2011

Gaps and Strengths in US Policies on Infant and Young Child Feeding: An Analysis Based on the Global Strategy on Infant and Young Child Feeding

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Acknowledgements

I would like to thank Sylvia Ellison, MA for her enthusiastic and wise support for this research project; Dr. John McAlearney for his economics perspective and input; and Dr. Cristina Redko, for her insights and guidance as this project developed. I am grateful to Dr. James Ebert for introducing me to Wright State's Master of Public Health program and for his confidence in my abilities.

I am especially grateful to Karin Cadwell, PhD; Miriam Labbok, MD; Lawrence Gartner, MD; Melissa Bartick, MD; Katherine Shealy, MPH; Audrey Naylor, MD; Ruth Lawrence, MD; Elisabeth Sterken, MS (IBFAN North America); Rebecca Norton (IBFAN / GIFA); Geri Fitzgerald, RN; Randa Saadeh, MS; Carmen Casanovas, MD; and Kathy Kendall-Tackett, PhD for their input, insights, friendship, and ongoing leadership in this project and in the international field of infant and young child feeding. Thanks go to my sister Nancy Dahlstrom, MFA, for her continued patient support, for asking tough questions, and for her wise academic perspective.

Finally, special thanks go to my husband Dennis Smith; my children Edwin Smith, Hannah Boswell and Carl Smith; and my granddaughter Carrie Boswell for their ongoing encouragement and support.

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Abstract

This research project reviews the evidence on the significance of infant and young child feeding to public health goals, analyzes US policy documents in relationship to the *Global Strategy* using the World Breastfeeding Trends Initiative (WBTi) to quantify the findings into a national score, and then summarizes the gaps and strengths in US policies and makes recommendations. Using the WBTi scoring system, strengths for the US exist in national policy, Baby-Friendly Hospital Initiative, monitoring and evaluation, and complementary feeding. Mother support and community outreach, information and support were moderate. Gaps exist in policies on infant feeding in emergencies and for mothers with HIV and four specific practice areas: early initiation of breastfeeding, exclusive breastfeeding for 6 months, mean duration of any breastfeeding, and bottle-feeding of breastfed infants. Full implementation and funding of the 2011 US *Surgeon General's Call to Action to Support Breastfeeding* could substantially improve infant and young child feeding practices.

Gaps and Strengths in US Policies on Infant and Young Child Feeding: An Analysis Based on the *Global Strategy on Infant and Young Child Feeding*

The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) jointly developed the *Global Strategy for Infant and Young Child Feeding* (GSIYCF or *Global Strategy*) to "revitalize world attention to the impact that infant feeding practices have on the nutritional status, growth and development, health, and thus the very survival of infants and young children" (World Health Organization & United Nations Childrens Fund, 2003, p. v). The Fifty-Fourth World Health Assembly passed Resolution WAH54.2 incorporating the *Global Strategy*'s core goals in 2002. The *Global Strategy* is a guide for integrated, comprehensive action at highest government levels. It recommends exclusive breastfeeding for the first 6 months followed by continued breastfeeding with the addition of nutritionally adequate and safe complementary foods for two years or beyond; integrates other previous policy documents and agreements; and identifies specific contexts for implementation.

In 1990, the United States recognized the importance of breastfeeding as a public health issue by signing the *Innocenti Declaration on the Protection, Promotion, and Support of Breastfeeding* adopted by WHO and UNICEF (United Nations Childrens Fund, 1990). The Innocenti Declaration is a major policy framework document integrated into the *Global Strategy*. The World Breastfeeding Trends Initiative (WBTi) is an evaluation tool developed by the International Baby Food Action Network of Asia (IBFAN-Asia) to analyze national policies, programs and practices weaknesses in implementing the *Global Strategy for Infant and Young Child Feeding* (International Baby Food Action Network (IBFAN) Asia & Breastfeeding Promotion Network of India (BPNI), 2008). This research project reviews the evidence on the significance of infant and young child feeding to public health goals, analyzes US policy documents in relation to the *Global Strategy,* uses the WBTi to quantify the findings into a

national score, then summarizes the gaps and strengths in US policies and presents recommendations.

Research Questions

What is the significance of infant and young child feeding as a public health issue?

