Practice Paper of the Academy of Nutrition and Dietetics:

Promoting and Supporting Breastfeeding

March 2015

ABSTRACT

It is the position of the Academy of Nutrition and Dietetics that exclusive breastfeeding provides optimal nutrition and health protection for the first 6 months of life and that breastfeeding with complementary foods from 6 months until at least 12 months of age is the ideal feeding pattern for infants. Breastfeeding is an important public health strategy for improving infant and child morbidity and mortality, improving maternal morbidity, and helping to control health care costs. This practice paper was created to provide registered dietitian nutritionists (RDNs) and nutrition and dietetics technicians, registered (NDTRs) with guidelines and resources to promote and support breastfeeding. The position and practice papers should be used together to address the important contribution breastfeeding makes to the health of women, children, and infants and the future of our nation. While RDNs/NDTRs practice in a variety of settings including direct patient care, education, industry, and research, it is essential that all RDNs/NDTRs possess a minimum level of breastfeeding competency including basic knowledge, skills, and attitudes to provide appropriate patient care (see Figure 1). The United States Breastfeeding Committee and the Surgeon General’s Call to Action to Support Breastfeeding recommend that all health professionals possess core competencies to integrate breastfeeding care into current practice to provide effective and comprehensive services to mothers, children, and families.2,3

Breastfeeding promotion by health care professionals to educate families, employers and policy makers is needed to increase awareness of the important role of breastfeeding in improving health and reducing health care costs. Families need support to reach their breastfeeding goals. Registered dietitian nutritionists (RDNs) and nutrition and dietetics technicians, registered (NDTRs) are well suited to promote and support breastfeeding.

OVERVIEW OF PRACTICE

Practice Settings

There are a variety of practice settings where RDNs and NDTRs may come in contact with pregnant or lactating mothers or breastfeeding infants and children. It is essential that all RDNs/NDTRs possess a minimum level of breastfeeding competency including basic knowledge, skills, and attitudes to provide appropriate patient care (see Figure 1). The United States Breastfeeding Committee and the Surgeon General’s Call to Action to Support Breastfeeding recommend that all health professionals possess core competencies to integrate breastfeeding care into current practice to provide effective and comprehensive services to mothers, children, and families.2,3

RDNs/NDTRs may encounter breastfeeding families in their work in an acute care hospital setting. This includes patient populations in the neonatal, pediatric, cardiac intensive care units, general pediatrics, and subspecialties. In addition to pediatric nutrition, RDNs/NDTRs work with breastfeeding mothers in an acute care setting either pre- or post-natally, including mothers with gestational diabetes, hypertension, eating disorders, hyperemesis, preeclampsia, or birth complications. RDNs/NDTRs’ specialized training can help pregnant and breastfeeding mothers make healthy food choices and to understand the role of maternal nutrition as related to lactation.

Breastfeeding families are also seen in a variety of ambulatory settings including hospital clinics; public...
health centers; Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) clinics; and private practice. RDNs/NDTRs provide anticipatory guidance for normal infant and maternal nutrition in the form of education and counseling to ensure that nutrition, health, and growth are optimized. The expertise of RDNs/NDTRs is particularly useful in areas related to maternal nutrition such as appropriate weight gain during pregnancy, weight loss after birth, and adequate nutrient intake with special attention to iron, vitamin D, iodine, zinc, protein, choline, and docosahexaenoic acid. RDNs/NDTRs work with mothers with special dietary needs including vegan mothers, mothers with type 1 and 2 diabetes, mothers with a history of bariatric surgery or eating disorders, and mothers on restricted diets. RDNs/NDTRs work with families whose children require medical nutrition therapy due to nutrition-related problems such as failure to thrive, food allergies, metabolic disorders, swallowing dysfunction, feeding intolerances, and surgery affecting nutritional intake.

RDNs/NDTRs also work in areas not directly related to patient care, such as education, research, pharmaceuticals, workplace wellness, and public policy. They provide population-based services at the local, regional, or national level, or engage in program planning, development, implementation, and evaluation. They serve as consultants to Head Start programs, child care centers, schools, school-based health clinics, home health programs, and other health care programs. RDNs/NDTRs teach in colleges, universities, and cooperative extension services and conduct research in academic, public health, and community settings. RDNs/NDTRs also provide leadership and training in food safety, emergency preparedness, food security, and sustainable food and water systems.

All RDNs/NDTRs, regardless of practice setting, need to have basic knowledge in order to fully promote and support breastfeeding. A thorough understanding of the anatomy and physiology of the lactating breast is essential. At a minimum, RDNs/NDTRs need to know the importance of exclusive breastfeeding and to understand the role of breastfeeding and human milk in maintaining health and disease prevention (see position paper).1 University and college courses preparing students to become RDNs/NDTRs should include a thorough discussion of the implications of infant feeding choices on the development of disease and how promotion and support of optimal breastfeeding practices can favorably impact maternal and child health outcomes.

