLEDGE, COMPETENCE AND SKILLS, EVALUATION OF EDUCATIONAL PROCESSES

There should be a system in place for evaluating staff knowledge, skills and competencies. Evaluation strategies to consider could include:

- Self-evaluation
- Written or computer-based testing of knowledge
- Case studies/analysis
- Use of skills checklists or other competency assessments to analyze skills/ performance and competence
- Observation by peers or colleagues either in person or by review of video recordings, role-play, rehearsal, simulation, competency verification
- Medical record review; supervisor evaluation and feedback
- Parent/family feedback

FREQUENCY OF EDUCATION AND TRAINING

The frequency of staff education, training and competency verification and when it is offered during orientation of new staff should be scheduled to meet the recommendation of having staff receive training within the first six months of employment in the NICU. On-going education, annual continuing education and/or competency verification and/or periodic updates for each category of staff members should be scheduled.

OFFERING OR SHARING EDUCATION AND TRAINING WITH REFERRAL SOURCES

If the NICU receives referrals or transports of infants from other facilities, the NICU could offer to share education and training to those sites caring for mothers whose infants may be referred or transported to the NICU. Video conferencing, recordings, webinars and outreach education dissemination using models like train-the-trainer may allow for efficient participation. This can facilitate effective partnerships between regular referral sources and the NICU. Educational sharing with referral sources could be customized to the specific topics their staff needs. For example, a community hospital where a mother may birth a preterm infant who must be transported to the NICU needs at least the preparation for initiation of milk expression. High risk OB clinic staff may need to focus on antenatal education.

APPENDIX D: A BRIEF GUIDE FOR DEVELOPING PLANS FOR NICU PARENT EDUCATION FOCUSED ON INFANT FEEDING ISSUES

RATIONALE FOR PARENTAL EDUCATION

Parental education is one of the most important components of successful breastfeeding and optimal infant outcomes. Educating the parents and families on breastfeeding yields enormous benefits to infants and mothers and should be considered a valuable investment of staff time and effort.

RECIPIENTS OF EDUCATION

Parents and others designated by them who will be involved in caring for the infant (see definition of family).

TIMING OF EDUCATION

Education sessions, in some cases, may be focused on what the parents need to know regarding infant feeding at a specific stage in the continuum of care (antenatally, on admission to the NICU, at discharge). In other cases, education sessions may be focused on a particular topic such as milk expression, formula feeding, etc. NICUs can organize the education plans to best meet each family's needs as long as key topics are covered.

EDUCATIONAL CONTENT

Education should be delivered in culturally and linguistically appropriate ways. Materials should be representative of the ethnicities and cultures of patients in the facility and provided in the language most commonly spoken by patients. Develop and disseminate robust and culturally relevant local resource lists.

Specific educational content to consider at key stages in the continuum of NICU care:

TIMING	POSSIBLE TOPICS/CONTENT
Antenatally, especially for those at risk of delivering infants admitted to the NICU	▪ Previous knowledge and experience ▪ Potential contraindications/risk factors ▪ Possible impact of labor and delivery, medical conditions, medications, diet, fluid intake ▪ Rationale for human milk for the infant in NICU, benefits for mother and infant, preference for mothers' own milk; availability, indications and potential use of pasteurized donor human milk ▪ Processes and options for supplying milk/breastfeeding; resources for equipment, help, support ▪ Importance of STS; early initiation of breastfeeding (positioning and attachment), based on infant cues ▪ Parent access to infant/staff caring for infant, importance of parent presence; role of family in care of infant in the NICU

NICU admission and throughout the NICU stay	▪ Skin-to-skin (STS): duration/frequency, strategies; impact on infant, mother/family and milk production
	▪ Milk expression:
	  ▪ Initiation: time-sensitivity; value/importance of early milk expression
	  ▪ Techniques: massage, hand expression, use of pump (access to appropriate pump for home use), frequency and duration of pumping sessions, comfort measures, expected volume, changes in milk production and target amounts, need for and availability of help
	  ▪ Safe storage and handling of milk, identification/labelling, order of use
	▪ Infant feeding:
	  ▪ When/how mothers' own milk is used, volume needed over time, additives/alternatives/supplements
	  ▪ Breastfeeding: position/latch, techniques/aids/devices; evaluation of quality/tolerance

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TIMING	POSSIBLE TOPICS/CONTENT
NICU discharge	▪ Feeding frequency, volumes, methods, techniques/devices, supplements/additives, vitamins/medications ▪ How to modify milk expression/pumping to protect milk production ▪ Signs of problems, when/how to access appropriate follow up care and support
Post-NICU (to extent the facility provides follow-up care)	▪ Feeding evaluation; reinforce, address concerns/problems, progression/advancement ▪ Impact of feeding on infants' recovery, progress, weight gain, growth and development ▪ Further follow-up and access to post-NICU specific community supports and resources

