Implementing Breastfeeding Education in Pediatric Settings

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Breastfeeding adherence rates in community and acute hospital settings are substandard across many developed nations, despite the development of programs to support them. For example, the Baby-Friendly Hospital Initiative program was developed by the World Health Organization (WHO) to enhance breastfeeding success. A narrative review of the literature relevant to community and acute pediatric health care settings indicates that enhanced education for interdisciplinary team members needs to be implemented to support breastfeeding. The 28 articles in this review include systematic reviews; randomized control trials; case-control, cohort, descriptive, and qualitative studies; as well as opinion articles. After synthesizing study results into content themes, it is evident that initiation and management of breastfeeding within these settings can be improved through increased health care provider knowledge. A narrative summary of the evidence reveals that issues related to breastfeeding promotion in community and acute pediatric settings are due to complacency with early cessation, inadequate health care provider knowledge, and overreliance on Internationally Board-Certified Lactation Consultants® (IBCLCs). Recommendations from gathered studies include educational approaches that can be implemented through managerial and clinical strategies, structured breastfeeding education programs, and module-based learning. Hands-on learning of health care professionals with assistive devices to troubleshoot breastfeeding issues will also assist with breastfeeding success in pediatric settings. If health care leaders can adopt strategies outlined in this article related to their organizational needs, breastfeeding success will be enhanced in the future.

Key Words: Breastfeeding, community pediatrics, acute pediatrics, continuing education, interdisciplinary education.

Initiating and supporting the implementation of human milk into the infant diet has shown to have lifelong benefits for the individual receiving the milk (Schanler, 2018). Colostrum, which is produced during the first 24 to 48 hours following birth, is a yellow-clear fluid rich in antibodies (Leifer, 2011). Receiving this fluid provides initial protection for the infant against various pathogens (Leifer, 2011). Therefore, it is crucial that nurses engage in effective feeding practices with mothers and infants to help support the infant's intake of colostrum.

Longitudinal studies on the effects of human milk intake and breastfeeding are also linked to favorable health outcomes for both mothers and infants (World Health Organization [WHO], 2020). For mothers, breastfeeding is linked to a decreased risk of developing type 2 diabetes mellitus in later life (Wein, 2015). In a prospective cohort study involving 1000 women diagnosed with gestational diabetes in pregnancy, researchers observed that women were 50% less likely to be diagnosed with type 2 diabetes mellitus in later adulthood if they exclusively breastfed their infants (Wein, 2015). For infants, being breastfed has significant protection against the development of obesity and type 2 diabetes mellitus, and is also linked to higher scores on intelligence tests (Horta & Victoria, 2013).

Breastfeeding is also associated with a reduction in various allergies that can become present in childhood. Recently, results from a longitudinal study with over 1000 mother-infant dyad participants showed a reduction in the development of respiratory allergies associated with exclusive breastfeeding for the first three months of life (Bigman, 2020). Experimental studies in mice have also linked maternal milk consumption with antibody production to protect against food-related allergens (Ohsaki et al., 2017). As food allergies become more prominent in childhood, this benefit of human

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milk intake will hopefully be another promoting factor for breastfeeding initiation in pediatric settings and can be communicated to parents as a benefit of breastfeeding (Johns Hopkins Medicine, 2020).

Breastfeeding has gained worldwide attention over the past few decades after the commencement of the WHO's Baby-Friendly Hospital Initiative (BFHI). This program contains a set of guidelines meant to be adopted by hospitals to promote breastfeeding initiation and management (WHO, 2020). The importance of breastfeeding has been examined through the conduction of various studies, with a goal of implementing breastfeeding education into health care settings worldwide (Baby Friendly Initiative, 2019). However, despite extensive literature on the importance of breastfeeding, a gap exists in health care provider education to assist new parents in community and acute pediatric settings (Beake et al., 2012; Horta & Victoria, 2013).