World Health Organization (WHO) International Code of Marketing of Breast-milk Substitutes

The International Code of Marketing of Breast-milk Substitutes was adopted in 1981 by the World Health Assembly to promote safe and adequate nutrition for infants by the protection and promotion of breastfeeding and by ensuring the proper use of human milk substitutes when these are necessary. There is ample evidence that health workers are influenced by marketing practices of companies manufacturing human milk substitutes that in turn influence mothers’ behaviors related to infant feeding. These marketing practices, especially providing free and low-cost human milk substitutes to hospitals and clinics, are harmful to infants’ health by increasing the likelihood that they will

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1. Demonstrate understanding of:
   a. anatomy and physiology of the lactating breast and milk production
   b. the importance of exclusive breastfeeding for the first 6 months and continued breastfeeding until at least 12 months of age
   c. the role of breastfeeding and human milk in maintaining health and disease prevention

2. Assess:
   a. infant nutritional status by obtaining a detailed infant nutrition history
   b. infant growth patterns with an understanding that normal growth is based on the healthy, breastfed infant
   c. maternal nutritional status and health history including pregnancy weight gain and current dietary intake

3. Provide:
   a. families with evidence-based information on breastfeeding and human lactation
   b. anticipatory guidance for normal infant nutrition including recognizing early infant feeding cues and progression of feeding behavior
   c. evidence-based information on maternal nutrition

4. Utilize effective education and counseling skills in a culturally competent manner

5. Evaluate challenges to breastfeeding and develop strategies for improvement

6. Plan and implement nutrition interventions to support the breastfeeding family

7. Recognize when to refer to an International Board Certified Lactation Consultant for complex breastfeeding problems

8. Participate in professional organizations that support breastfeeding

9. Establish collaborative relationships with other health professionals to support breastfeeding

10. Demonstrate ethical behavior when dealing with companies

Figure 1. Competencies recommended for registered dietitian nutritionists and nutrition and dietetics technicians, registered to support and promote breastfeeding. Based on The Surgeon General’s Call to Action to Support Breastfeeding (reference 2) and the United States Breastfeeding Committee Core Competencies in Breastfeeding Care and Services for All Health Professionals (reference 3).
be given human milk substitutes that may negatively affect optimal feeding practices.

The choice by RDNs/NDTRs to adhere to the principles and aims of the WHO Code demonstrates a commitment to promote and support breastfeeding. The WHO Code specifically calls on RDNs/NDTRs as health care workers to comply with provisions of the WHO Code. Supporting breastfeeding and abiding by the WHO Code means that RDNs/NDTRs should ensure that there are no donations of free or subsidized supplies of human milk substitutes in any part of the health care system, including maternal, well-baby, and pediatric care and neonatal intensive care units. This applies to all government, non-government, private organizations, or institutions as well as private practice. The WHO Code covers all human milk substitutes including any food or drink given to infants under 6 months of age who should be exclusively breastfeeding as well as follow-up feedings given to children 6 months to 2 years. According to the WHO, breastfeeding is recommended until 2 years and any milk feeding given during this time is a human milk substitute and thus covered by the WHO Code. The prohibition applies to all types of human milk substitutes, including those for special medical purposes. Human milk is the medically indicated feeding of choice for almost all pre-term and low-birth-weight infants. Obtaining free supplies encourages feeding of human milk substitutes, which further threatens their survival and healthy development. Moreover, once free supplies are available, it is extremely difficult to control their distribution and misuse.

One of the main principles of the WHO Code is that health care facilities should not be used for the purpose of promoting alternative infant feeding including bottles and nipples. The WHO Code states that these items need to be obtained through “normal procurement channels.” In other words, they need to be purchased the same way other supplies are purchased. It is understood that there will always be a small number of infants who will need to be fed with human milk substitutes. Any suitable replacement should be procured and distributed as part of the regular inventory of food and medicine, and not be provided to the institution free of charge.5,6

Conflicts of Interest
RDNs/NDTRs should be aware of real and perceived conflicts of interest related to commercial sponsorship of educational activities.7 In dealing with the public, RDNs/NDTRs are in a position to influence families to use certain products. Companies that are associated with educational activities for RDNs/NDTRs might influence the opinions of RDNs/NDTRs resulting in bias when providing nutrition recommendations. Companies are for-profit entities that develop, produce, market, or distribute products by investing resources while maximizing value for shareholders. Clinicians need to be independent and objective in dealing with companies and minimize actual and perceived conflicts of interest. RDNs/NDTRs should meet high ethical standards in their relationships with companies, in particular with respect to the Academy/Commission on Dietetics Registration Code of Ethics, Responsibilities to the Profession, #15 and #18.8 While it is not strictly forbidden to accept gifts, the Code of Ethics states: “…the test for appearance of impropriety is whether the conduct would create in reasonable minds a perception that the dietetics practitioner’s ability to carry out professional responsibilities with integrity, impartiality, and competence is impaired.”