The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) began campaigns and initiatives to improve infant young child feeding practices in the 1970s which have demonstrated increased importance with almost every new research study that is published. The 2003 Lancet Child Survival Series concluded that about 13% (1.3 million) of deaths of children under five years old could be prevented by improved breastfeeding; another 6% (0.6 million) deaths could be prevented by appropriate complementary feeding (Black, Morris, & Bryce, 2003; Bryce et al., 2003; Claeson et al., 2003; Jones et al., 2003; Victora et al., 2003). Even in the US, rates of illness and death in artificially fed (formula-fed, not breastfed) infants and children greatly exceed morbidity and mortality in breastfed children (Bartick & Reinhold, 2010; Ip et al., 2007b). The United States has identified improved breastfeeding as a public health goal as early as 1984 (Department of Health and Human Resources, 1984).

What tools exist for analyzing US policies compared with the Global Strategy for Infant and Young Child Feeding?

Numerous tools exist for tracking national health systems, outcomes and statistics, including the Human Development Index, WHO Health Systems Performance, WHO Global Data Bank on Infant and Young Child Feeding, and World Bank databases. The US Centers for Disease Control and Prevention (CDC) publish a Breastfeeding Report Card (BRC) which provides data on US status on some (but not all) of the *Global Strategy* elements. The World Breastfeeding Trends Indicator (WBTi) is the only available global tool for tracking, assessing,

and monitoring implementation of the *Global Strategy* through detailed investigation of infant and young child feeding practices, policies and programs within a country.

What gaps and strengths exist in US policies on infant and young child feeding?

US infant nutrition policies and strategies are derived from and based on global agreements signed by US officials, position statements from major health professional organizations, and recommendations of scientific agencies in the US. For this analysis, national-level published recommendations, national strategies, data elements tracked and reported, government agencies' reports and major professional associations' position statements collectively embody US policies on infant and young child feeding.

Review of Literature

Significance of Infant and Young Child Feeding as a Public Health Issue

The World Health Organization (WHO) has, since at least 1974, recommended breastfeeding as a specific nutritional practice to support infant and young child health. World Health Assembly (WHA) resolutions are passed by the governing body of WHO, composed of representatives from its member nations. WHA resolutions have refined, clarified, expanded, and strengthened the general concept that "breastfeeding is the healthiest form of infant feeding." WHO nutrition recommendations follow an extremely rigorous and lengthy development process with many expert consultations supported by abundant research evidence. The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) began campaigns or initiatives to improve infant young child feeding practices in the 1970s which have demonstrated increased importance with almost every new research study that is published. The United Nations Millennium Declaration committed member nations, including the US, to a series of time-bound targets related to improving health and reducing extreme poverty. Millennium

Development Goal (MDG) 1 addresses the nutritional status of children under age five[1]; MDG 4 (Child survival) is specifically relevant to infant and young child feeding[2]. Breastfeeding outcomes are also addressed in MDG 5 (Improve maternal health)[3].

Infant and under-five child mortality rates are core global health indicators and an important measure of a population's general health. Artificial feeding – i.e., lack of maternal breastfeeding – has been a well-known risk factor for infant morbidity for nearly a century (Sedgwick & Fleischner, 1921). In under-developed and resource-poor countries, artificial feeding carries a very high risk of mortality and morbidity (Horta, Bahl, Martines, & Victora, 2007). Even in industrialized and affluent countries, under-five mortality rates are still significantly higher in formula-fed children than in breastfed children. For example, Bartick and Reinhold estimated that 911 children die every year in the US because they were not breastfed (Bartick & Reinhold, 2010). The 2003 Lancet Child Survival Series concluded that more than 2 million deaths of children aged 1 month to < 5 years old from infectious diseases could be prevented by (1) immediate skin-to-skin contact (0.2 million); (2) improved breastfeeding (1.3 million); and (3) appropriate and timely complementary feeding (0.6 million) (Black, et al., 2003; Bryce, et al., 2003; Claeson, et al., 2003; Jones, et al., 2003; Victora, et al., 2003).

Preventive Intervention	**Number (thousands)**	**Deaths prevented as proportion of all child deaths**
Breastfeeding	1301	13%
Insecticide-treated materials	691	7%
Complementary feeding	587	6%
Zinc	459	5%
H Influenza vaccine	403	4%
Antiseptic delivery	411	4%
Water, sanitation, hygiene	326	3%

Figure 1. Chart courtesy of Randa Saadeh, WHO Nutrition for Health and Development, 2008; adapted from 2003 Lancet Child Survival Series

[1] Millennium Development Goal 1 is End Hunger & Extreme Poverty which includes the nutritional status of children less than 5 years of age.
[2] Millennium Development Goal 4 is *Reduce Child Mortality*. Under-5 mortality rates are strongly affected by infant and young child nutrition – i.e., breastfeeding and complementary feeding practices.
[3] Millennium Development Goal 5 is *Improve Maternal Health*; Target 5A is *Reduce maternal mortality.* Childbirth practices and complications affect the mother's ability to lactate (produce milk) and thus breastfeed her infant.