Provision of in-hospital support for breastfeeding is crucial to breastfeeding longevity (Vehling et al., 2018). This means nurses who work directly with newborn infants require adequate training to assist mother-infant dyads with feeding. According to Chuisano and Anderson (2020), enhancing staff breastfeeding training can improve breastfeeding initiation and management by 20%. Pediatric care areas have been identified as needing assistance with adapting care recommendations promoted through the BFHI (WHO, 2020). Some identified care needs include appropriate assessment of an infant's latch and intake, the implementation of lactation aides when human milk amounts are inadequate, and learning to clinically coach and implement a feeding plan with mothers to support their goals for long-term breastfeeding (de Mattos Pereira de Souza et al., 2015). In a study in England, over 100,000 readmissions of term newborns occurred over the course of two years that resulted in separation from their mothers due to the setup of hospital units, causing a significant barrier to breastfeeding (Battersby et al., 2017). Therefore, this narrative review aims to provide resources that can be used to guide breastfeeding support in community pediatric units and within large pediatric centers. These resources can be implemented based on the goals of care for infants who do not have underlying conditions that would present a contraindication to safe breastfeeding.

Search Strategy and Appraisal of Literature Quality

A thorough search strategy was initiated to identify methods for supporting breastfeeding in pediatric settings. This strategy included a database review using key search terms (outlined in Table 1), as well as collaboration with health care professionals who specialize in breastfeeding strategy implementation in pediatric settings. Databases included in the search were PubMed, ProQuest, Medline, CINAHL, and Google Scholar. Expert resources were from a community hospital pediatric unit with a well-established breastfeeding support program, including registered nurses, a lactation consultant, and a nurse educator (each with 10 to 20 years of clinical experience). Limits were set for the past five years, peer-reviewed articles, and English language. However, some older articles were included for supporting information if they identified relevant breastfeeding resources for pediatric sites. Country of publishing limits were not implemented because breastfeeding initiatives are taking place worldwide through efforts of the WHO. This strategy yielded data-rich articles from China, South Africa, and Brazil. The Levels of Evidence pyramid was used to assess the quality of included literature (Ackley et al., 2008, as cited in Winona State University, 2019). This appraisal tool groups sources of evidence into categories ranging from Level I to VII based on their evidence type.

Approximately 50 articles were appraised, and 28 were included within the narrative review based on level of evidence and applicability. Besides general limits, inclusion criteria for articles included 1) content was applicable to breastfeeding in community or acute pediatric settings, 2) information was applicable to developed nations, and 3) evidence from the articles could be applied to healthcare provider education programs. Exclusion criteria for the articles included 1) breastfeeding data were only applicable to the period immediately following birth, and 2) articles that discussed breastfeeding information were not focused on current, global best practice evidence (as outlined by the WHO). Of the included articles, three were systematic reviews, one was a randomized control trial, four were case control or cohort studies, one included systematic review evidence from descriptive or qualitative studies, 11 were single qualitative or descriptive studies, and eight were expert opinion articles. Information was also incorporated from government-supported literature, professional associations, and scholarly textbooks.

The Necessity for Breastfeeding Support in Hospitalized Pediatric Settings

Early Cessation of Breastfeeding Phenomenon

Exclusive breastfeeding has a high attrition rate even in non-hospitalized settings. In Canada, as of 2012, only 26% of mothers who were surveyed continued exclusive breastfeeding for six months, despite 89% of women initiating it after birth (Lukeman et al., 2019). In the United States, the exclusive breastfeeding rate between 0 to 5 months after birth is 35% and drops to 9% at one year. In Japan, the 0- to 5-month adherence rate decreases to 26% (UNICEF, 2017). Critical inquiry into why there are low breastfeeding rates across developed nations may provide pertinent data to further support breastfeeding establishment and maintenance worldwide.