RDNs/NDTRs may have interactions with companies by receiving charitable donations, applying for grants to support program activities, and other related transactions. Acting with integrity and transparency will help maintain actual and perceived independence and ultimately improve the care provided. Furthermore, the Code of Ethics Principles #12 and #13 state that decisions on clinical practice should be based on evidence-based principles and not on subjective determinants such as familiarity, friendship, favors, and finance that are associated with ethical failure.9

Clinical Skills
RDNs/NDTRs should provide mothers with evidence-based information on breastfeeding and human lactation, and should offer strategies to help address problems and concerns that are related to establishing and maintaining lactation. Mothers should be taught how to recognize when their infant is latching well and adequately transferring milk during a feeding. RDNs/NDTRs are the experts in areas related to infant feeding practices, normal infant feeding, and complementary feeding and they possess the unique understanding of maternal nutrition through the lifecycle as it applies to adolescence, pregnancy, and lactation.

RDNs/NDTRs working directly with families need to be able to prepare families with realistic and appropriate expectations for breastfeeding, and to follow up in a culturally competent manner. Pertinent nutrition-related information should be communicated to the lactation consultants and health care providers to provide optimal nutrition while supporting breastfeeding. RDNs/NDTRs should be aware of limitations of their expertise in breastfeeding care and refer to International Board Certified Lactation Consultants (IBCLCs) when appropriate.

When working with patients, RDNs/NDTRs should first obtain thorough maternal and infant histories. This includes maternal health, history of breast surgery, nutritional status, reproductive and breastfeeding history, and use of medications and substances. Maternal medications should
be checked using a reliable reference for compatibility with breastfeeding (see Figure 2). Knowing the mother’s previous experience with breastfeeding and lactation, whether positive or negative, provides valuable information for counseling and education. Information on the birth history, gestational age, birth weight, and infant feeding history should be obtained. Included in the comprehensive history are details related to feeding mode (breast, bottle, tube feeding, or a combination), and type of milk (human milk, fortified human milk, mixed human milk and human milk substitutes, shared milk from another mother, or pasteurized donor milk). Nutrition history includes whether or not the infant or child receives complementary feedings and when supplementation, if any, was started. This should be obtained either from the medical record or by interviewing the parents. Challenges to breastfeeding such as painful or sore nipples, low milk supply, oversupply, forceful let-down, or poor latch should be discussed. Mothers should be asked about the use of devices such as nipple shields, supplemental feeding systems, or infant scales for pre- and post-weighing.

It is important to use effective counseling skills and techniques including motivational interviewing. These skills should be familiar to RDNs/NDTRs in clinical practice as they are a basic component of nutrition counseling. Counseling techniques such as active listening, reflecting, asking open-ended questions, validating, being non-judgmental, displaying empathy, and developing rapport with families will assist RDNs/NDTRs to effectively communicate with breastfeeding families. Breastfeeding counseling during prenatal care should account for the many questions mothers have. Mothers may be insecure in their ability to breastfeed making them more susceptible to pressure from family, friends, and health care professionals. Feelings of self-doubt and lack of self-efficacy may conflict with the desire to breastfeed and increase the likelihood of feeding human milk substitutes. RDNs/NDTRs can correct wrong information and provide accurate information in a caring, positive manner without criticism.

Mothers need practical help to assist with breastfeeding challenges. Mothers can become discouraged and wean prematurely without proper information. RDNs/NDTRs can listen and show mothers that their feelings are understood and accepted, while at the same time providing praise and information without judgment. RDNs/NDTRs should be knowledgeable about equipment available such as breast pumps and supplemental feeding devices used to support breastfeeding but also be ready to collaborate and refer to IBCLCs for complex breastfeeding situations.

Breastfeeding should be supported and preserved even under adverse or challenging conditions such as prematurity, allergies, chronic illness, and multiple births. RDNs/NDTRs specializing in pediatric nutrition work collaboratively with IBCLCs to fortify or modify human milk feedings for chronically ill or premature infants in order to optimize nutritional intake and to encourage direct feeding at the breast when feasible. Careful medical monitoring of infants on fortified human milk is required to assure balanced delivery of nutrients and to avoid toxic levels of vitamins A and D.

Breastfeeding premature infants after discharge to home should be encouraged. In theory, feeding premature infants nutrient-enriched human milk after discharge from the hospital would promote more rapid catch-up growth, particularly for infants unable to adequately feed ad libitum from the breast or who have increased metabolic and nutritional requirements. However a Cochrane review concluded that there is no convincing evidence that feeding premature infants after hospital discharge with multinutrient fortified human milk compared with unfortified human milk improves growth and neurodevelopmental outcomes during infancy. Long-term effects on growth and development have not been assessed. Premature infants can be breastfed in response to hunger and satiety allowing them to adjust their volume intake to meet their calorie needs. Infants fed higher nutrient density milk may reduce their intake and subsequently will not receive higher calories.

