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Barriers, Facilitators, and Recommendations Related to Implementing the Baby-Friendly Initiative (BFI): An Integrative Review

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Abstract

Despite growing evidence for the positive impact of the Baby-Friendly Initiative (BFI) on breastfeeding outcomes, few studies have investigated the barriers and facilitators to the implementation of Baby-Friendly practices that can be used to improve uptake of the BFI at the local or country levels. This integrative review aimed to identify and synthesize information on the barriers, facilitators, and recommendations related to the BFI from the international, peer-reviewed literature. Thirteen databases were searched using the keywords *Baby Friendly, Baby-Friendly Hospital Initiative, BFI, BFHI, Ten Steps, implementation, adoption, barriers, facilitators,* and their combinations. A total of 45 English-language articles from 16 different countries met the inclusion criteria for the review. Data analysis was guided by Cooper's five stages of integrative research review. Using a multiple intervention program framework, findings were categorized into sociopolitical, organizational-level, and individual-level barriers and facilitators to implementing the BFI, as well as intra-, inter-, and extraorganizational recommendations for strengthening BFI implementation. A wide variety of obstacles and potential solutions to BFI implementation were identified. Findings suggest some priority issues to address when pursuing Baby-Friendly designation, including the endorsements of both local administrators and governmental policy makers, effective leadership of the practice change process, health care worker training, the marketing influence of formula companies, and integrating hospital and community health services. Framing the BFI as a complex, multilevel, evidence-based change process and using context-focused research implementation models to guide BFI implementation efforts may help identify effective strategies for promoting wider adoption of the BFI in health services.

Keywords

Baby-Friendly Hospital Initiative (BFHI), breastfeeding barriers, community support, hospital policies, hospital practices, process evaluation, Ten Steps to Successful Breastfeeding

Background

The protection, promotion, and support of breastfeeding has become a global health priority since the Innocenti Declaration was signed by 30 countries in 1990.[1] The Baby-Friendly Hospital Initiative (BFHI) was launched the following year by the World Health Organization (WHO) and UNICEF to increase breastfeeding rates by promoting worldwide adoption of the Ten Steps for Successful Breastfeeding[2] (Table 1) and compliance with the International Code of Marketing of Breast-milk Substitutes (referred to herein as the "Code").[3] By 2009, more than 20,000 maternity facilities in 156 countries around the world had been designated Baby-Friendly, and many countries had established BFHI coordinating groups or other infant feeding authorities to support implementation of the BFHI at the regional or national levels.[4] Several countries have now expanded the BFHI to include criteria for Baby-Friendly designation of community health services (initiated by the UNICEF UK Baby-Friendly Initiative[5]), as well as specialty-care areas such as neonatal intensive care[6] and pediatric units.[8] In 2009, the WHO/UNICEF's original

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Table 1. Ten Steps for Successful Breastfeeding[a]

Every facility providing maternity services and care for newborn infants should:

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
2. Train all health care staff in skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within a half-hour of birth.[b]
5. Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.
6. Give newborn infants no food or drink other than breast milk unless *medically* indicated.
7. Practice rooming in—allow mothers and infants to remain together—24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

[a]From the World Health Organization and UNICEF.[7]
[b]The 2009 revision of the Baby-Friendly Hospital Initiative now interprets this step as "Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour. Encourage mothers to recognize when their babies are ready to breastfeed and offer help if needed."

BFHI guidelines were updated in light of BFHI implementation experiences to date, challenges posed by the HIV pandemic, and guidance from the WHO/UNICEF's Global Strategy for Infant and Young Child Feeding.[9] These revisions support further expansion of the BFHI and integration of the program with other maternal-child health initiatives to optimize infant health outcomes.[7]

There is growing evidence that the BFHI is associated with increased rates of breastfeeding initiation, exclusivity, and duration at both the hospital and population levels in diverse cultural contexts.[10-25] However, the extent of adoption of the BFHI varies widely across communities and countries, and falls far short of UNICEF's original ambitious target that by 1995 all maternity care facilities around the world fully practice the Ten Steps. Although current data on the global status of the BFHI are not available, 2006 data from UNICEF records reported that the percentage of Baby-Friendly maternity care facilities in each country ranged from 0% (46 countries) to 97% (Sweden).[26] Implementation of the BFHI also varied markedly across world regions, from a high of 50% of facilities in East Asia and the Pacific having achieved Baby-Friendly status, to a low of only 6% of facilities among the industrialized countries.[26] Published studies that have examined hospital or community health service compliance with Baby-Friendly practices at the municipal,[27-31] regional,[32-40] or national level[41-47] further reveal inconsistencies in the degree of adoption of the Ten Steps across health care facilities, although studies involving follow-up evaluations of hospital compliance consistently demonstrate progress in implementation of Baby-Friendly practices over time.[27,28,42,45] The above-mentioned studies on BFHI compliance reveal similar patterns in the level of health facility achievement of the Ten Steps across both industrialized and developing nations. In general, the studies reported higher health facility compliance with Steps 3 (inform pregnant women about breastfeeding), 5 (show mothers how to breastfeed), and 8 (encourage breastfeeding on demand), whereas lower compliance was typically found for Steps 1 (breastfeeding policy), 6 (give nothing but breast milk), and 7 (rooming-in).

Despite the large numbers of health facilities around the world that have achieved Baby-Friendly status in the past two decades, as well as the growing volume of studies examining BFHI compliance and outcomes, few studies to date have specifically investigated barriers and facilitators to the implementation of Baby-Friendly practices. The BFHI (referred to from this point on as the Baby-Friendly Initiative, or BFI, to include expansions of the program to neonatal or community health settings) is a complex, multifaceted program to optimize breastfeeding support by transforming health service structures, processes, and practices. The WHO/UNICEF's BFHI was also intended to be part of broader multisector and multilevel efforts to protect, promote, and support optimal infant and young child feeding.[4] Baby-Friendly USA published a guide in 2004 describing strategies for overcoming common barriers to implementation of each of the Ten Steps, based on the experiences of US hospitals and birth centers that had achieved Baby-Friendly status.[48] More recently, as part of a BFHI course for decision makers, WHO/UNICEF produced an extensive list of concerns, solutions, and necessary actions for implementing each of the Ten Steps based on experiences from a variety of countries.[49] Although comprehensive in scope, neither of these two documents identify the specific contexts, data sources, or experiences on which they are based, nor do they address the expansion of the BFHI to community health or specialty-care perinatal settings. Whereas documentation of BFI activities and lessons learned likely exist in both formal and informal reports throughout the world, to our knowledge, a comprehensive review of the published literature on factors influencing implementation of Baby-Friendly initiatives has not been published. Therefore, the objective of this integrative review is to identify and synthesize information about barriers, facilitators, and recommendations related to implementation of Baby-Friendly initiatives published to date in the international, peer-reviewed literature.