Despite receiving assistance in postpartum clinical areas and programs, various external factors may also be barriers to the continuation of breastfeeding, especially if readmission occurs in a pediatric hospital or community setting (Chang et

Table 1.
Content Themes of Selected Articles and Associated Search Terms

Content Theme	Associated Search Terms	Selected Articles (in order of appearance)
Breastfeeding Importance	***Breastfeeding Importance*** Breastfeeding AND Disease Prevention, Breastfeeding AND Benefits, Breastfeeding AND Immunology, Breastfeeding AND Health Benefits	Schanler, 2018 Wein, 2015 Horta & Victoria, 2013 Bigman, 2020 Ohsaki et al., 2017
Necessity for Breastfeeding Support in Hospitalized Pediatric Settings	***Multidisciplinary Approach and Hospital Support*** Physicians AND Breastfeeding, Nursing or Nurses AND Breastfeeding, Interprofessional AND Breastfeeding, Team Members AND Breastfeeding	Vehling et al., 2018 Chuisano & Anderson, 2020 de Mattos Pereira de Souza et al., 2015 Battersby et al., 2017 Lukeman et al., 2019 Chang et al., 2019 Bradford et al., 2017 Patel & Patel, 2015 Witt et al., 2012
Assistance with Implementation of a Breastfeeding Program using Frameworks	***Pediatric Needs and Suggestions for Implementation*** Acute Paediatrics OR Pediatrics AND Breastfeeding, Acute Paediatrics OR Pediatrics AND Breastfeeding AND Assistance, Acute Paediatrics OR Pediatrics AND Education, Pediatrics OR Paediatrics AND Breastfeeding, Hospital AND Paediatrics OR Pediatrics AND Breastfeeding ***Training Program Components*** Breastfeeding AND Staff Education, Breastfeeding AND Nurses AND Education, Breastfeeding AND Model	Busch et al., 2014 Beake et al., 2012 de Alvarenga et al., 2018 Child Health and Disability Prevention Program, 2022 University of Albany School of Public Health, 2020 Chuisano & Anderson, 2020
Initiation of Assistive Devices in Breastfeeding	***Information about Lactation Aids*** Lactation Device OR Aid AND Breastfeeding, Lactation Device OR Aid AND Nurses	Borucki, 2005 Kurokawa, 1994 Olaogun et al., 2015
Barriers to Implementation	***Breastfeeding Barriers*** Breastfeeding AND Barriers AND Hospital, Breastfeeding AND Barriers, Breastfeeding AND Barriers AND Nurses ***Breastfeeding Myths*** Breastfeeding AND Myths, Jaundice AND Types, Jaundice AND Breastfeeding, Breastfeeding AND Pediatrics AND Nursing	Mgolozel et al., 2019 Beake et al., 2012 Lukeman et al., 2019 Pérez-Escamilla, 2019 Martucci, 2012 Chuisano & Anderson, 2020 Chu et al., 2019 Long et al., 2017 Sage et al., 2015

al., 2019). In a Taiwanese study, approximately one-third of mothers who were surveyed stopped breastfeeding earlier than they originally wanted (Chang et al., 2019). The risk for cessation is heightened in pediatric care settings due to multifactorial health care concerns, including cyclic weight measurements, the need for medication administration, and a possible lack of assistance with milk expression, including manual and via a pump. Without adequate encouragement from nurses trained in supportive breastfeeding practices, these stressors may make parents more likely to decide to implement exclusive bottle feeding with human milk substitutes.

Inadequate Pediatric Health Care Provider Knowledge

Despite widespread research demonstrating the importance of breastfeeding, information given by health care providers in clinical settings to families is often reported as conflicting (Beake et al., 2012). Evidence-based information must be conveyed in a consistent manner by health care providers to promote breastfeeding success. A shift in organizational attitudes toward supporting breastfeeding may be one of the most important factors to enhance success with breastfeeding adherence (Bradford et al., 2017). The issue of unprepared health care providers in acute pediatric settings directly relates to the lack of standardized lactation education, both in postsecondary programs and on-the-job training (Chuisano & Anderson, 2020). If confidence is lacking in any area of patient teaching, health care professionals are not going to feel comfortable delivering evidence-based information to their patients. Organizational policies that support continuing education for health care providers are imperative for fostering enhanced breastfeeding support

(Bradford et al., 2017). Therefore, standardized education in pediatric settings is imperative to prepare health care professionals to assist parents in continuing to breastfeed.