**ADVOCACY**

**Baby-Friendly Hospital Initiative (BFHI)**

RDNs/NDTRs should be familiar with and support the BFHI. Maternity care practices have a significant impact on breastfeeding success. The BFHI was established in 1991 by the WHO and United Nations Children’s Fund to assist hospitals in providing mothers the support, information, and skills needed to succeed in breastfeeding. In order to be certified as “Baby-Friendly” a hospital needs to comply with all Ten Steps to Successful Breastfeeding. The Ten Steps demonstrate excellence in breastfeeding support and guide the training of health care workers. As of October 2014, there were 202 Baby-Friendly hospitals and birth centers in the United States with 8.4% of all births occurring in Baby-Friendly facilities. RDNs/NDTRs should advocate that birth hospitals seek certification as Baby-Friendly. Several of the Ten Steps are particularly relevant to the dietetics profession and it is essential that RDNs/NDTRs become familiar with them. These include:

**Step 3: Inform all pregnant women about the benefits and management of breastfeeding.** RDNs/NDTRs working in prenatal clinics such as WIC or hospital affiliated prenatal care should provide breastfeeding information and written materials to pregnant women. This discussion needs to cover the importance of immediate and sustained skin to skin contact, early initiation of breastfeeding, rooming-
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<th>Organization</th>
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<tr>
<td>International Board of Lactation Consultant Examiners (IBLCE)</td>
<td>Establishes the highest standards in lactation and breastfeeding care worldwide and certifies individuals who meet these standards as International Board Certified Lactation Consultants (IBCLCs).</td>
<td><a href="http://www.iblce.org">www.iblce.org</a></td>
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<tr>
<td>Lactation Education Accreditation and Approval Review Committee</td>
<td>Establishes, maintains and promotes appropriate standards of quality for educational programs in lactation and provides recognition for programs that meet or exceed the minimum criteria.</td>
<td><a href="http://leaarc.org/">http://leaarc.org/</a></td>
</tr>
<tr>
<td>GOLD Lactation Online Conference</td>
<td>Online conferences for breastfeeding and lactation health care professionals.</td>
<td><a href="http://www.goldconf.com">www.goldconf.com</a></td>
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<tr>
<td>iLactation Online Breastfeeding Conferences</td>
<td>Online breastfeeding conferences.</td>
<td><a href="http://www.ilactation.com">www.ilactation.com</a></td>
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<tr>
<td>Breastfeeding USA</td>
<td>Provides training and education to become a breastfeeding counselor. Requires personal breastfeeding experience.</td>
<td><a href="http://www.breastfeedingusa.org">www.breastfeedingusa.org</a></td>
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<td>Childbirth and Postpartum Professional Association</td>
<td>Provides childbirth professionals training in breastfeeding education to become a certified lactation educator (CLE).</td>
<td><a href="http://www.cappa.net/get-certified.php?lactation-educator">www.cappa.net/get-certified.php?lactation-educator</a></td>
</tr>
<tr>
<td>Childbirth International</td>
<td>Provides breastfeeding counselor training to become a certified breastfeeding counselor (CBC).</td>
<td><a href="http://www.childbirthinternational.com/lactation/main.htm">www.childbirthinternational.com/lactation/main.htm</a></td>
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**Figure 2.** Resources for promoting and supporting breastfeeding. This information is intended to provide registered dietitian nutritionists and dietetic technicians, registered with resources for professional development and learning opportunities related to breastfeeding and human lactation. Internet resources include recommended websites for breastfeeding information for health care professionals and families.
| **Healthy Children's Center for Breastfeeding** | Provides lactation counselor training course to become a certified lactation counselor (CLC). | [www.healthychildren.cc/Education2.htm#Lactation](http://www.healthychildren.cc/Education2.htm#Lactation) |
| **Lactation Education Consultants** | Provides onsite programming through its certified lactation specialist (CLS) and Certification Cram/Review courses. | [www.lactationeducationconsultants.com/index.html](http://www.lactationeducationconsultants.com/index.html) |
| **Lactation Education Resources** | Provides online lactation management training to be eligible for IBCLC exam or to become a certified breastfeeding specialist. | [www.lactationtraining.com](http://www.lactationtraining.com) |
| **La Leche League International** | Helps mothers worldwide to breastfeed through mother-to-mother support, encouragement, information, and education. | [www.llli.org](http://www.llli.org) |
| **Internet Resources** | **Description**<br>**Academy of Breastfeeding Medicine**<br>Clinical protocols for professionals caring for breastfeeding mothers and infants. | **Source:**<br>[www.bfmed.org](http://www.bfmed.org) |
| **Evergreen Perinatal Education** | Provides quality education and consultation to organizations, health care professionals and individuals working with expectant and new families. | [www.evergreenperinataleducation.com/](http://www.evergreenperinataleducation.com/) |
| **Human Milk Banking Association of North America** | Professional association for supporters of nonprofit donor human milk banking. | [https://www.hmbana.org/](https://www.hmbana.org/) |
| **Infant Risk Center at Texas Tech University Health Sciences Center** | Evidence-based information about medications during pregnancy and lactation. | [www.infantrisk.com/category/breastfeeding](http://www.infantrisk.com/category/breastfeeding) Call center: (806)352-2519 |
| **Massachusetts Breastfeeding Coalition** | Free downloadable handouts for parents. | [http://massbreastfeeding.org/handouts](http://massbreastfeeding.org/handouts) |