Infants who are not breastfed – i.e., are fed with manufactured formulas made from cow's milk, soy protein, or other substances – have higher rates of morbidity and mortality from infections, Sudden Infant Death Syndrome, chronic diseases, and other illnesses. Mothers who give birth and do not lactate have higher rates of some cancers, accelerated return of fertility, and other negative health outcomes. The 2011 US Surgeon General's *Call to Action* to Support Breastfeeding (US Department of Health and Human Services, 2011) lists the following excess health risks associated with not breastfeeding[4]:

Outcome	**Excess Risk (%) (95% CI)**	**Comparison**
Among full-term infants		
Acute ear infections (otitis media)	100 (56, 233)	EFF‡ vs. EBF§ for 3 or 6
Eczema (atopic dermatitis)	47 (14, 92)	EBF <3 mos vs. EBF ≥3 mos
Diarrhea and vomiting	178 (144, 213)	Never BF¶ vs. ever BF
Hospitalization for lower respiratory tract diseases	257 (85, 614)	Never BF vs. EBF ≥4 mos
Asthma, with family history	67 (22, 133)	BF <3 mos vs. ≥3 mos
Asthma, no family history	35 (9, 67)	BF <3 mos vs. ≥3 mos
Childhood obesity	32 (16, 49)	Never BF vs. ever BF
Type 2 diabetes mellitus	64 (18, 127)	Never BF vs. ever BF
Acute lymphocytic leukemia	23 (10, 41)	Never BF vs. >6 mos
Acute myelogenous leukemia	18 (2, 37)	Never BF vs. >6 mos
Sudden infant death syndrome	56 (23, 96)	Never BF vs. ever BF
Among preterm infants		
Necrotizing enterocolitis	138 (22, 2400)	Never BF vs. ever BF
Among mothers		
Breast cancer	4 (3, 6)	Never BF vs. ever BF (per year of BF)
Ovarian cancer	27 (10, 47)	Never BF vs. ever BF

Figure 2: * The excess risk is approximated by using the odds ratios reported in the referenced studies. † CI = confidence interval. ‡ EFF = exclusive formula feeding. § EBF = exclusive breastfeeding. ¶ BF = breastfeeding.

A systematic review of maternal and infant health outcomes related to infant feeding in developed countries conducted by the Agency for Healthcare Research and Policy (AHRQ) reported that "a history of breastfeeding was associated with a reduction in the risk of acute otitis media, non-specific gastroenteritis, severe lower respiratory tract infections, atopic dermatitis, asthma (young children), obesity, type 1 and 2 diabetes, childhood leukemia, sudden infant death

[4] This language establishes breastfeeding as the norm, instead of "advantages of breastfeeding" which assumes formula feeding is the norm.

syndrome (SIDS), and necrotizing enterocolitis… For maternal outcomes, a history of lactation was associated with a reduced risk of type 2 diabetes, breast, and ovarian cancer" (Ip et al., 2007a, p. 7).

Economically, formula feeding is very expensive in terms of outright costs of the products needed (bottles, teats, formula, and safe storage) and secondary costs of excess disease, which fall upon the end-users of infant formula: parents, third-party payers, and the entire health care system. A 1999 study estimated that families who adopt optimal breastfeeding practices would save $1,200-1,500 per year (Ball & Wright, 1999). Nationally, a 2001 study reported that $3.6 billion could be saved if breastfeeding rates reached the Healthy People 2010 goals. Adjusting for 2007 dollars, if 90 percent of families followed guidelines to exclusively breastfeed for six months, the US would save an estimated $13 billion annually from reduced direct costs of medical care and indirect costs of premature death. If 80% of babies were exclusively breastfed, an estimated $10.5 billion would be saved (Bartick & Reinhold, 2010). There are enormous financial implications of every aspect of formula-feeding, from the production, marketing, distribution and sale of formula-feeding products to the drugs and therapies that are needed in higher amounts to treat illnesses related to formula feeding (Drago, 2011).

Rationale for WHO Recommendation of Exclusive Breastfeeding for the First 6 Months

Exclusive breastfeeding from birth until around 6 months of age is the core WHO/UNICEF infant and young child feeding policy. Exclusive breastfeeding means that from the moment of birth, nothing other than the mother's breast enters the baby's mouth and nothing other than her colostrum and milk enter the baby's body for about six months, or until the baby shows developmental signs of readiness to start eating other foods. The infant receives no water,

nor other animal milks, teas, ritual feeds, or supplements of any kind. Medications given for specific therapeutic indications are excluded.