Reliance on International Board-Certified Lactation Consultants

International Board Certified Lactation Consultants (IBCLCs®) are professionals who have specialized training and provide consultation services in a variety of settings (Patel & Patel, 2015). The main goal for these professionals is to support and promote the initiation of breastfeeding, and provide appropriate resources for parents to access within the hospital setting and community (Witt et al., 2012). These professionals provide their services in pediatric settings through the request of a nurse or other allied health team member (Baby Friendly Initiative, 2019). However, depending on the working hours of IBCLCs, the onus may be on frontline health care professionals for breastfeeding assistance. Therefore, effective collaboration between IBCLCs and allied health care staff may be a more sustainable solution for long-term breastfeeding success, such as through multidisciplinary rounds and one-to-one teaching (Patel & Patel, 2015). Information given by health care professionals must be consistent with what is taught by the IBCLC to enhance breastfeeding success (Witt et al., 2012).

Assistance with Implementation of a Breastfeeding Program Using Frameworks

Tri-Core Model of Breastfeeding Promotion

The three principles outlined by the Tri-Core Model for Breastfeeding Promotion provides a framework for what should be included in a lactation education program for health care professionals to help promote breastfeeding in the clinical setting (Busch et al., 2014). The three outlined factors of this framework include 1) maternal self-efficacy, 2) support of the clinician and mother in breastfeeding education, and 3) the education of the mother and clinician. Therefore, this three-factor approach assists both the multidisciplinary team and the mother-infant dyad (Busch et al., 2014).

A structured breastfeeding program has shown a statistically significant correlation with enhanced breastfeeding success (Beake et al., 2012). As a result, the Tri-Core Model composed a list of specific strategies to enhance lactation support. A brief outline of some of these strategies includes educating families on the importance of breastfeeding, using culturally inclusive materials for learning, education on long-term benefits of sustained breastfeeding, and ways to recognize if human milk intake is adequate to meet the infant's needs (Busch et al., 2014).

World Health Organization's 10 Steps to Successful Breastfeeding

The World Health Organization has composed a list of 10 strategies to be implemented at the managerial and clinical levels to support breastfeeding across health care sectors (WHO, 2020). The second strategy, as outlined in the critical management processes, states all frontline staff should be educated in best practices regarding breastfeeding support to assist their patients in best feeding practices (WHO, 2020). The key clinical outcomes outlined can be applied to community and acute pediatric settings, including discussing breastfeeding importance with parents and families, managing breastfeeding complications, offering human milk substitutes only when medically necessary, and advocating for community support upon discharge (WHO, 2020).

NANDA-I Classifications

The International Nursing Knowledge Association (NANDA-I, 2021) provides worldwide assistance to nurses to classify presenting issues of patients using succinct diagnoses or descriptions. Three specific diagnoses relate to breastfeeding assistance and promotion in the clinical setting, including ineffective breastfeeding, the discontinuation of breastfeeding, and intent for increased breastfeeding (de Alvarenga et al., 2018). Classifying patients into these three categories may assist clinical professionals to follow specific pathways of escalating care based on the category in which their patient is classified. These diagnoses must be considered within the context of the patient's specific situation, with the realization that other factors, such as anxiety, pain, exhaustion, and other stressors, may cause alterations in being able to use a specific pathway (de Alvarenga et al., 2018). However, these three classifications provide an excellent starting point for health care professionals assisting mother-infant dyads in acute pediatric settings.

Lactation Education and Breastfeeding Courses

A variety of independent learning courses are available for health care providers to enhance their knowledge about breastfeeding. In the United States, many evidence-based organizations provide various options for breastfeeding education courses. For example, the Carolina Global Breastfeeding Institute provides comprehensive modules for health care providers (United States Breastfeeding Committee, 2020). Many state-specific websites also provide online resources health care organizations can adapt based on the needs of the patient population. For example, the Child Health and Disability Program through the state of California and the School of Public Health at the University of Albany, New York, provide online resources for hospital breastfeeding promotion (Child Health and Disability Prevention Program, 2022; University of Albany School of Public Health, 2020). In Canada, the Infant Feeding Action Coalition (INFACT) 20-hour breastfeeding course for health care providers is one education program used to promote initiation and continuation of breastfeeding in clinical settings (INFACT, 2016). The courses cover a variety of key topics, including various feeding processes, information regarding the BFHI, WHO recommendations, and current best practices (INFACT, 2016). Health care

leaders can choose courses most applicable for their patient population and to meet the needs of their staff members.