**Figure 2 (continued).** Resources for promoting and supporting breastfeeding. This information is intended to provide registered dietitian nutritionists and dietetic technicians, registered with resources for professional development and learning opportunities related to breastfeeding and human lactation. Internet resources include recommended websites for breastfeeding information for health care professionals and families.
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<tr>
<td>National Breastfeeding Center</td>
<td>Provides expertise to corporations/employers, hospitals/health systems, health care providers and organizations to improve breastfeeding promotion and support.</td>
<td><a href="http://www.nbfcenter.com/">www.nbfcenter.com/</a></td>
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<tr>
<td>National Institute of Child Health and Human Development, National Institute of Health</td>
<td>Breastfeeding and breast milk resources and publications for patients and consumers.</td>
<td><a href="http://www.nichd.nih.gov/health/topics/breastfeeding/resources/Pages/patients-consumers.aspx#information">www.nichd.nih.gov/health/topics/breastfeeding/resources/Pages/patients-consumers.aspx#information</a></td>
</tr>
<tr>
<td>Pennsylvania Department of Health</td>
<td>Free handouts for parents on breastfeeding in English and Spanish.</td>
<td><a href="http://www.portal.state.pa.us/portal/server.pt?open=514&amp;objID=558213&amp;mode=2">www.portal.state.pa.us/portal/server.pt?open=514&amp;objID=558213&amp;mode=2</a></td>
</tr>
<tr>
<td>United States Breastfeeding Committee (USBC)</td>
<td>Independent nonprofit coalition of professional, educational, and governmental organizations working collaboratively to protect, promote, and support breastfeeding.</td>
<td><a href="http://www.usbreastfeeding.org/">www.usbreastfeeding.org/</a></td>
</tr>
<tr>
<td>DHHS</td>
<td>Business Case for Breastfeeding—a comprehensive program developed to educate employers about the value of supporting breastfeeding employees in the workplace.</td>
<td><a href="http://mchb.hrsa.gov/pregnancyandbeyond/breastfeeding/">http://mchb.hrsa.gov/pregnancyandbeyond/breastfeeding/</a></td>
</tr>
<tr>
<td>World Alliance for Breastfeeding Action</td>
<td>Sponsor of World Breastfeeding Week.</td>
<td><a href="http://www.waba.org.my">www.waba.org.my</a></td>
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in, baby-led or cue based feedings, frequent feedings to assure adequate milk production, proper positioning and attachment, exclusive breastfeeding for the first 6 months, the risks of giving human milk substitutes, and that breastfeeding continues to be important after 6 months when other complementary foods are given (see position paper).  

**Step 6: Give infants no food or drink other than breast milk, unless medically indicated.**  RDNs/NDTRS can make a difference when it comes to nutrition recommendations for infants. As members of the health care team, they can influence and educate providers that the optimal nutrition is exclusive human milk for the first 6 months of life. Hospital guidelines and clinical protocols for infant feedings should be evidence-based. Written instructions for families should not contain recommendations for feeding human milk substitutes, for scheduled feedings or for any other inappropriate feeding practices. Infants should be fed only human milk and there should be acceptable medical reasons for receiving anything else.  

Instructions provided to mothers on proper preparation of human milk substitutes should be in an area away from breastfeeding mothers. Mothers who choose not to breastfeed need to be informed of the risks and benefits of various feeding options and RDNs/NDTRS should assist mothers in choosing the most suitable option for their situation.  

**Step 8: Encourage breastfeeding on demand.**  RDNs/NDTRS can teach mothers how to recognize when their newborn infants are hungry by offering guidance on early feeding cues such as hands to mouth behavior; lip smacking; opening and closing mouth; sucking on lips, hands, or fingers; and tongue movement. RDNs/NDTRS should also teach mothers that young infants need to feed often and to feed until the infant is satisfied. Feeding times should not be scheduled nor restricted or limited in time.  

**Step 9: Give no pacifiers or artificial nipples to breastfeeding infants.**  Use of pacifiers and bottle nipples before breastfeeding is fully established may cause breastfeeding problems as sucking at the breast is different than sucking on an artificial nipple. As much as possible, infants should be sucking only on the breast while learning to breastfeed. Alternative methods of supplementing breastfeeding when medically indicated, such as cup feeding, syringe feeding, or using a supplemental feeding device at the breast may be advised. Whenever a bottle or pacifier is given to a breastfed infant, the RDNs/NDTRS should inform the mother of the risks.  

**Step 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or birth center.**  RDNs/NDTRS can provide prenatal breastfeeding education and post-natal support in the form of mother support groups or warm lines (phone counseling for non-urgent concerns). Follow-up support for mothers after discharge from the hospital can help mothers avert challenges that might lead to discontinuing exclusive breastfeeding or shortening the duration of any breastfeeding. This support is particularly important in the early weeks of breastfeeding when parents are adjusting to their new role and are often overwhelmed with caring for their newborn.  