Methods

Review methods were guided by Cooper's five stages of integrative research review (i.e., problem formulation, data collection, data evaluation, data analysis and interpretation,

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public presentation).[50] Given the paucity of empirical studies of barriers and facilitators to BFI implementation and the complexity of factors that may influence adoption of the BFI, an integrative review method was selected in order to combine insights related to the process of BFI implementation gleaned from a variety of published sources. Unlike other forms of systematic reviews, an integrative review allows for the synthesis of findings from experimental and nonexperimental studies (e.g., qualitative studies, narrative case study reports), as well as data from both theoretical and empirical literature.[51]

Selection of Articles

A librarian-assisted search of the databases PubMed, Cochrane Library, Ovid Medline, Ovid EMBASE, CINAHL, Scopus, Global Health, ERIC, CAB Abstracts, HaPI, AMED, Research Library (Proquest), and ABI/Inform Global (Proquest) was conducted using the keywords *Baby Friendly, Baby-Friendly Hospital Initiative, BFI, BFHI, Ten Steps, implementation, adoption, barriers, facilitators,* and their combinations. Additional search strategies included hand searching key breastfeeding or perinatal health journals, reviewing reference lists, and ancestry searching of included papers or other relevant documents. Articles were eligible for inclusion in the review if they (1) were in English and published in peer-reviewed journals; (2) were quantitative or qualitative empirical studies, literature reviews, narrative case reports, or commentaries on the process and/or outcomes of implementing the BFI or the Ten Steps in hospital, community, or specialty-care settings; and (3) specifically mentioned barriers to and/or facilitators of BFI implementation in the findings or discussion sections. There were no restrictions on the country or level (organizational, regional, or national) of BFI implementation addressed. Because most of the articles found were descriptive, article rating for strength of evidence was not used as an inclusion criterion. To better understand the challenges of implementing the multiple practices included in the BFI, the review excluded articles that focused on only 1 of the Ten Steps (e.g., breastfeeding training for health care professionals) or implementation of the Code alone. Unpublished dissertations, theses, and government reports also were excluded due to the length of these documents and the burden associated with their review. However, a future comprehensive review of the international "gray" literature related to BFI implementation is warranted.

Data Extraction and Analysis

Two authors (SS, JL) and a research assistant screened titles and abstracts and reviewed full texts of potentially relevant papers to determine if they met the inclusion criteria. To better understand implementation of the BFI as part of a broader, multilevel strategy for improving breastfeeding rates, information from the articles was collected and interpreted using a multiple intervention program (MIP) framework.[52] Rooted in socioecological models of health promotion, MIPs consist of interconnected strategies that target multiple levels (e.g., individual, organizational, policy) and sectors (e.g., health, education) of the social system, delivered through a variety of channels (e.g., health professionals, media) and settings (e.g., hospital, community).[53] In the first step of data analysis, a research assistant and one of two authors (JL or JEC) independently reviewed the articles and abstracted all relevant units of text into 3 broad categories (barriers, facilitators, and recommended strategies for BFI implementation) using a data extraction table. The research assistant and either SS or JEC then further categorized the abstracted texts according to the main level at which they operated as a barrier, facilitator, or intervention: (1) sociopolitical (e.g., policy, regulatory, sociocultural factors), (2) organizational (structures and processes within health care facilities), or (3) individual (knowledge, attitudes, and practices of health care workers or health care users). Constant comparison techniques[54] were used to group the barriers, facilitators, and recommendations into themes and subthemes within each of these levels and to identify key categories of factors influencing BFI implementation that can be targeted for intervention. Verification of the emergent themes with the source data was performed as a final step to ensure accuracy of the review findings.[51]

Results

Article Details

The search yielded 730 citations. Following a review of titles and abstracts, 133 relevant articles were identified, retrieved in full text, and reviewed for inclusion criteria. Of these, 88 articles were excluded because they did not explicitly describe barriers or facilitators to BFI implementation or because they addressed only 1 component of the BFI (Figure 1). A total of 45 articles met the inclusion criteria and were included in the present review. Characteristics of the selected articles are summarized in Table 2. The articles were published between 1995 and 2011. Authors were based in 16 different countries, although a language and publication bias was evident, with a disproportionate number of articles coming from the United States (28%), Australia (15%), and the United Kingdom (13%). The identification of challenges and solutions to BFI implementation was a central focus for only 10 (22%) of the 45 articles.[29, 46, 55, 56, 59, 68, 70, 77, 78, 81] Other articles mentioned barriers and/or facilitators in descriptions of BFI implementation efforts or in discussions of study findings. Eighteen articles (39%) were studies assessing the level of compliance with the Ten Steps and/or outcomes of BFI implementation; 14 articles (30%) were case descriptions

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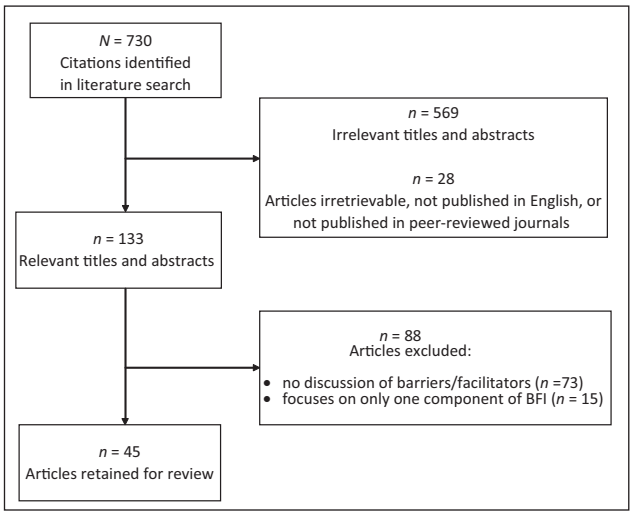

Figure 1. Article retrieval and selection.

of the process of BFI implementation at the health facility or at the regional or national level; and 11 (24%) articles assessed the knowledge, attitudes, and/or practices of health care professionals or mothers regarding the BFI. Empirical studies were predominately qualitative or descriptive quantitative in design. Only 7 (15%) articles referred to a theoretical framework in relation to BFI implementation, including continuous quality management,[58,62,63] diffusion of innovation,[77,78] social learning theory,[74] and sense of coherence.[81] Two articles[16,55] reviewed literature in relation to BFI implementation but did not address any of the primary studies included in this review and were therefore retained. The majority of the articles focused on BFI implementation in hospitals or maternity facilities, 5 articles described BFI implementation in community health services,[77,80-82,84] and 5 articles addressed implementation of the Ten Steps in neonatal intensive care units (NICUs).[69,71,77,78,83]

Barriers and Facilitators Related to BFI Implementation

Tables 3, 4, and 5 summarize sociopolitical, organizational-level, and individual-level barriers and facilitators to implementation of the BFI in hospital, community, or NICU settings. The numbers in the tables refer to the reference list of articles at the end of this article.

Sociopolitical factors. Key factors related to the broader contexts (e.g., sociocultural, economic, health system) of BFI implementation that emerged from the articles included the degree of government or health authority endorsement and support for the BFI; the extent of integration of pre-, intra-, and postnatal health care services; societal norms for infant feeding; the strength and visibility of the marketing practices of the infant formula industry; enactment of legislation to protect and support breastfeeding (e.g., maternity leaves); the socioeconomic status of health care facilities and their patient populations; and the adequacy of formal breastfeeding education in health professional training programs (Table 3). Strong recognition and support of the BFI by government or other professional bodies was the most frequently reported facilitator at the sociopolitical level, including such actions as establishing breastfeeding as a national public priority, government creation of BFI coordinating committees, and active support from BFI-accrediting bodies throughout the BFI implementation process. Another commonly reported category of facilitators involved health service actions to improve the integration of services across the perinatal continuum, to enhance the availability and diversity of community-based breastfeeding support, and to promote collaborative approaches to BFI implementation across health care facilities or regions. The most frequently reported sociopolitical barriers were the aggressive marketing practices of infant formula companies, lax government adherence to the Code, and sociocultural infant feeding norms that favor formula feeding.