The Registered Nurses' Association of Ontario (RNAO) is one example of a provincial or state-specific organization that provides e-learning modules on breastfeeding practices to support health care professionals who work with mother-infant dyads (RNAO, 2019). The program provides a thorough basis of knowledge for health care professionals to implement in clinical settings. The RNAO course is more accessible than the INFACT learning, so it can reach more health care professionals. Therefore, this program can be implemented into health care professionals' regular annual education or training, which is mandated upon being hired into an organization (RNAO, 2019).

Recommended Components of a Breastfeeding Training Program

A summary of key points (see Table 2) health care providers must be aware of when providing breastfeeding education includes anatomy and physiology of the breast and lactation endocrinology, how to recognize effective latching, sucking and swallowing, intake amounts based on infant age, how to diagnose lactation problems and implement a supplemental device, cultural beliefs in feeding practices, and how to support mother-infant dyads upon discharge (Chuisano & Anderson, 2020). Some maternal factors that can also be explored are breast complications (mastitis and engorgement), positioning techniques for effective latching, and family support (Chuisano & Anderson, 2020).

Initiation of Assistive Devices in Breastfeeding

The following sections provide an overview of the assistive devices used to support breastfeeding. Additional details are provided for this topic because it is often minimally covered or absent in nursing curricula. Training health care professionals on how to use different assistive devices will help promote success in pediatric clinical settings when infants are deemed safe to orally feed or breastfeed (Newman, 2019a). When health care providers learn the indications for implementing devices, it assists with creating an individualized plan of care. Health care provider education on how to use these devices and which one to suggest to patients is imperative to successful and sustained breastfeeding. Detailed information on how to use each device will help these health care professionals feel comfortable in recommending them to parents based on the infant's age, supplemental requirements, and latch ability (Newman, 2019b).

Lactation Device

The Supplemental Feeding Lactation Device (SFLD) can be implemented if an infant is able to latch and suck effectively, but the mother's milk supply may not be adequate for weight gain, promoting output to excrete bilirubin, or other factors related to infant health (Newman, 2019a). Therefore, this device promotes breastfeeding goals of the mother to continue with latching and feeding at the breast, while also promoting adequate nourishment for the patient (Borucki, 2005). Lactation device supplies include a sealed, transparent bottle to hold the human milk substitute or expressed human milk, a tube with whistle-tip holes that attaches to the bottle, and tape or another type of securing device to keep the tube at the nipple (Borucki, 2005). The mother can then prime the tube with the supplement. When the infant begins sucking at the breast, the tube can be slipped into the side of the infant's mouth, or the infant can latch onto the breast with the tube already in place (Newman, 2019b). Based on the age of the infant, the health care provider can decide how much supplement should be poured into the bottle. Pre- and post-feeding weights can also be done to determine how much human milk the infant obtained from the breast while also receiving the supplement.

Finger Feeding

Finger feeding an infant uses similar equipment as the SFLD, including a container to hold the expressed human milk or human milk substitutes and a tube that is placed in the infant's mouth (Newman, 2019a). However, this type of feeding is more appropriate for infants who are too sleepy to latch effectively at the breast, for those who are too small to latch effectively, for infants who are separated from their mothers, and for mothers experiencing extreme nipple or breast pain that prevents latching (International Breastfeeding Centre, 2019). Finger feeding involves having the infant sit in an upright position with their jaw forward; the infant then latches on to the finger with the tube taped to the side of it. The infant is then able to make the same sucking movements as he or she would at the breast (International Breastfeeding Centre, 2019). This method is meant to prevent nipple confusion that can occur with bottle feeding in the early stages of trying to promote latching because the infant still must work for the milk. In many cases, latching can become successful once the barrier to it is removed (Kurokawa, 1994). In the acute pediatric clinical setting, the nurse can assist parents by teaching them how to set up the device, the purpose of the device, and by providing support to the individual who is performing the feeding. The nurse can also assess whether this is a suitable method of feeding for the infant based on their clinical outcomes (International Breastfeeding Centre, 2019).