**Breastfeeding in Emergencies**

Awareness of the life-saving properties of human milk in emergencies such as natural disasters, weather-related events, or acts of terror should inform decision making regarding offers of donations of human milk substitutes that have the potential to increase risk of morbidity and mortality. Infants who are fed human milk substitutes during emergencies are more vulnerable to diarrhea because of increased exposure to pathogens in powdered products or contaminated water. The availability of clean water for mixing human milk substitutes and for properly cleaning and sterilizing feeding bottles, nipples, and utensils is an important consideration. Immunity is enhanced when infants are fed human milk during emergencies and efforts to support breastfeeding should be encouraged. When appropriate, instructing mothers on techniques to relactate may increase available human milk and reduce the need to feed with human milk substitutes. Humanitarian aid that inappropriately distributes human milk substitutes can have a significant negative impact on infant and maternal health outcomes in emergencies. Women and infants are more vulnerable in times of emergencies and any form of aid should support rather than undermine the continuation of breastfeeding.  

**In the Workplace**

Employers can make sure that their workplace supports breastfeeding mothers by allowing sufficient break time for pumping and by advocating for clean, private areas where mothers can express their milk. The Business Case for Breastfeeding is an excellent resource for employers to help them create breastfeeding supportive workplace programs (see Figure 2).  

As patient advocates RDNs/NDTRS may need to work with insurance companies, durable medical equipment companies, and WIC to obtain necessary equipment such as breast pumps and infant scales to assure continued breastfeeding for mothers returning to work or school, or for mothers who depend on pumping to maintain or increase milk production.  

The Break Time for Nursing Mothers law was created when the Patient Protection and Affordable Care Act was signed into law on March 23, 2010. This federal law
In Child Care
RDNs/NDTRs may also be asked to serve as a resource for child care and daycare providers to help develop policies and guidelines on proper handling and storage of human milk. Human milk continues to be a source of both optimal nutrition and immune protection well into the second year of life and should be encouraged for infants and children in a daycare setting. As of 2006, data indicate that 47% of US infants receive some form of non-parental care.26 This is an important point, in light of research indicating a significant negative association between non-parental child care and breastfeeding duration.27-31 The Department of Agriculture provides guidelines for child feeding based on best practices,32 and these are operationalized in a document drafted by a collaboration between professional health organizations and the federal government.33 However, state regulations ultimately serve as the minimal enforceable standard and, as such, it is important to be aware of these regulations at the state level.34 The absence of breastfeeding in regulations published by more than 75% of states (as late as 2009) supports the continued focus on this area of breastfeeding support.

Public Breastfeeding
The right of a mother and infant/child to breastfeed in public varies. RDNs/NDTRs can discuss with families options for breastfeeding in public and can encourage families to determine if their local laws support breastfeeding in public spaces. Nearly all states have some protection for breastfeeding in public57 yet it is rare for any enforcement to be part of the law.

World Breastfeeding Week
RDNs/NDTRs can participate in World Breastfeeding Week activities in their local communities. World Breastfeeding Week occurs each year from August 1–7 and is sponsored by the World Alliance for Breastfeeding Action to promote and support breastfeeding. Themes vary from year to year and recommended activities and projects help raise awareness for both the public and the health care community.

Donor Milk
While a mother’s own milk is the standard food for infants and young children, there are situations when a mother is unable to provide sufficient milk for her infant or child. In such cases, human milk from screened donors that is pasteurized is the next best option, particularly for high-risk or ill infants.36,37 The Human Milk Banking Association of

Although lactation rooms for pumping allow mothers to continue providing human milk for their infants, this is not the only option for working mothers. Direct breastfeeding can also be combined with employment. This has been found to be the most effective strategy for successfully combining breastfeeding and work.21 Direct breastfeeding, rather than using an employee lactation room for pumping, can be achieved with onsite child care, telecommuting, taking the infant to work, allowing the mother to leave work to breastfeed the infant, or having the infant brought to the workplace. These options can be discussed and considered in certain workplace environments. When direct breastfeeding is not possible during the workday mothers should be encouraged to use employee lactation rooms to maintain milk production.

The United States is the only advanced industrialized nation in the world without a paid family leave policy. Paid family leave is rare in the United States with only 11% of all workers receiving this benefit, although more state workers (19%) and local government workers (16%) receive paid family leave.22 Only New Jersey, California, and Washington have paid family leave to offer cash benefits payable for up to 6 weeks to bond with a newborn or newly adopted child. Legislation in Congress, the FAMILY Act, is being introduced to establish a national paid family leave insurance program that would help mothers initiate and continue breastfeeding and improve newborn and child health.23 As of August 1, 2012, under the Affordable Care Act, many health plans expanded prevention coverage for women’s health and well-being to cover at no cost breastfeeding support, supplies, and counseling by a trained provider during pregnancy and/or in the postpartum period, and to cover the costs for breast pumps and supplies.24 Despite this legislation, coverage by insurance companies varies greatly and families often do not receive coverage for the support and equipment they need to help with breastfeeding. The National Breastfeeding Center published a Breastfeeding Policy Scorecard to assess health care insurance companies’ published policies and guidelines for breastfeeding support and equipment coverage and assigns a grade based on the adequacy of coverage provided (see Figure 2).25

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The right of a mother and infant/child to breastfeed in public varies. RDNs/NDTRs can discuss with families options for breastfeeding in public and can encourage families to determine if their local laws support breastfeeding in public spaces. Nearly all states have some protection for breastfeeding in public57 yet it is rare for any enforcement to be part of the law.