Organizational factors. Organizational-level factors accounted for the largest number of barriers and facilitators to the BFI mentioned in the articles reviewed (Table 4). Issues related to the strength and style of leadership of the BFI implementation process, organizational culture, the availability of human and financial resources to carry out the Ten Steps, and the presence of audit and feedback mechanisms for Baby-Friendly practice changes emerged as key management factors influencing adoption of the BFI. Other main categories of organizational factors that influenced BFI implementation were related to specific components of the BFI. These included the presence and quality of breastfeeding policies (Step 1), the availability of mandatory breastfeeding education programs for all staff (Step 2), the impact of hospital infrastructures and routines on mother-infant contact (Steps 4 and 7), and hospital reliance on free or low-cost infant formula company products (Step 6 and the Code).

The most commonly mentioned organizational facilitator was a well-coordinated change management strategy characterized by strong administrative support, multidisciplinary involvement, motivated and credible leaders, open communication, and a flexible, participatory approach. The availability of mandatory and flexible breastfeeding education for all levels of maternity care staff (including managers and physicians) also was identified in numerous articles as an essential element for improving breastfeeding knowledge, attitudes, and practices among staff that helped pave the way for adoption of the other Ten Steps. The most frequently reported organizational barriers to implementing the BFI were insufficient funding and inadequate staffing (e.g., lack of staff or high staff turnover), which limited the ability of staff to provide direct breastfeeding support or to attend training sessions. Another commonly reported challenge was hospital structures or routines that interfere with

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Table 2. Summary of the Articles Reviewed (N = 45)[a]

Article	Country	Setting	Study Purpose	Method and Sample
Barnes,[55] 2003	Australia	H/MF	Discuss the challenges and barriers to practice change and provide strategies for developing a plan for implementing the BFHI in health facilities	Literature review
Bartick et al,[56] 2010	US	H/MF	Describe highlights of a Baby-Friendly collaborative and present recommendations for overcoming barriers	Qualitative case study; 13 hospital maternity units
Chamberlain,[57] 1997	China	H/MF	Describe the status of the BFHI implementation in an urban maternity unit	Qualitative case study; 1 urban hospital maternity unit
Chee & Horstmanshof,[27] 1996	China (Hong Kong)	H/MF	Examine hospital adherence to the Code and Ten Steps as well as the extent to which mothers perceived themselves supported to breastfeed in hospital	Cross-sectional survey; 22 hospitals, 33 maternal and child health clinics, 5 infant formula companies, 235 mothers
Chien et al,[41] 2007	Taiwan (China)	H/MF	Examine the association between the number of Ten Steps experienced by mothers in 1 hospital and breastfeeding outcomes (initiation and breastfeeding rates at 1 and 3 months)	Population-based cross-sectional survey; 2079 mothers
Clarke & Deutsch,[58] 1997	US	H/MF	Describe the process of implementing the BFHI using a total quality management approach	Qualitative case study; 1 hospital maternity unit
Crivelli-Kovach & Chung,[28] 2011	US	H/MF	Assess current implementation of the Ten Steps and compare with 1994 and 1999 data to determine changes in breastfeeding policies and practices over time	Descriptive longitudinal study (group interviews with health care professionals, survey); 25 metropolitan hospitals providing maternity care
Daniels & Jackson,[59] 2011	South Africa	H/MF	Assess the knowledge, attitudes, and practices of staff nurses and maternity unit managers regarding the BFHI; describe barriers and constraints to BFHI implementation	Cross-sectional survey; 8 unit managers and 45 staff nurses in 8 non-BFHI-accredited hospital maternity units
Dasgupta et al,[60] 1997	India	H/MF	Determine in-hospital breastfeeding practices, investigate the impact of the BFHI on breastfeeding practices, and identify barriers to exclusive breastfeeding in 1 hospital	Before-after study; questionnaires; 204 mothers; 1 hospital
Dodgson et al,[34] 1999	US	H/MF	Determine in-hospital breastfeeding rates and hospital rate of adherence to each of the Ten Steps and analyze their relationships with hospital demographic characteristics	Cross-sectional survey; obstetric nursing administrators from 80 hospitals
Edwards et al,[61] 2011	UAE	H/MF	Describe the process of successfully implementing the BFHI in a large, culturally diverse multicultural hospital	Qualitative case study; 1 hospital
Fletcher,[62] 1997	Australia	H/MF	Describe the application of a quality management approach for planning, implementing, and achieving the BFHI	Qualitative case study; maternity services in 1 hospital
Garcia-De-Leon-Gonzalez et al,[63] 2011	Spain	H/MF	Describe the implementation process and effect of a quality improvement intervention on compliance with the BFHI and on breastfeeding rates in 1 hospital	Before-after study; questionnaires, observational audits, medical records and document review, interviews with health professionals and mothers; maternity unit in 1 hospital
Gökçay et al,[29] 1997	Turkey	H/MF	Document degree of implementation of the Ten Steps; identify factors influencing implementation of the BFHI; make recommendations for improvements	Document review, interviews and focus groups with managers and staff, questionnaires to mothers; 5 urban maternity hospitals
Grizzard et al,[35] 2006	US	H/MF	Assess degree of implementation of the Ten Steps and assess the association between degree of BFHI implementation and hospital sociodemographic characteristics	Cross-sectional telephone survey; postpartum nurse managers from 43 hospitals
Hahn,[64] 2005	US	H/MF	Describe the process of BFHI implementation	Qualitative case study; 1 community hospital maternity unit
Hannon et al,[65] 1999	US	H/MF	Describe the process of implementation of the BFHI using a multidisciplinary approach	Qualitative case study; 1 urban medical center

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Table 2. (continued)