Cup Feeding

Cup feeding is a final alternative practice that can be implemented and supported by health care providers in pediatric care areas. This involves using a small, disposable medicine cup to deliver expressed human milk or human milk substitutes to an infant. This may be an alternative to the other methods when the infant is not able to suck effectively to obtain the milk from the feeding device (Olaogun et al., 2015). Another reason for using this method is if the infant has a minor

Table 2.
A Summary of the Priority Information for Breastfeeding Education and Resources

Breastfeeding Education Topics	Associated Resources
1. Anatomy and physiology of the breast	World Health Organization (p. 8) https://www.who.int/nutrition/publications/infantfeeding/9789241597494.pdf American Academy of Pediatrics https://services.aap.org/en/learning/breastfeeding-curriculum/ Cleveland Clinic https://my.clevelandclinic.org/health/articles/8330-breast-anatomy
2. Lactation endocrinology	World Health Organization (p. 9) https://www.who.int/nutrition/publications/infantfeeding/9789241597494.pdf
3. How to recognize effective latching, sucking, and swallowing	Office on Women's Health – U.S. Department of Health & Human Services https://www.womenshealth.gov/breastfeeding/learning-breastfeed/getting-good-latch Nemours – KidsHealth https://kidshealth.org/en/parents/breastfeed-starting.html
4. Intake amounts based on infant age	Johns Hopkins Medicine https://www.hopkinsmedicine.org/health/wellness-and-prevention/feeding-guide-for-the-first-year Centers for Disease Control and Prevention https://www.cdc.gov/nutrition/infantandtoddlernutrition/breastfeeding/how-much-and-how-often.html
5. Diagnosis of lactation problems	The University of British Columbia https://learn.pediatrics.ubc.ca/body-systems/neonate/breastfeeding-problems/ International Breastfeeding Centre https://ibconline.ca/information-sheets/blocked-ducts-mastitis/ https://ibconline.ca/information-sheets/sore-nipples/
6. Implementation of a Supplemental Feeding Lactation Device (SFLD)	Canadian Breastfeeding Foundation https://www.canadianbreastfeedingfoundation.org/basics/lactation_aid.shtml
7. Finger feeding	International Breastfeeding Centre https://ibconline.ca/information-sheets/lactation-aid/ International Breastfeeding Centre https://ibconline.ca/information-sheets/finger-and-cup-feeding/
8. Cup feeding	Australian Breastfeeding Association https://www.breastfeeding.asn.au/bfinfo/cup-feeding International Breastfeeding Centre https://ibconline.ca/information-sheets/finger-and-cup-feeding/
9. Cultural beliefs in feeding practices	U.S. National Library of Medicine (Figure 1) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4788465/
10. Support of mother-infant dyads upon discharge	The Academy of Breastfeeding Medicine https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3903163/ Canadian Paediatric Society https://www.cps.ca/en/documents/position/facilitating-discharge-from-hospital-of-the-healthy-term-infant

cleft palate (Australian Breastfeeding Association, 2016). The nurse will teach the parent or caregiver to hold this small cup up to the infant's upper lip and then allow the infant to use their own tongue and lip movements to obtain the milk. The most important educational aspect of this method is to avoid pouring the human milk or human milk substitute into the infant's mouth because this puts the infant at risk of choking and aspiration (Olaogun et al., 2015).

Barriers to Implementation

Workload Burden

Nursing workload issues have been identified as an international problem (Mgolozel et al., 2019). In a South African study, the main barrier to the implementation of the WHO's breastfeeding strategy was the negative attitudes conveyed by staff nurses; they stated they did not have time to carry out the proposed strategies (Mgolozel et al., 2019). Study recommendations suggest that a structured program, such as implementation of the BFHI, should be implemented to foster an environment of support from staff members (Beake et al., 2012). One example to reduce time constraints is structuring nursing assignments to account for the time spent assisting mothers with breastfeeding so it can become a part of regular nursing care rather than being viewed as an extra task.