The optimal duration of exclusive breastfeeding has been a source of debate, contention, and research for many years. The World Health Organization has recommended breastfeeding (in general) since 1974 (World Health Organisation, 1974). The first instance of a specific *duration* of exclusive breastfeeding appears in World Health Assembly Resolution WHA 33.32, referencing the WHO/UNICEF joint statement *Protecting, Promoting and Supporting Breastfeeding, the Special Role of Maternity Services*, recommending exclusive breastfeeding for 4-6 months (World Health Organization & United Nations Childrens Fund, 1989). On May 18, 2001, the 54th World Health Assembly passed Resolution 54.2, recommending six months of exclusive breastfeeding; this policy and recommendation appears in all subsequent WHO and UNICEF policy documents. The resolution was passed by acclamation, not by individual-country roll-call vote. The US delegation participated in the acclamation (consensus).

The US has been inconsistent in adopting the WHO recommendation of 6 months' exclusive breastfeeding with continued breastfeeding duration until age 2 or more years. Neither the 2011 US *Surgeon General's Call to Action to Support Breastfeeding* (CTA) nor the 1990 *DHHS Blueprint for Action on Breastfeeding (Department of Health and Human Services, 2000b)* specifically states a recommendation for the duration of exclusive or any breastfeeding. Yet the 2011 CTA references the 1990 *Innocenti Declaration* signed by Assistant Surgeon General Dr. Audrey Hart Nora which recommended exclusive breastfeeding for 4-6 months and continued breastfeeding for 2 or more years (United Nations Childrens Fund, 1990). Healthy People 2000 and 2010 established breastfeeding objectives for three milestones: the early

postpartum period (initiation); at 6 months postpartum; at one year postpartum. Healthy People 2020 reiterated those three previous milestones and added other related targets.

The American Academy of Pediatrics (AAP) recommended "exclusive breastfeeding...for approximately the first 6 months after birth" in December 1977 (American Academy of Pediatrics, 1997). The full AAP reiterated the "exclusive breastfeeding for six months" recommendation in its 2005 Policy statement (American Academy of Pediatrics et al., 2005). However, the Nutrition Committee of the AAP still maintains that exclusive breastfeeding for 6 months is controversial, and recommends 4-6 months of exclusivity (Kleinman, 2009).

Other national health professional associations that recommend exclusive breastfeeding for 6 months include AAP, ACOG, AAFP, ADA, AWHONN, NAPNAP, ILCA, ABM, NWA, and ACNM[5]. La Leche League International (LLLI) has been recommending exclusive breastfeeding until "about the middle of the first year" since 1956.

Controversy over the Recommended Duration of Exclusive Breastfeeding

Recommending exclusive breastfeeding for the first six months (i.e., delaying introduction of any complementary [non-human milk] foods until six months) has enormous metabolic, immunological, developmental, sociological/cultural, and economic implications to all stakeholders, including infants, mothers, health care providers, public health agencies, and the formula industry. By around six months of age, gut permeability in the breastfed infant is substantially reduced; therefore any ingested non-human proteins are less able to trigger allergenic and pathological responses (Shulman et al., 1998). The infant's oral motor skills have developed to allow the complex movements of the tongue, arms and hands necessary for self-

[5] ACOG: American College of Obstetricians and Gynecologists; AAFP: American Academy of Family Physicians; ADA: American Dietetic Association; AWHONN: Association of Women's Health, Obstetric and Neonatal Nurses; NAPNAP: National Association of Pediatric Nurse Practitioners; ILCA: International Lactation Consultant Association; ABM: Academy of Breastfeeding Medicine; NWA: National WIC Association

feeding, coordinated chewing, and swallowing of semi-solid foods. The infant's immune system is far more robust by 6 months, reducing the threat of histamine reactions to foreign proteins (Goldman, 2007). Unique milk components assure adequate nutritional status of the exclusively breastfeed baby for at least 6 months (Kramer & Kakuma, 2002). The mothers of exclusively breastfed infants have prolonged lactational amenorrhea (Labbok et al., 1997), reducing risk of unplanned pregnancy and reducing postpartum blood loss.