Article	Country	Setting	Study Purpose	Method and Sample
Heads,[66] 2005	Australia	H/MF	Describe the process of BFHI implementation	Qualitative case study; 1 tertiary teaching hospital
Helsing et al,[67] 2002	Russia	H/MF	Compare women's perceptions of their birthing and breastfeeding experiences in BFHI- and non-BFHI-certified hospitals	Cross-sectional survey; 180 mothers; 6 large maternity hospitals
Hofvander,[16] 2005	Sweden	H/MF	Describe national implementation of the BFHI in Sweden and compare with other countries	Qualitative case study (1 country), literature review
Kovach[30] 2002	US		Describe the status of hospital breastfeeding policies and practices to evaluate the degree of implementation of the BFHI and compare with previous data	Descriptive longitudinal study; individual and group interviews with health care professionals, questionnaires, medical record review; 35 hospitals with maternity units
Marais et al,[36] 2010	South Africa	H/MF	Assess the extent of the implementation of the Ten Steps in public and private maternity facilities; in a follow-up study assess knowledge and attitudes of health care workers and mothers and identify barriers to exclusive breastfeeding among mothers attending private breastfeeding clinics	Cross-sectional survey, observational audits, and questionnaire; 26 maternity facilities (up to 3 health care workers and 5 mothers per facility), 18 private breastfeeding clinics (25 health care workers and 64 mothers)
Martens et al,[37] 2000	Canada	H/MF	Examine correlations between breastfeeding policies and actual practices, level of compliance with BFHI criteria, and the associations between hospital practices and breastfeeding rate at 2 weeks postbirth	Cross-sectional surveys; 43 hospital administrators, 413 nursing staff, and 633 mothers; 43 hospitals
Merewood & Philipp,[68] 2001	US	H/MF	Describe the process of BFHI implementation and strategies to overcome barriers	Qualitative case study; 1 inner-city teaching hospital
Merewood et al,[69] 2003	US	NICU	Evaluate the impact of a Baby-Friendly designation on breastfeeding rates in a NICU	Before-after study; medical record review; 227 infants; 1 hospital
Moore et al,[70] 2007	New Zealand	H/MF	Identify barriers encountered during the process of government-directed BFHI implementation in public hospitals	In-depth interviews; lactation consultants from 6 hospitals
Moura de Araujo & Soares Schmitz,[42] 2007	Brazil	H/MF	Reassess adherence to the Ten Steps in BFHI-certified hospitals	Interviews with mothers and health care professionals, observation of hospital practices (using the *BFHI Reassessment Guide*); 167 hospitals
Nikodem et al,[44] 1995	South Africa	H/MF	Assess the degree of implementation of the Ten Steps in South African hospitals	Cross-sectional postal surveys; 516 mothers; managers from 138 hospitals
Nyqvist & Kylberg,[71] 2008	Sweden	NICU	Obtain suggestions from mothers of very preterm newborns regarding modification of the BFHI to the NICU environment	In-depth interviews; 13 mothers; 1 hospital
Okolo & Ogbonna,[72] 2002	Nigeria	H/MF	Assess the knowledge, attitudes, and practices of health workers related to the BFHI	Cross-sectional survey; questionnaire-guided interviews; 250 health care workers; 10 health facilities representing different levels in district health services
Raghu Raman et al,[73] 2001	India	H/MF	Assess the impact of a program to implement the BFHI on Baby-Friendly practices and breastfeeding outcomes in 1 hospital	Before-after study; questionnaire; 90 mothers pre- and 135 mothers postintervention; 1 hospital
Reddin et al,[74] 2007	Australia	H/MF	Identify factors, in relation to the Ten Steps, that influence the development of breastfeeding support practices among new midwives	Qualitative longitudinal study; sequential interviews using critical incident technique; 17 midwifery students; 1 hospital
Rogers,[75,76] 2003, 2003	UK	H/MF	Describe the process of implementation of the Ten Steps in a BFHI-designated hospital	Qualitative case study; 1 hospital
Schmied et al,[77] 2011	Australia	H/MF + NICU + CH	Describe nurse and midwife perceptions of barriers and facilitators to implementation of the BFHI	Interpretive, qualitative study; focus groups; 132 nurses, midwives, and clinical leaders from 4 maternity facilities, 2 neonatal units, and their related community services

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Table 2. (continued)

Article	Country	Setting	Study Purpose	Method and Sample
Taylor et al,[78] 2011	Australia	NICU	Explore the perceptions, understandings, and experiences of maternity care staff toward implementation of the BFHI in the NICU	Focus groups and individual interviews; 47 maternity care staff from 4 metropolitan maternity hospitals
Thomas,[79] 1997	India	H/MF	Describe the process of implementing the BFHI at the state level	Qualitative case study; all hospitals in Kerala state
Thomson et al,[80] 2011	UK	CH	Explore health care provider roles, knowledge, and experiences of the BFI and perceptions of barriers and facilitators to the process of BFI implementation in the community	Focus groups and interviews; 47 health care professionals; 2 community health care facilities
Thomson & Dykes,[81] 2011	UK	CH	Explore experiences, opinions, and perceptions of infant feeding within the context of BFI implementation in community health services	In-depth interviews; 15 women; 2 community health facilities
Vincent,[82] 2011	UK	CH	Describe the process of BFI implementation in a BFI-certified community health facility	Qualitative case study; 1 inner-city community health facility
Walsh et al,[46] 2011	Australia	H/MF	Examine the factors perceived to promote or hinder BFHI accreditation	Focus group interviews; 31 health care staff (nursing, medical, midwifery, and ancillary); 6 hospitals
Weddig et al,[83] 2011	US	H/MF + NICU	Assess variations in breastfeeding knowledge and practices of maternity care nurses and hospital practices related to breastfeeding support in BFHI vs. non-BFHI hospitals	Comparative qualitative case study; 8 focus groups; 40 maternity care nurses; 8 hospitals
Weng et al,[47] 2003	Taiwan (China)	H/MF	Assess the impact of BFHI on breastfeeding rates and analyze factors associated with achieving BFHI accreditation	BFHI appraisal (questionnaire, interviews), medical record review; 56 hospitals, 7563 mothers
Wheat,[84] 2001	UK	CH	Describe the process of BFI implementation at UK's first community health facility to achieve BFI certification	Qualitative case study; 1 urban community health facility
Wright et al,[85] 1996	US	H/MF	Implement the Ten Steps and assess the impact of changing hospital practices on breastfeeding initiation and duration	Before-after study; interviews with 192 women pre- and 392 women postintervention; 1 hospital

[a]Abbreviations: BFHI, Baby-Friendly Hospital Initiative; BFI, Baby-Friendly Initiative; US, United States; UK, United Kingdom; UAE, United Arab Emirates; H/MF, hospital or maternity facility; CH, community health; NICU, neonatal intensive care unit.

maternal-infant contact (e.g., separating mothers and infants following caesarean delivery or for routine infant care procedures; lack of appropriate facilities for 24-hour rooming-in) or that impede in-hospital opportunities for maternal learning about breastfeeding (e.g., the combination of early postpartum discharge with open visiting hours).

Individual factors: health care providers and health care users. Individual-level factors (e.g., knowledge, attitudes, and practices) influencing BFI implementation were categorized into factors pertaining to either health care providers or health care users (i.e., mothers). Key factors related to health care provider implementation included the provider's level of breastfeeding knowledge and/or skills; attitudes toward breastfeeding in general or to the BFI; reluctance to promote breastfeeding out of concern about making mothers feel guilty or out of respect for mothers' cultural beliefs and practices; and overuse of readily accessible bottles, pacifiers, or infant formula. The most commonly reported facilitator was access to a variety of formal and informal opportunities for breastfeeding education and skills training, while the most frequently mentioned barrier was attitudinal. This encompassed neutral or negative views toward breastfeeding, resistance to changing routines and practices, and unfavorable opinions of BFI implementation as being too dogmatic or time consuming. Other barriers to BFI implementation among health care providers were inadequate staff knowledge and outdated practices related to breastfeeding (particularly among senior nurses or medical staff); staff reliance on the use of infant formula, pacifiers, or breast pumps (often as a quick fix to manage breastfeeding challenges); and lack of clarification for medical reasons for supplementation and/or the absence of sanctions for inappropriate formula use.