World Breastfeeding Week
RDNs/NDTRs can participate in World Breastfeeding Week activities in their local communities. World Breastfeeding Week occurs each year from August 1–7 and is sponsored by the World Alliance for Breastfeeding Action to promote and support breastfeeding. Themes vary from year to year and recommended activities and projects help raise awareness for both the public and the health care community.

Donor Milk
While a mother’s own milk is the standard food for infants and young children, there are situations when a mother is unable to provide sufficient milk for her infant or child. In such cases, human milk from screened donors that is pasteurized is the next best option, particularly for high-risk or ill infants.36,37 The Human Milk Banking Association of
North America has developed guidelines for establishing and operating human milk banks to assure the safety of the milk.\(^{38}\) There are currently 17 operational human milk banks in the United States and Canada and several that are in the developmental stages. Milk banks use a method of pasteurization known as Holder pasteurization that heats milk in a controlled water bath to 62.5 degrees C and holds the temperature for 30 minutes to eliminate the threat of pathogen contaminants. After pasteurization the milk is cultured to assure that there is no bacterial growth. Milk is frozen and shipped in a frozen state to users. Most bioactive components are still active in human milk after pasteurization, and donor milk has been shown to reduce the incidence of necrotizing enterocolitis, sepsis, and infection, and to result in shorter hospital stays.\(^{39,40}\) Donor milk improves outcomes in a variety of conditions including bowel surgery, failure to thrive, feeding intolerance, allergies, leukemia, and HIV.

While donor milk from Human Milk Banking Association of North America milk banks is used in many hospitals for sick and premature infants, there is a growing interest in donor milk for families of healthy children where the mother is unable to meet the infant’s or child’s needs for optimal nutrition. Parents seek alternatives in the form of informal milk sharing due to inherent risks of feeding human milk substitutes. The practice of milk sharing is not new. Wet nursing has been practiced for thousands of years and milk banking for a century.\(^{41}\) RDNs/NDTRs need to be familiar with the warnings by many organizations including the US Food and Drug Administration and the American Academy of Pediatrics regarding the risks of using non-pasteurized shared milk from unscreened donors especially milk purchased on the Internet that has been shown to have high levels of bacterial growth.\(^{42-45}\) Rather than alienating families who choose to milk share, RDNs/NDTRs should engage these families in a discussion to assure that families understand the pros and cons of milk sharing in order to make an informed decision.\(^{41,46,47}\)

**PROFESSIONAL DEVELOPMENT**

**Networking Opportunities**

RDNs/NDTRs can collaborate and network with other organizations that support breastfeeding mothers. The professional organizations for lactation consultants include the International Lactation Consultant Association (ILCA) and the United States Lactation Consultant Association (USLCA). USLCA has local chapters around the country for those interested in the area of lactation and breastfeeding management as well as support for those who aspire to become IBCLCs. These organizations offer peer-reviewed journals, conferences, and webinars that will help RDNs/NDTRs advance their knowledge and skills. Interested RDNs/NDTRs can partner with their state breastfeeding coalitions (see Figure 2) to learn how to affect policy change and develop programs to provide breastfeeding support especially to underserved communities.

Other organizations that RDNs/NDTRs should become familiar with are La Leche League, an international organization providing mother-to-mother breastfeeding support; United States Breastfeeding Committee, a coalition of professional, educational, and governmental organizations; and the Academy of Breastfeeding Medicine, a world-wide organization of physicians dedicated to the promotion, protection, and support of breastfeeding and human lactation (see Figure 2). RDNs/NDTRs with personal breastfeeding experience may want to become volunteers with mother-to-mother support organizations. Their expertise in nutrition and health along with the required breastfeeding experience make them excellent candidates for becoming peer counselors or La Leche League leaders.

WIC supports breastfeeding mothers by offering counseling through its peer counselors, WIC nutritionists, and IBCLCs. WIC provides an enhanced food package to breastfeeding mothers and assists women returning to work or school by providing breast pumps. Whether the mother receives a personal manual or electric pump, or a hospital-grade multi-user loaner pump will vary depending on the mother's needs and availability of equipment. RDNs/NDTRs can become familiar with their local WIC offices and refer eligible patients to WIC for breastfeeding support and counseling.

Opportunities for networking and enhancing understanding of breastfeeding support and promotion are available through the Academy’s dietetic practice groups (see Figure 2). RDNs/NDTRs who are Academy members should consider joining these professional interest groups to connect with other members in their areas of interest and/or practice to find ways to work together to support and promote breastfeeding.

**Professional Training and Advancement**

Action 9 of the Surgeon General’s Call to Action to Support Breastfeeding\(^2\) recommends that all health professionals who care for women and children receive adequate education and training to support lactation and breastfeeding. Undergraduate and graduate studies in dietetics should include breastfeeding education. Opportunities to interact with breastfeeding mothers and infants during internship experiences can provide a foundation for future clinical practice. Learning opportunities to advance skills and increase knowledge are an important part of professional development. Lactation is a learning need for continuing professional education for RDNs/NDTRs and certification as an IBCLC is approved by the Commission of Dietetic...
Registration for alternate recertification periods. The science of lactation and the art of breastfeeding are constantly changing. New research informs evidence-based practice. Information that may have been learned years before during academic training may no longer be relevant or accurate. Utilization of current textbooks and credible websites will provide immediate information on breastfeeding either to assist families or to participate in discussions with other members of the health care team regarding patient care (see Figure 2).