Globally, there is little disagreement among policy-makers and professionals regarding the WHO recommendation of 6-months of exclusive breastfeeding. Within the American Academy of Pediatrics, the Nutrition Committee continues to recommend introduction of complementary foods between 4 and 6 months which contradicts the full AAP recommendation (backed by the AAP Section on Breastfeeding) of exclusive breastfeeding for the first 6 months (American Academy of Pediatrics et al., 2005; Baker & Greer, 2010; Kleinman, 2004). Even in 2011, the controversy continues: The AAP Committee on Nutrition recommended universal supplementation of all breastfed infants with iron starting at 4 months vs. exclusive breastfeeding for 6 months (Baker & Greer, 2011). The AAP Section on Breastfeeding and several experts strongly objected (American Academy of Pediatrics Section on Breastfeeding et al., 2011; Furman, 2011; Hernell & Lönnerdal, 2011; Schanler et al., 2011), criticizing flawed evidence in the 2003 study which was cited for the Nutrition Committee's recommendation (Friel et al., 2003).

The AAP Section of Nutrition iron supplementation recommendation is an example of politics and conflicts-of-interest in the field of infant and young child feeding: James Friel, first author of the 2003 study cited above, serves on the advisory boards of Heinz Canada and Danone Canada. Danone is currently the largest multinational formula company in the world (Sterken,

2011). Dr. Lydia Furman wrote in her critique: "The study referenced in the AAP recommendation included 77 term infants randomly assigned to receive 7.5 mg of iron daily or placebo from 1 to 6 months of age. By 6 months of age, 26 infants (34%) had dropped out of the study, 15 (19%) were noncompliant with the iron/placebo treatment, most infants in both groups were receiving formula (i.e., not exclusively breastfeeding), and all but 3 infants were also receiving cereal. Although the study initially was powered to evaluate development, enrollment was stopped before the full number needed was enrolled, so the results regarding neurodevelopmental outcomes are interesting but not conclusive or scientifically defensible. This particular data set is not ideal for support of a significant AAP policy recommendation" (Furman, 2011, p. e1098). Baker and Greer's reply challenges and attempts to shift the burden of proof to the well-established WHO recommendation instead of the intervention: "Supplementing breastfed infants would protect them; why put these infants at any risk when no appreciable harm of iron supplementation has been convincingly demonstrated?" (Robert D. Baker & Greer, 2011, p. e1103).

Rationale for WHO Recommendation of Breastfeeding for Two Years or Beyond and Controversy over the Recommended Duration of any Breastfeeding

The recommended duration of any breastfeeding is also fraught with controversy. The US Deputy Surgeon General (Dr. Audrey Hart Nora) signed the 1990 *Innocenti Declaration* which states "As a global goal for optimal maternal and child health and nutrition, all women should be enabled to practice exclusive breastfeeding and all infants should be fed exclusively on breastmilk from birth to 4-6 months of age. Thereafter, children should continue to be breastfed, while receiving appropriate and adequate complementary foods, for up to two years of age or beyond" (United Nations Childrens Fund, 1990). The American Academy of Pediatrics 2005

policy states that "Breastfeeding should be continued for at least the first year of life and beyond for as long as mutually desired by mother and child" (American Academy of Pediatrics et al., 2005). Most other relevant professional associations have adopted the AAP policy for duration and others state "for at least one year or longer." According to the former chair of AAP's Section on Breastfeeding (SOB) and two prominent physicians in the Section, the SOB leadership was very aware of the WHO and UNICEF recommendation, but also was aware that a recommendation beyond one year would be strongly opposed by other members of the AAP (Gartner, 2011). Unfortunately, many parents interpret the AAP statement to mean that "12 months of breastfeeding is good enough." The Academy of Breastfeeding Medicine (ABM) is one of the few professional associations whose position paper (2008) states "*Optimal infant and young child feeding is exclusive breastfeeding for 6 months, and continued breastfeeding for at least 1 and up to 2 years or longer*."

Initiatives and Agreements Addressed in the Global Strategy, US Participation in WHA, and US Policy Development

The US has been a member nation of the World Health Organization for many decades, sending representatives to the biennial World Health Assemblies which set WHO governance and policy. Over the years, the composition of the US delegation has depended on the priorities of the current Administration. After the Reagan Administration instructed the US WHA delegates to cast the sole negative vote against WHA resolution 34.22 (establishing the *International Code of Marketing of Breast-milk Substitutes)* in 1982*,* both houses of Congress voted to censure the administration for taking that action (Blackwell, 1981). Every WHA resolution relevant to infant feeding subsequent to WHA 34.22 was passed by consensus (acclamation). Because roll-call votes were not taken and no objections were formally recorded,

the US implicitly supported these resolutions. Subsequent resolutions related to infant nutrition clarified or closed the gaps in various details of the *International Code* and *Global Strategy*. In some years, the US delegates have been primarily executives or consultants with financial ties to commercial (for-profit) companies including the baby food industry. In 2010, the US delegation was led by Dr. Regina Benjamin, US Surgeon General.