Key individual-level factors related to mothers included their level of knowledge of breastfeeding and/or the BFI; traditional beliefs, practices, and rituals surrounding breastfeeding; the impact of the mothers' birth experiences on breastfeeding outcomes; and the availability of breastfeeding support from family members or other resources (e.g., peer

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Table 3. Sociopolitical Barriers and Facilitators to Implementation of the Baby-Friendly Initiative[a]

Key Factors	Main Barriers Identified	Main Facilitators Identified
Support of national health policy or health professional bodies	Lack of direction from government regarding BFI implementation (eg, absent or abstract government policies related to the BFI)[16,29,66,68,70,84] Lack of government funding for BFI implementation[66,84] Lack of endorsement of the BFI by health professional associations[66]	Breastfeeding established as a national public health priority; national/regional collaboration to improve breastfeeding rates and promote the BFI[42,47,57,65,77,79] Establishment of formal BFI committee at national and/or regional levels[16,27,28,79] Strong and active support from Baby-Friendly-designating bodies during the accreditation process[16,27,47,56,68,76] Provision of media attention to hospitals achieving Baby-Friendly designation[16] Breastfeeding research/practice partnerships between the government and academic institutions[36]
Integration of health services	Fragmentation of health services/poor communication between facilities (eg, hospitals do not refer mothers to community breastfeeding resources)[29,36,61] Lack of access to prenatal care or limited breastfeeding education provided during prenatal care[30,36,42,76] Lack of community-based breastfeeding support[46]	Availability/diversity of community-based breastfeeding support (eg, peer support groups, telephone hotlines, breastfeeding advocacy groups, breastfeeding clinics, early discharge follow-up programs, well-baby/immunization clinics)[27,36,66,68,70,79,80] Formal and informal partnerships between hospitals, community health agencies, and community-based support groups to support breastfeeding women[28,55,80] Interagency collaboration and sharing of experiences related to BFI implementation[27,56,68,80]
Cultural norms related to breastfeeding	Formula feeding traditions/cultural norms unsupportive of breastfeeding[27,46,61,81] Breastfeeding promotion activities do not reach larger populations[27,79] Upper-class women set formula feeding trends (India)[79]	Social marketing of breastfeeding to create public demand for improved breastfeeding services[79]
Strength of infant formula industry	Aggressive marketing by formula companies in hospitals, community clinics, pharmacies[27,35,41,64,68,73,85] Few countries enact the Code into law, making adherence voluntary[16,34]	Grassroots movements to counter formula marketing practices (eg, Ban the Bag)[56]
Legislation to protect, promote, support breastfeeding	Short maternity leave for mothers/workplace practices do not support breastfeeding[16,27,61] Lack of health insurance to cover breastfeeding aids such as breast pumps[68,69]	Enactment of laws to protect/support breastfeeding (eg, regulation of employee breastfeeding breaks)[57]
Socioeconomic disparities	BFI harder to implement in public hospitals as they have fewer resources[29] Hospitals serving low-income population have lower breastfeeding rates[69,70]	BFI implementation stronger in more affluent regions of the country[47]
Preservice training	Inadequate breastfeeding education in medical/nursing/midwifery training[34,73,84]	Improved preservice breastfeeding training of health care professionals[30]

[a]Abbreviation: BHI, Baby-Friendly Initiative.

support programs). The most commonly reported facilitators referred to the availability of innovative strategies to provide women with breastfeeding education and support across the perinatal continuum. Knowledge-related barriers were also the most commonly mentioned challenge to successful implementation of the BFI, particularly inadequate antenatal breastfeeding preparation and/or inconsistent breastfeeding information from different health care providers. Traditional beliefs and rituals related to breastfeeding (e.g., use of prelacteal feeds, prioritization of maternal rest over infant feeding, beliefs related to insufficient milk) were most often cited as barriers to acceptance of the BFI in developing nations such as China and Turkey.[27,29,41,57]

Unique challenges of implementing the BFI in NICUs and community health settings. Many of the barriers and facilitators to implementing the BFI described in the articles were shared across different types of health care settings. However, the articles addressing implementation of the BFI in

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Table 4. Organizational-Level Barriers and Facilitators to Implementation of the Baby-Friendly Initiative[a]

Key Factors	Main Barriers Identified	Main Facilitators Identified
Leadership of BFI program	Lack of administrative support (BFI not an organizational priority)[46,70,77,85] Lack of a designated leader/coordinator for the BFI project[29,59,78] Autocratic, top-down management of the BFI implementation process[46,62,75]	Strong administrative/managerial support for the BFI[59,61,63,65,66] Physician leadership and/or active endorsement of the BFI[16,29,47,64,68,84] Coordinated BFI implementation strategy (eg, BFI steering committee or taskforce) with motivated and credible leaders, a shared vision, and engagement of multidisciplinary partners and staff from all levels of the organization[29,35,46,58,61-65,68,75,78-80,82,84,85] Participatory, decentralized approach to change, with open and ongoing communication throughout the BFI implementation process[55,58,59,61,62,65,80,82] Gradual, staged implementation of the Ten Steps[47,58,78] Keeping hospital administrators informed of BFI efforts[68,76]
Organizational culture/ philosophy of care	Focus on active treatment or patient safety instead of health promotion[61,63,66,74] Lack of a patient-centered approach[58,71] Focus on Ten Steps as a "checklist" rather than a more global, best-practice approach to care[77] Lack of collaboration across perinatal units (eg, perception of NICU as a "separate world"[29,78] Private hospitals cater to consumer wishes/ demands (eg, rooming-out at night)[29,46,47]	Promotion of a breastfeeding-friendly organizational culture (eg, BFI efforts well-publicized)[65, 66, 68, 80, 82] Focus placed on optimizing family-centered care rather than pursuit of the "award" of BFI designation[29, 58, 71] Adoption of an evidence-based approach to breastfeeding to justify need for changes in practice[64, 66, 84] Hospitals pursue BFI designation to attract more educated, affluent clientele[67]
Human and financial resources	Staff shortages, high staff turnover and/or unqualified staff at both direct care and manager levels[29,42,56,59,63,70,74,77,78,83-85] Staff too busy or stressed to provide breastfeeding teaching and support[29,74,77,78,81,82] Lack of funds for costs related to BFI implementation[16,42,46,65,78,81,84]	Stable workforce[70] Integration of lactation consultants/breastfeeding resource persons into perinatal units[28,55,58,62,64,65,68,70,78] Dedicated financial support for costs of BFI implementation[84]
Audit and feedback mechanisms	Lack of resources to collect data to monitor impact of BHI practice changes[65] No monitoring or reassessment of Baby-Friendly hospitals postdesignation[79]	Adoption of a continuous quality management approach to change (eg, audits to determine baseline practices, ongoing review of BFI impacts, self-monitoring following BFI designation)[58,61-64,66,73] Initial granting of Baby-Friendly status is only for 2 years, motivating the organization to conduct continuous audit compliance with the Ten Steps and improve practices[76] BFI criteria included in hospital accreditation process[47,56] Hospitals report breastfeeding rates to the public[64]
Breastfeeding policies	Lack of formal, written breastfeeding policies, or breastfeeding policy not publically available[34-36,61,70] Lack of time or experience to draft breastfeeding policies/guidelines[46,61] Inappropriate, outdated, and/or inconsistent breastfeeding policies or practice guidelines[34-36, 44,46] Lack of enforcement of breastfeeding policies[36,46]	Formal, written breastfeeding policies and protocols that are visible and consistent with BFI values[28,30,55,64,75,76,83] Clear policies and protocols supporting BFI in high-risk situations (eg, NICU)[78] Hospital consideration of cultural/traditional factors when making changes to breastfeeding policy[29,56]
Breastfeeding training	Lack of a breastfeeding training program for staff or insufficient resources to liberate staff for training[29,30,36,44,46,57,59,65,70,72,79,84] Breastfeeding education is not mandatory, or education time is unpaid[46,85] Poor communication and unclear role responsibilities in NICU regarding breastfeeding education[78] Lack of participation of non-nursing staff in breastfeeding education[35]	Availability of breastfeeding training (basic and continuing education) targeting all staff (including managers)[16,36,44,46,56,58,64,73,75,78-80,84] Use of innovative teaching strategies (eg, e-learning, pocket guides to breastfeeding, train-the-trainer methods, videos, dolls)[27,46,55,59,65,76,84] Assessment of staff education needs (eg, via surveys or breastfeeding case reviews)[55,64] Breastfeeding training integrated into mandatory orientation programs[64,74]