EDUCATIONAL METHODS AND COUNSELING STRATEGIES

Various educational and counseling strategies may be utilized depending on the topic, the individual learner, the skills of the caregiver and the environment as well as the condition and prognosis of the infant. Consideration should be given to each mother's/parent's individual circumstances (age, education, parity, ethnicity/cultural beliefs, availability, etc.) and family needs. Counseling strategies should be customized in regard to relative body placement of parent and care provider, use of space, gestures, eye contact, facial expression, touch, volume and pace of speaking, with culturally-sensitive adjustments. Actively engaging families in discussion of their priorities, concerns and questions allows each facility to modify their systems to best meet the needs of those for whom they provide care. Some topics may be addressed in groups such as parent classes or support group meetings. Other topics may require more privacy and individualization (e.g., techniques to use during feedings at the breast, specialized devices, use of breast milk additives/substitutes). Feeding education should be incorporated with other parent/family education in order to streamline the entire education process into a coherent whole.

Depending on the length of the infant's stay in the NICU, this education might be an ongoing process over an extended time or might be completed in a few days. Repeated opportunities for education and counseling will be available when the parent(s) and family are with the infant frequently and for extended time periods. Staff will need to creatively adapt when the family's availability is limited, optimizing communication strategies and using audio-visual and printed educational materials.

EDUCATIONAL ASSESSMENT AND EVALUATION

Every facility should have established methods for identifying the learning needs, styles and preferences of the individuals receiving education, as well as evaluation and documentation of education outcomes. These same methods should be employed in the NICU in regard to infant feeding education.

DESIGNING EDUCATION PLANS

Each education plan should include the following information:

1. Focus of the education: parents or significant others, family members and/or designated caregivers
2. Timing of the education
3. Staff member(s) responsible for planning and conducting the education
4. Educational content/topics and objectives
5. Educational strategies (methods, group/individual)
6. Length/schedule of the educational sessions
7. Education venue (e.g., patient bedside, parent education room, etc.)
8. Method(s) for documenting attendance/participation
9. Method(s) for evaluation (with consideration about what is useful to require and/or reasonable to expect)

APPENDIX E: ACTION PLAN TEMPLATE FOR IMPROVING NICU INFANT FEEDING POLICIES AND PRACTICES

Name of the NICU and Facility : _____

Date Prepared: _____ Prepared by: _____

NICU STEP AND RECOMMENDED PRACTICES	OBJECTIVE Targets	RATIONALE	TASKS	PERSONS RESPONSIBLE Collaboration	TIME FRAME Target Dates	EVALUATION STRATEGIES

GUIDANCE FOR ACTION PLAN DEVELOPMENT

ONCE YOUR TEAM HAS COMPLETED THE NICU PRACTICES REVIEW, LOOK OVER THE RESULTS WITH YOUR TEAM. IDENTIFY PRIORITY AREAS FOR CHANGE BY:

- Reviewing the ratings for each of the Steps and Recommended Practices.
- Identifying those where the scores for your NICU are weakest.
- Determining which Step(s) you might work on first.

SELECT TWO OR THREE STEPS/RECOMMENDED PRACTICES TO FOCUS ON FIRST, BASED ON WHERE CHANGES WOULD:

- Be easiest to make ("low-hanging fruit").
- Be important to make before tackling other issues.
- Mesh with other on-going quality improvement projects.
- Have the greatest impact.

WORK TOGETHER TO DEVELOP AN "ACTION PLAN", USING THE TEMPLATE (TABLE) ON PAGE 92, OR ANOTHER THAT IS ACCEPTABLE TO USE IN YOUR FACILITY.

- List the Step/Recommended Practices for improvement.
- Draft the objectives (targets) and rationale for the changes you want to make in this area. There may be more than one; use additional rows as needed.
- Decide on the tasks that will be necessary to reach each of the objectives. If multiple tasks are required, adjust the table to list each task on a separate row.
- For each task, identify and list the key persons/groups responsible for completing it, as well as other individuals/groups who will be impacted by the change or who may need to participate in the change process (collaborators).
- Include timeframe or target dates.
- Define the evaluation strategies your team will use to determine when/whether the objectives have been met.

Your team can use your "Action Plan" to guide quality improvement processes.

Develop another "Action Plan" to focus on additional Steps/Recommended Practices.

Your plans may need revisions as they are implemented in order to remain realistic or to adjust for unexpected challenges.

APPENDIX F: BABY-FRIENDLY USA NICU TASK FORCE (2013-2017)

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