The United Nations *Convention on the Rights of the Child* (CRC), cited on page 5 of the *Global Strategy*, states that children have the right to the highest attainable standard of health which includes appropriate nutritional support. The United States signed but has not yet ratified the CRC (United Nations, 1989).

The International Labor Organization *Maternity Protection Convention 183* and *Recommendation 191* (International Labor Organization, 2000) delineate specific workplace protections for women workers including paid breastfeeding breaks. US researchers found that women alter their breastfeeding practices to meet workplace obligations, not vice-versa. (Fein, Mandal, & Roe, 2008; Guise & Freed, 2000; Li, Fein, Chen, & Grummer-Strawn, 2008; Roe, Whittington, Fein, & Teisl, 1999). The US has not ratified ILO Maternity Protection Convention 183. The 2011 *Patient Protection and Affordable Care Act* requires employers to allow mothers paid breaks for expressing milk (Drago, Hayes, & Yi, 2010).

The US was a signatory to WHO's *Health for All by 2000* Declaration of Alma-Ata in 1978, which included maternal and child health in its definition of primary health care (World Health Organization, 1978) but did not define the duration of exclusive or any breastfeeding. The US developed health objectives for 1990 that included increasing rates of breastfeeding initiation to 75% and duration of breastfeeding to six months to 35% (Department of Health and Human Services, 1990), but had no objectives on exclusivity nor duration of any breastfeeding beyond 6

months. Healthy People 2010 retained the breastfeeding initiation objective of 75% and added two new objectives: 50% for any breastfeeding at 6 months, and 25% for any breastfeeding at one year (Department of Health and Human Services, 2000a). The Healthy People 2020 Objectives for breastfeeding (Department of Health and Human Services, 2011) are:

Topic #	Descriptor	Baseline	Objective
Increase the proportion of infants who:			
MICH-21.1	Were ever breastfed (any breastfeeding)	73.9%	81.9%
MICH-21.2	Were breastfed at 6 months	43.4%	60.5%
MICH 21.3	Were breastfed at 1 year	22.7%	34.1%
MICH 21.4	Were breastfed exclusively through 3 months	33.1%	44.3%
MICH 21.5	Were breastfed exclusively through 6 months	13.6%	23.7%
MICH-22	Increase the proportion of employers that have worksite lactation support programs	25%	38%
MICH-23	Reduce the proportion of breastfed newborns who receive formula supplementation within the first 2 days of life	15.6%	10%.
MICH-24	Increase the proportion of live births that occur in facilities that provide recommended care for lactating mothers and their babies	2.9%	8.1%.

Figure 3. Healthy People 2020 Objectives for Breastfeeding

The Centers for Disease Control and Prevention (CDC), in collaboration with other federal agencies, monitors and provides information on infant and young child feeding through several mechanisms: Infant Feeding Practices II Survey, National Immunization Survey, Breastfeeding Report Card, the Maternity Practices in Infant Nutrition and Care (mPINC) Survey, HealthStyles Survey, and 6 other survey instruments (Centers for Disease Control and Prevention, 2011a). The US *Blueprint for Action on Breastfeeding* was the first comprehensive policy statement issued by the Department of Health and Human Services and the first government document to explicitly state that breastfeeding is a public health issue (Department of Health and Human Services, 2000b). The Blueprint recommends specific actions in the health care system, workplace, family and community, and research. The US *Surgeon General's Call to Action to Support Breastfeeding* is the most comprehensive policy document issued to date,

builds on and expands previous documents and reports, and recommends 20 action steps each with several implementation strategies (Department of Health and Human Services, 2011).

The United States Breastfeeding Committee (USBC) is an independent, non-profit coalition of more than 40 non-profit and governmental organizations formed in 1998 to "improve the Nation's health by working collaboratively to protect, promote, and support breastfeeding" (United States Breastfeeding Committee, 2011b). Representative from relevant federal agencies, health professional associations, advocacy groups and academic centers meet twice-yearly to develop and implement health goals for breastfeeding. Both the USBC and CDC websites maintain links to key organizations' position papers, policies and statements on breastfeeding and infant feeding.

Other Influences on Infant Feeding Decisions Cited in the Global Strategy

Skills and knowledge of health professionals affect infant feeding practices. Attitudes, knowledge and skills related to breastfeeding acquired in medical, nursing and nutrition programs affect professionals' ability to support breastfeeding women. Insufficient knowledge and skills among health care professionals have a negative effect on breastfeeding outcomes; conversely, implementation of evidence-based curriculum in medical schools improves breastfeeding outcomes (Feldman-Winter et al., 2010; Grossman et al., 2009; Guise & Freed, 2000). Published research on the impact of childbirth practices on breastfeeding outcomes has increased in recent years (Smith & Kroeger, 2010).