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Table 4. (continued)

Key Factors	Main Barriers Identified	Main Facilitators Identified
Infrastructure and routines	Hospital structures/routines that interrupt mother-infant contact (eg, separation for routine procedures or post-caesarean recovery, lack of 24-hour rooming-in, rushing mothers from delivery rooms)[27-30,41,46,47,57,58,60,61,74,78,85]	Pumping rooms visible and readily accessible; increased access to pumps[68,69] Eliminating nurseries from obstetrical units[58]
	Early hospital discharge combined with open visiting hours limits time for breastfeeding teaching and support[29,30,56,66,74,81]	
	Unsupportive, stressful breastfeeding environments in neonatal units[58,71,78]	
Hospital reliance on formula company products	Hospitals provided with free or subsidized formula/formula products	Terminating hospital contracts with infant formula companies, paying for formula, and declining formula company gifts and handouts[68]
	Lack of standards to calculate fair market price for formula, or lack of funds to pay for it[34,35,56,68]	Using ethics committee to halt handouts of free infant formula; discouraging staff from handing out formula[56]
	Staff attitudes influenced by formula company gifts (eg, small gifts, free lunches)	Removing formula company ads throughout the health care facility and increase visibility of breastfeeding/BFI (posters, leaflets etc)[68,75]
		Use of ancillary staff to monitor facility for Code violations[84]

[a]Abbreviations: BFI, Baby-Friendly Initiative; NICU, neonatal intensive care unit

NICUs identified some unique challenges, including the lack of privacy or space to pump or breastfeed, impact of the noisy and stressful environment on feeding and mother-infant contact, lack of access to breast pumps to initiate and maintain lactation, lack of staff expertise in managing breastfeeding for ill or premature infants, ubiquitous use of bottles and pacifiers for infant feeding and soothing, inadequate antenatal breastfeeding preparation among mothers who unexpectedly delivered prematurely, and maternal focus on infant health status rather than breastfeeding.

The few articles that addressed Baby-Friendly community health services described similar barriers and facilitators as those identified in hospital settings, particularly regarding organizational-level challenges such as lack of resources, resistance to change, and barriers to staff breastfeeding training. However, key facilitators of BFI implementation in community health services included the establishment of both formal and informal networks of engagement between different professional groups and key partner agencies in the community to support continued breastfeeding after hospital discharge, as well as the availability and accessibility of community-based breastfeeding support services (e.g., telephone hotlines, peer support groups). Volunteer-based breastfeeding support such as peer support organizations was particularly valued in light of community health staff shortages.

Recommendations for Implementing the BFI

Recommendations for strengthening BFI implementation efforts gleaned from the 45 articles reviewed are synthesized in Table 6. The recommendations were broadly categorized into extraorganizational strategies to support BFI implementation at the population level and intra- or interorganizational strategies to overcome barriers to the adoption of Baby-Friendly practices within health care facilities. Extraorganizational recommendations primarily targeted health policy makers to integrate the BFI into national health priorities and standards of practice, establish national BFI coordinators, boost health services resources and capacity to implement the Ten Steps and the Code, establish formal monitoring systems for breastfeeding rates and practices, and implement social marketing strategies to shift public attitudes toward breastfeeding. Several authors also called for intersectoral action at the government level to enact improved legislation to support breastfeeding women (e.g., adequate maternity leaves), regulate the infant formula industry, and improve preservice breastfeeding training for health care providers. Intraorganizational recommendations to enhance the BFI focused predominately on the adoption of effective change management strategies targeting both organizational culture and clinical practices. These included securing dedicated resources and skilled leaders for the BFI implementation process, creating a strategic plan, enhancing administrator and multidisciplinary staff commitment to the pursuit of Baby-Friendly designation, ensuring participatory and flexible implementation of practice changes, and using a continuous quality improvement approach. Other key categories of inter- or intraorganizational recommendations for supporting BFI implementation addressed the central role of breastfeeding training; measures to counter the marketing practices of formula companies; improving the continuity and consistency of pre-, intra-, and postpartum breastfeeding

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Table 5. Individual-Level Barriers and Facilitators to Implementation of the Baby-Friendly Initiative[a]

Type of Individual	Key Factors	Main Barriers Identified	Main Facilitators Identified
Health care providers	Knowledge/ skills related to breastfeeding	Inadequate or variable staff knowledge and skill related to breastfeeding or the BFI Outdated practices among physicians or senior staff (junior staff not empowered to challenge outdated practices)[29,68,74,82,84] Misconception of which of the Ten Steps apply to NICUs[71,78] Lack of knowledge of community resources[29,36]	Access to both formal and informal opportunities for breastfeeding education/skills training (eg, peer learning from more experienced staff, one-to-one teaching from lactation experts, self-learning modules, discussion of breastfeeding policies, attendance at formal training sessions or workshops)[29,30,41,44,57-59,64,66,70,71,75,78-80,82,85] Expansion of staff roles/skills (eg, cross-training of perinatal staff) to better promote BFI practices[56]
	Staff attitudes toward the BFI	Negative or ambivalent views toward breastfeeding, particularly among senior staff, and medical staff[29,44,59,66,68,74,82,84] Negative or conflicting attitudes toward the BFI as a breastfeeding promotion program (eg, seen as too dogmatic, too inflexible, or too much work)[55,59,63,77,78] Resistance to change (particular among senior staff, and medical staff) Breastfeeding management not considered a clinical priority[61,65,66,83] Staff are patronizing, dogmatic about breastfeeding, or lack sensitivity to patient/family needs[71,81]	Existence of research supporting BFI influences positive feelings toward BFI[77] Engaging each staff member in BFI process; staff ownership of BFI implementation (eg, assistance with policy writing, mentoring, education/training)[56,61,64,77] Staff more motivated to implement BFI if results are visible and perceived as achievable[77] Close engagement of BFI leaders with staff to understand their practice realities[56,64]
	Discomfort promoting breastfeeding	Reluctance to "push" breastfeeding (concerned about making mothers feel guilty about their personal feeding choices)[16,29,46,58,75,77,81] Traditional beliefs that prioritize maternal rest over infant feeding (eg, belief that a mother is ill immediately postbirth and should not be made to room-in)[60]	Staff approach that is flexible, open, and embodied is viewed by patients as more effective than rigid, rules-driven approach to breastfeeding support[81] Reframing language used with new mothers to be more breastfeeding friendly[64] Staff support for and encouragement of BFI policies in the NICU[71,78]
	Use of formula, bottles, and pacifiers	Overreliance on breastfeeding aids (eg, breast pumps, bottles, pacifiers, or formula) to manage breastfeeding challenges[29,44,46,64,74,78] Formula and/or bottle use prevails among high-risk patients (eg, cesarean section delivery; infants in the NICU)[28,29,42,61,63,70,81] Lack of clarification of medical reasons for supplementation[16,35,37,56,58,85,] Staff not held accountable for inappropriate use of formula supplements[37,58,74,83,85] NICU staff perceive role of mothers is to express milk, not breastfeed[78] Confusing recommendations for formula feeding for HIV-positive mothers[44]	Restricting staff access to pacifiers or formula for supplementation[30,35,46,56] Access to human donor milk/milk banks[57,83] Establish cup feeding of expressed breast milk instead of nipple feeding as standard practice in NICU (with use of formula feeding where indicated)[28,58,71]
Mother/family members	Knowledge about breastfeeding and the BFI	Lack of knowledge about breastfeeding contributing to low motivation to breastfeed or early weaning, especially among less-affluent, younger, and less-educated mothers[42,60,65] Inadequate antenatal breastfeeding preparation (contributing to unrealistic expectations about breastfeeding)[30,46,56,57] No opportunity for antenatal breastfeeding preparation among mothers who deliver prematurely[71] Mothers receive inconsistent breastfeeding information (eg, staff teach from their own personal breastfeeding experiences)[27,35,36,61,64,71,74,77,81] Mothers receive limited information about formula and products or are not presented with a choice[81] Lack of appropriate teaching tools for women with diverse educational needs or language backgrounds (eg, illiterate)[61]	Use of innovative and varied strategies for providing mothers with breastfeeding teaching and support over the perinatal continuum (eg, breastfeeding classes, phone support, use of peer counselors on in-patient units, flyers, DVDs, baby care record)[28,30,44,46,56,61,62,66,68,76,79,82] Longer length of stay in NICU allows more time for education of mothers in NICU[78]