Funding Constraints

In the hundreds of hospitals across Canada, only 23 have fully adopted the BFHI as of 2019 (Lukeman et al., 2019). Seven of these hospitals are within Ontario but do not include large acute pediatric centers (Baby Friendly Initiative, 2019). In the United States, approximately 17% of hospitals are certified under the BFHI (Baby-Friendly USA, 2020). One main reason for these low rates is because adequate training is needed for a breastfeeding program to be successful in health care settings (Pérez-Escamilla, 2019). Large-scale implementation techniques through the suggestions from the BFHI will need to be adapted by pediatric organizations, and ongoing training is necessary for it to be sustainable (Pérez-Escamilla, 2019). Although education materials were originally implemented in maternity settings, the principles of BFHI apply to pediatric settings where infant patients may be admitted (WHO, 2020). Unfortunately, no adaptation guides for pediatric settings exist; thus, these efforts can be costly, and budgeting plans will need to be executed for implementation to be effective. This is a large barrier in a health care system with limited funding and competing priorities (RNAO, 2018). Therefore, the many benefits of this program will need to be communicated to stakeholders in detail for an effective cost-benefit analysis to be done.

Achieving Staff Support of Breastfeeding

Historically, adaptation of in-hospital breastfeeding practices by nurses has been difficult to implement (Martucci, 2012). Inconsistencies regarding the information delivered from health care providers to patients and families regarding breastfeeding and human milk intake is cited as a principal barrier to successful breastfeeding in an acute care environment (Chuisano & Anderson, 2020). Standardization of a breastfeeding education program for pediatric care providers is meant to prevent this barrier; however, this does not guarantee health care providers will adopt all evidence-based guidelines suggested. According to an assessment of application-based breastfeeding education, many health care professionals report poor previous knowledge of how to provide breastfeeding support (Chuisano & Anderson, 2020). This demonstrates the importance of assessing staff motivation prior to implementing a program to focus education on how to specifically target identified motivational factors.

Myths Surrounding Jaundice and Breastfeeding

One of the largest misconceptions linked to ill outcomes in infants is the concept of human milk jaundice (Chu et al., 2019). Jaundice (hyperbilirubinemia) occurs due to the accumulation of bilirubin in the infant's bloodstream. If the bilirubin level is dangerously high and not excreted through urine and stool, it can lead to bilirubin encephalopathy (Gould & Dyer, 2011). The concept of human milk jaundice was described in a Taiwanese study as jaundice that develops when intake is too little to excrete the bilirubin, when there is an increased infant weight loss, and dehydration subsequently results (Chu et al., 2019). However, these ill-effects are not linked to the human milk itself, but rather, not enough fluid intake (Leifer, 2011). Previous studies focused on nursing-led interventions to decrease negative neonatal outcomes associated with jaundice; however, breastfeeding has not been a prominent topic (Long et al., 2017; Sage et al., 2015). Therefore, if proper education is supplied to health care providers to notice early signs of decreased intake for infants, knowledge of jaundice development and suggestions to continue breastfeeding can be promoted, such as through human milk substitute supplementation with an assistive device.

Summary of Breastfeeding Education for Pediatric Nurses

Despite extensive evidence supporting the importance of breastfeeding in the optimal health of infants, the BFHI has yet to be fully adopted nationally by hospitals to support families with ideal feeding practices (Baby Friendly Initiative, 2019). This narrative review of literature outlined the importance of implementing breastfeeding education into community and acute pediatric care settings to continue to support mother-infant dyads in their feeding goals despite admission to a pediatric setting. Health care professionals play a key role in the support of practices to assist with breastfeeding and can act as advocates and educators for their patients through completion of standardized, evidence-based education on breastfeeding assistance. If these care goals are adopted by pediatric institutions, strides will be made toward meeting the WHO's goal of achieving best nutrition for all infants.

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