Community support through peer programs and mother-support (mother-to-mother) groups maintained support for breastfeeding mothers during the decades when formula feeding rates were highest. La Leche League International and similar groups have a long history of effective support of breastfeeding mothers (Eglash, 2009; Helsing, 2008) across many cultures

and nations. Peer counseling programs have been implemented in many locations with positive results on breastfeeding rates (Anderson, Damio, Young, Chapman, & Perez-Escamilla, 2005; Chapman, Damio, & Perez-Escamilla, 2004; Merewood et al., 2006; Merewood & Philipp, 2003; Noel-Weiss & Hebert, 2004). Information, education and communication strategies are key elements to improving breastfeeding outcomes. The CDC's *Guide to Breastfeeding Interventions* indicates that information support improves breastfeeding outcomes (Shealy, Li, Benton-Davis, & Grummer-Strawn, 2005). World Breastfeeding Week (August 1-7) and the 2004-2006 *National Breastfeeding Awareness Campaign* are examples of national communication strategies for public health initiatives in the US (Office on Womens' Health, 2010).

The risk of transmitting human immunodeficiency virus (HIV) through breastfeeding poses a policy dilemma. In 2010, WHO released new *Guidelines on Infant Feeding and HIV*, which changed focus from merely preventing mother-to-child transmission to long-term survival of infants born to mothers known to be infected with HIV. Exclusive breastfeeding for 6 months plus use of antiretroviral medications reduces the chance of transmission of HIV through breastmilk to less than 1%, balancing the risk of transmission with the increased risk of mortality and morbidity from exclusive or partial formula-feeding. Exclusive breastfeeding combined with antiretroviral therapy for the mother supports the long-recognized importance of breastfeeding for child survival (World Health Organization, 2010).

Infant feeding during emergencies is part of the *Global Strategy* because young children are among the most vulnerable groups in emergencies and disasters. The Emergency Nutrition Network (ENN)[6] and WHO developed operational guidance for assuring appropriate infant and young child feeding in emergencies. Responsibility for infant feeding during emergencies falls

[6] The ENN was set up in 1996 by an international group of humanitarian agencies to accelerate learning and strengthen institutional memory in the emergency food and nutrition sector.

upon multiple agencies and organizations. UNICEF identified practices that undermine breastfeeding during disasters: Uncontrolled (often unsolicited) formula donations, especially powdered formula; lack of privacy and safety for nursing mothers; lack of knowledge of breastfeeding among emergency / aid workers (Adhisivam et al., 2006; Emergency Nutrition Network & Infant Feeding in Emergencies Core Group, 2009; Gribble, McGrath, Maclaine, & Lhotska, 2011; United Nations Childrens Fund, 2005; World Health Organization, 2004).

Monitoring and evaluation is central to implementing any public health policy. Monitoring and evaluation of infant and young child feeding in the US is conducted by the Centers for Disease Control and Prevention, Food and Drug Administration, state agencies, and other programs. Key US monitoring and evaluation programs include the Infant Feeding Practices II Survey; National Immunization Survey, Breastfeeding Report Card, the Maternity Practices in Infant Nutrition and Care (mPINC) Survey, HealthStyles Survey, and 6 other survey instruments (Centers for Disease Control and Prevention, 2011a).

Summary of Literature Reviewed

The published evidence supporting the importance of six months of exclusive breastfeeding on child morbidity and mortality is overwhelming and compelling. Challenges to this recommendation continue to appear, often linked to sources with conflicts of interest. Evidence for the importance of continued breastfeeding for two years or more with the timely addition of appropriate complementary foods is strong. The AAP recommendation of shorter duration of breastfeeding (until one year or longer) is unsupported by published evidence, and the rationale for limiting the recommendation to one year is unclear. Although the US voted against WHA34.22 (*on the International Code*), the US adopted by consensus since that first vote every subsequent WHA resolution on infant and young child feeding. The US signed the

1990 *Innocenti Declaration.* The 2011 US *Surgeon General's Call to Action to Support Breastfeeding* is the most comprehensive policy statement issued to date, containing 20 action steps.