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Table 5. (continued)

Type of Individual	Key Factors	Main Barriers Identified	Main Facilitators Identified
	Mothers' beliefs and practices related to breastfeeding	Mothers are uncomfortable breastfeeding or having skin-to-skin contact in front of staff or visitors[27,30,41,61,81] Traditional beliefs and practices related to breastfeeding and postpartum recovery (eg, avoidance of colostrum, use of prelacteal feeds, promotion of rest)[16,30,41,61] Concerns about insufficient milk lead to formula supplementation[29,30,41,47] More mothers choosing mixed feeding/ supplementation with formula[28,30] Mothers delay the first feeding due to presence of visitors, exhaustion[30] Strong reliance on pacifiers; pacifiers as cultural norm[29,46]	Patient interest in and family support of breastfeeding[29,65,81] Mothers have positive attitudes toward health care provider promotion of the BFI[36] Better-educated mothers demand better breastfeeding services[47] Creation of a publicity campaign to highlight benefits of rooming-in[61] Parents must sign informed consent forms to use formula[76]
	Birthing experiences	Obstetrical interventions (eg, cesarean section delivery) and high-risk pregnancies associated with problems initiating or sustaining breastfeeding[28,42,61,70,81] Mothers have trouble taking in breastfeeding information immediately after birth and neonate transfer to the NICU[71]	Early transfer of babies' care to their parents in the NICU[71]
	Family support and other resources	Lack of family support to breastfeed[73] Family members offer supplements, prelacteal feeds[29] Financial barriers for mothers wishing to obtain breast pumps[69,78]	Mothers' involvement with breastfeeding peer support programs (mother-to-mother support)[36,64,68,81,82] Education and/or engagement of family members/social network to support breastfeeding, skin-to-skin[56,65]

[a]Abbreviations: BFI, Baby-Friendly Initiative; NICU, neonatal intensive care unit

services; and creating collaborative networks across health care organizations and community resources working toward Baby-Friendly designation.

Discussion

This comprehensive, integrative review of literature on the BFI synthesized barriers, facilitators, and recommendations related to BFI implementation across a wide variety of health care settings and sociocultural contexts. Despite universal recognition of the benefits of breastfeeding and strong evidence for the positive impact of the BFI on breastfeeding outcomes, global implementation of the Ten Steps remains well below target, particularly in highly industrialized countries such as the United States[86] and Canada.[87] Using a MIP framework,[52] this review identified numerous factors at different levels of the health care system that interact to influence adoption of Baby-Friendly practices. The wide range of strategies for overcoming obstacles to BFI implementation elicited in the review underscores that carefully planned, multipronged, and multilevel approaches to implementing the BFI are needed to influence both organizational practices and broader health policy.

The review findings suggest some priority issues that need to be addressed when pursuing Baby-Friendly designation. These include the endorsement of both local administrators and governmental policy makers to leverage resources for BFI implementation, effective leadership of the practice change process, and the training of health care workers to improve breastfeeding practices and shift attitudes toward breastfeeding.[88,89] Also in need of change are the influence of formula companies[90,91] and the integration of hospital and community-based perinatal health services.[92] These are consistent with UNICEF's 2005 review of the Innocenti Declaration, which identified the following main challenges to BFI implementation: commitment of staff, compliance and quality control, cost, community outreach, extending the continuum of care, and integration of the BFI with other initiatives.[93]

Many of the barriers, facilitators, and recommendations listed in this review are also contained in reports on obstacles and solutions to implementing each of the Ten Steps from Baby-Friendly USA[48] and WHO/UNICEF.[49] Review findings also are consistent with 2 reports on breastfeeding promotion in health services that suggest effective strategies for implementing evidence-based breastfeeding practices such as the BFI.[94,95] However, more work is needed to determine which of the myriad obstacles to BFI implementation should be tackled first, and in what order, to maximize the impact and synergy of efforts to implement the Ten Steps. Our literature search found no research explicitly addressing optimal sequencing of implementation of the Ten Steps. However, 2 of the articles reviewed[42,55] identified Step 1 (breastfeeding policy) and/or Step 2 (training of health care staff) as fundamental to compliance with the BFHI. Another gap in the literature is the typical length of time it takes to fully implement the Ten Steps. Only 8 of the articles reviewed[29,62,63,68,70,76,79,84] documented timelines for achieving Baby-Friendly accreditation, which ranged from 1 to 6 years.

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Table 6. Synthesis of Recommendations for Implementing the Baby-Friendly Initiative[a]

Level	Main Recommendations Identified
Extraorganizational	Provide strong government support for BFI and fund regional positions to coordinate BFI implementation
	• Establish and fund BFI coordinators at the national and regional levels; formalize a national strategy to support BFI accreditation across the country • Coordinate BFI implementation with existing national breastfeeding networks • Provide local organizations with guides for implementing the BFI • Enact and support multisectoral measures to promote a breastfeeding-friendly culture (eg, workplace breastfeeding support, improved maternity leaves)
	Translate the Code into law; regulate formula industry marketing
	Promote BFI as benchmark for local, regional, and national authorities
	• Promote BFI and the Code as bases for breastfeeding best practice standards • Include BFI-related indicators in national benchmark standards and hospital accreditations • Monitor breastfeeding rates, practices, knowledge, and beliefs at the regional and national levels • Continue to monitor hospitals after BFI certification
	Introduce BFI in larger, trendsetting maternity hospitals (to act as role models)
	Implement social marketing strategies to promote breastfeeding and the BFI
	• Educate public about breastfeeding to create consumer demand for Baby-Friendly services and to support continued breastfeeding • Tailor breastfeeding information/communication to key target group (eg, low-income mothers)
	Promote breastfeeding in public spaces
	Provide hospitals with funding for BFI implementation, particularly for breastfeeding training and purchasing of formula
	Target smaller and/or rural facilities for BFI support and education
	Develop incentives/recognitions for providers/hospitals that comply with Baby-Friendly practices
	• Provide funding to hospitals with higher breastfeeding rates; give pay-for-performance incentives for individual care providers; recognize health care facilities for breastfeeding excellence; reward Baby-Friendly hospitals with more points during accreditation
	Disseminate successful models of BFI implementation as role models
	Promote breastfeeding education in health professional programs
	• Introduce lactation and breastfeeding management into nursing and medical school curricula
	Implement the BFI in university-based teaching hospitals
	Adopt a public health/health promotion approach to frame the BFI
	• Integrate BFI with other child health programs (eg, Safe Motherhood)
	Invest in prenatal and postnatal outreach for breastfeeding promotion and support
Inter- and intraorganizational	Have a strategic plan: develop an interdisciplinary core team task force, BFI coordinators, and strong leaders to implement the BFI
	• Develop organizational and human resources for BFI promotion; seek out motivated individuals; select leaders who have knowledge and competence, not just authority • Enforce breastfeeding policy at a high administrative level and restrict unhelpful practices • Conduct regular BFI meetings between all units involved • Group steps similar to the Ten Steps and set priorities for successful implementation (eg, create a breastfeeding policy sets the expectations; staff education serves as a foundation for attitude and practice change) • Create a Baby-Friendly organizational culture • Create a family-centered care environment • Adopt an evidence-based practice approach; focus on benefits of BFI for patients/families to justify changing work routines
	Acknowledge the discourse between infant feeding as a mother's choice and breastfeeding as a *medical choice* for infants (address both the "science" and "emotions" behind BFI implementation)