Earlier studies have shown that RDNs/NDTRs have a strong interest in lactation but there are gaps in knowledge and practice especially related to maternal concerns such as mastitis, contraception, and weight loss. Attitudes of RDNs/NDTRs related to breastfeeding are generally positive but are often influenced by personal experience. Those with negative beliefs are more likely to be less supportive and to recommend earlier weaning.

RDNs/NDTRs can keep informed by attending local or national conferences. ILCA holds yearly conferences, usually in the United States, where a variety of topics related to breastfeeding are presented by experts in the field. USLCA may hold a national conference when the ILCA conference is offered outside the United States. Local chapters of USLCA often sponsor their own regional conferences. Attending conferences provides ample opportunities for networking and visiting exhibitors. For those who prefer the convenience of online conferences, there are several excellent online lactation conferences and courses available (see Figure 2).

RDNs/NDTRs working with breastfeeding families should consider advanced training to seek the IBCLC credential. This credential provides recognition that an individual has met eligibility requirements and has passed a rigorous examination process that assesses knowledge in breastfeeding management. Lactation specific coursework and a clinical experience are necessary to meet eligibility requirements to sit for the exam. The IBCLC credential is the highest level of recognition for expertise in lactation and breastfeeding management. There are also certificate programs that provide education and coursework suitable for RDNs/NDTRs seeking information about lactation to support the families they work with. Many of these educational programs provide the basis of lactation specific education required to be eligible to sit for the IBCLC exam (see Figure 2). Courses approved by the Lactation Education Accreditation and Approval Review Committee meet the minimum standards for quality education programs in lactation.

Social Media
Communication via online social networking has become pervasive and research has indicated that social networking sites, where individuals build peer communities, is thought to have potential for influencing health behaviors. For example, change in attitude, knowledge, and behavior has been associated with peer-to-peer communication, direct-to-consumer marketing, and indirect marketing using the existing peer-network. This is especially critical when considering health behaviors such as infant feeding choice. Limited research has indicated a positive response to online breastfeeding support groups and use of electronic communication tools (other than email) for breastfeeding consultation. This work is expected to increase in the future, and will likely provide strategies for effectively targeting and implementing these activities. However, the online realm is not limited to entities targeting support of breastfeeding. For example, a recent study established the presence of human milk substitute marketing in many of these social networking communities, including mobile applications, and revealed several violations of the International Code of Marketing of Breast-milk Substitutes. In addition, the authors highlighted several electronically-based activities not predicted at the time the WHO Code was adopted in 1981 by the World Health Assembly, demonstrating the need for consideration when advocating for revisions to the WHO Code. Breastfeeding supporters will need to continue to be active participants as this medium continues to evolve.

Areas of Research
RDNs/NDTRs are experts in food and nutrition and the majority work in the treatment and prevention of disease. Many first became interested in the field of dietetics because of their belief that food and nutrition are critical to maintaining a healthy lifestyle. Maternal and infant nutrition are the cornerstone of a lifetime of good health. Early nutrition has a profound effect on health outcomes throughout the life cycle (see position paper). According to the Surgeon General’s Call to Action to Support Breastfeeding, new studies can provide insights related to reducing disparities in breastfeeding rates, removing barriers to breastfeeding, and identifying cost savings and best practices to manage and support breastfeeding.

Nutrition research can be designed to explore health and developmental outcomes related to infant feeding by targeting infants with specific conditions including prematurity, low birth weight, congenital heart defects, neurological impairment, and a history of intestinal surgery. More research is also needed to explore the unique composition of human milk and the impact of handling and storage on immunological properties. The position paper suggests additional emerging issues that require further study. RDNs/NDTRs involved in research should consider exploring these important topics, as well as conducting surveys to determine knowledge gaps and attitudes of current RDNs/NDTRs. While it is clear that RDNs/
NDTRs have a critical role in breastfeeding promotion and support, further studies are needed to explore strategies to enhance this important responsibility.

CONCLUSION
The basis of dietetics practice is to promote optimal nutritional health of infants, children, and adults, and there is no better way to do this than to support and promote breastfeeding. RDNs/NDTRs have many opportunities in their daily work to counsel and educate pregnant and postpartum women, health care professionals, hospital administrators, insurance companies, employers, and early child care workers. RDNs/NDTRs can advocate for the rights of mothers to receive appropriate counseling and support not only for their patients but also for their co-workers, colleagues, families, friends, and acquaintances. RDNs/NDTRs play a pivotal role in breastfeeding support and promotion in their workplace; in educating students, interns and the general public; and as role models to families and friends. Because professional support is associated with breastfeeding rates, it is critical that RDNs/NDTRs are confident in their knowledge about breastfeeding in order to adequately support and promote breastfeeding.

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