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Table 6. (continued)

Level	Main Recommendations Identified
	Use effective organizational change strategies—recognize that the style of BFI implementation is central to the success of its adoption • Avoid a procedural/bureaucratic approach • Involve staff in decision making; practice open communication and share the plan; adopt participatory and enabling approaches to change management • Address ineffective breastfeeding policies and practices at the grassroots level • Be flexible and make changes as the project evolves • Implement BFI steps gradually (step-by-step approach) to improve staff breastfeeding attitudes and knowledge • Maintain a positive attitude while managing the expectations of patients, family/friends, and staff • Consider cultural/traditional factors and other local needs before making changes to health services
	Create clear guidelines to support Baby-Friendly practices in the NICU
	Develop staff education programs early in the process • Develop and implement accessible lactation programs that target all staff early in the implementation process • Sponsor lactation consultant training and breastfeeding education courses in hospitals (however, do not allow an "elitist" group to own all the lactation knowledge/skills) • Commit to some increase in breastfeeding education for staff even if the 18-20 h required is not initially realistic
	Provide training and ongoing support for both providers and decision makers
	Develop indicators of BFI success, monitor breastfeeding indicators, and provide staff with feedback to motivate continued improvements • Gather unit-specific breastfeeding statistics to assist in guiding breastfeeding promotion efforts • Identify, measure, and regularly assess indicators of BFI implementation success; use the information to make continuous improvements and to build support for the BFI across the organization
	Share mothers' positive feedback about BFI changes with staff to maintain motivation
	Decrease the influence of formula companies • Limit formula marketing practices in hospital units to avoid inconsistent feeding messages • Discontinue the practice of providing mothers with discharge packs containing formula or formula coupons; offer alternatives to families, such as hospital-produced discharge packs containing educational materials • Ban formula company "educational" sessions and other forms of industry presence • Use hospital ethics committees to block marketing practices that put finances above patient care • Encourage hospital administrators to examine the true costs of continuing to accept free formula
	Support the establishment of milk banks (but monitor for risk of HIV infection)
	Promote an integrated, continuum-of-care approach to BFI implementation • Provide accessible antenatal maternal breastfeeding education to set realistic breastfeeding expectations and provide parents with anticipatory guidance; involve family and social networks in breastfeeding education • Provide hospitals with adequate supplies/resources (eg, breast pumps) to support breastfeeding practices • Address the provision of inconsistent breastfeeding information • Consider restricting postpartum visiting hours to support demand feeding and maternal learning during the short hospital stay • Promote and facilitate the development of peer support programs and other community-based breastfeeding programs; integrate peer counselors in hospital-based breastfeeding support activities
	Establish collaborations between health care facilities pursuing a Baby-Friendly designation to share implementation efforts and promote regional spread of the BFI

[a]Abbreviation: BFI, Baby-Friendly Initiative.

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Recent studies of BFI implementation grounded in theoretical models of organizational change included in this review[77,80] offer promising direction for the development of more effective approaches to the adoption of the BFI. Conceptualizing the Ten Steps as a complex, evidence-based practice change and drawing on the rapidly growing field of implementation science to inform BFI implementation efforts may also increase global uptake of the BFI. Systematic study of contextual features that act as barriers or facilitators to the adoption of evidence-based practices in health care has been identified as a key priority in the field of implementation science.[96] Organizational context encompasses such dimensions as the physical and infrastructure features of the health care setting; organizational culture and leadership; availability of time, resources, and education to support change; interpersonal relationships; and environmental complexity and workload.[97,98] All of these were identified as influential factors related to BFI implementation in the current review. Implementation frameworks such as the Promoting Action on Research Implementation in Health Services (PARiHS) model[99] provide guidance for effective evidence-based practice change by considering the nature of the evidence being implemented, the organizational context for change, and the organizational approach to facilitation of practice change. The use of such context-focused knowledge transfer models is critical for the development of effective interventions to support adoption of the BFI in different types of health care settings.

Review findings also point to the importance of broader strategies aimed at the health system, government, and public to influence country-level implementation of the BFI. The WHO's 2009 update for the BFHI has led to renewed calls to revitalize, expand, and integrate the BFI within a broader public health framework so that national infant and young child feeding initiatives can be optimized. However, planning, implementing, and evaluating multifaceted programs such as the BFI is complex and requires consideration of the intensity, reach, and timing of interventions delivered; consideration of program impacts as well as unplanned spin-offs; and identification of synergies and as well as antagonistic interactions between program components.[53] Using a MIP approach for scaling up the BFI at the regional or national level would help to identify key areas of impact and synergy as well as barriers to wider implementation of the BFI.

Limitations

This review was limited to peer-reviewed articles published in English, resulting in a dominance of articles from English-speaking, industrialized countries. Review findings may thus have limited transferability to nations with very different populations and health care systems. Although the articles from industrialized and less-developed countries reported similar barriers and facilitators to BFI implementation, our findings suggest that traditional practices and beliefs related to breastfeeding, lack of human and financial resources (especially for breastfeeding training), lack of formal breastfeeding policies, and unsupportive hospital infrastructure and routines were particularly salient barriers in the low- and middle-income countries represented in the review. Important lessons about BFI challenges and solutions in diverse sociocultural contexts (particularly from developing countries that have widely implemented the BFI despite scarce resources or countries such as Sweden and Norway with nearly universal implementation of the BFI) may be more available in other sources such as local journals or government reports. Findings are also limited by the fact that the articles were not screened for quality, although this enabled the inclusion of numerous, nonempirical descriptions of BFI implementation. The review also found few studies that focused specifically on barriers and facilitators or that examined expansion of the BFI to either community or specialty-care settings. This suggests important gaps in the literature that need to be addressed.

Conclusion

The BFI is a comprehensive, multicomponent program for implementing evidence-based practices to protect, promote, and support breastfeeding. This review identified different levels of barriers and facilitators to the adoption of the BFI, which can help inform more strategic planning of BFI implementation activities in different health care settings. The complexity of issues influencing the adoption of the Ten Steps and the Code at the organizational level points to the value of context-focused implementation frameworks. More theory-driven studies are now needed to move beyond barriers and identify the most effective strategies for wider implementation of the BFI.

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