Methods

To compare US policies to the *Global Strategy*, a three-part analysis was conducted:

1. History, development, and elements of the *Global Strategy*
2. History, development, and elements of US infant feeding policies and strategies
3. History, development, and elements of the *World Breastfeeding Trends Initiative*

History, Development, and Elements of the Global Strategy

Every World Health Assembly (WHA) Resolution relevant to infant and young child feeding since 1974 was downloaded, reviewed and analyzed for language and details, which created a timeline of increasingly specific and targeted policy goals, initiatives and recommendations for infant and young child feeding. Analyzing the 2003 *Global Strategy* involved retrieving and reading every document cited in the *Global Strategy*, charting the elements, and creating a graphic (see Figure 4) to clarify the key goals, documents cited, applications and situations for implementation, stakeholders called upon, and outcomes (target groups) that are affected by the *Global Strategy*. The *International Code of Marketing of Breast-milk Substitutes* (*International Code)* and *Codex Alimentarius* (Codex) address the marketing and composition of infant and young child feeding products, and are referenced by multiple sections of the *Global Strategy*. In addition to reading the entire *International Code* and subsequent WHA resolutions referencing the *International Code*, several textbooks and publications about the *International Code* were reviewed (Allain & Kean, 2010; Armstrong, 1988a, 1988b, 1989a, 1989b; Jones, 1997; Shubber, 2011). Codex regulations were not analyzed

in depth because Codex primarily regulates formula, baby-food products, and other foods and issues that are beyond the scope of this project.

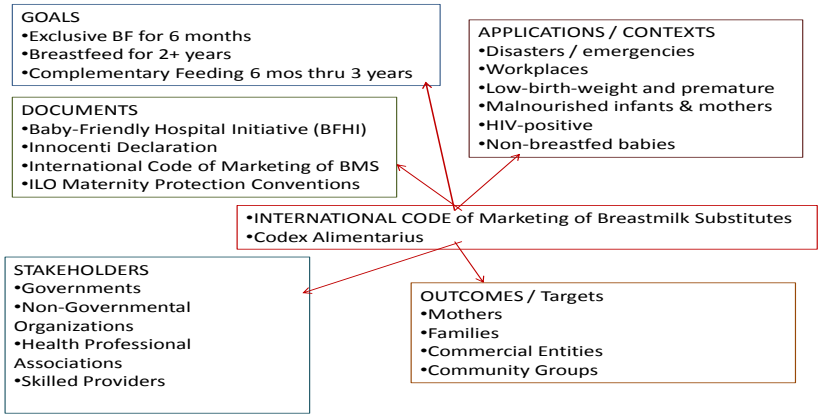

Figure 4: Map of *Global Strategy for Infant and Young Child Feeding*

History, Development, and Elements of US Infant Feeding Policies and Strategies

Understanding US infant feeding policy involved finding, reading, and cross-referencing US Surgeon Generals' reports and Calls to Action; published national health goals; federally-funded pamphlets and educational materials; published national workshop proceedings; WHO and UNICEF agreements signed by US officials; and position papers of relevant major professional associations. The earliest federal activities found were the 1976 *Symposium on Human Lactation* co-sponsored by the Public Health Service and George Washington University and two workshops on human milk banking in 1975 and 1976, convened by the Division of Maternal and Child Health of the National Institute of Child Health and Human Development. The 1984 US *Surgeon General's Workshop on Breastfeeding and Human Lactation* (Department of Health and Human Resources, 1984) launched increased interest in breastfeeding at the federal level. The 2001 Blueprint for Action on Breastfeeding was the first comprehensive policy document issued by the Surgeon General; the 2011 US Surgeon General's *Call to Action* to

Support Breastfeeding is the most recent and most comprehensive policy to date. Healthy People 2000, 2010 and 2020 Goals are a form of policy which target specific outcomes.

History, Development, and Elements of the World Breastfeeding Trends Initiative

The World Breastfeeding Trends Initiative (WBTi) was developed and launched by the International Baby Food Action Network of Asia and the Pacific (IBFAN-Asia) to track international progress toward the targets set by the 1990 Innocenti Declaration using the methodology and philosophy of Global Participatory Action Research (GLOPAR) developed and promoted by the World Alliance for Breastfeeding Action (WABA) in 1993. The WBTi is an extension to GLOPAR as it also tracks additional targets set by the *Global Strategy for Infant and Young Child Feeding*. The WBTi utilizes questionnaires and other material from the WHO tools *Infant and Young Child Feeding: A Tool for Assessing National Practices, Policies, and Programs* (World Health Organization & Linkages, 2003) and the *Planning Guide for National Implementation of the Global Strategy for Infant and Young Child Feeding* (World Health Organization & United Nations Childrens Fund, 2007). WBTi Indicators 1-10 deal with policies and programs; indicators 11-15 assess practices. Scoring and color-coding allow the web-based toolkit to generate maps or graphic charts.

Analysis Process

First, each goal (element) of the *Global Strategy* was analyzed and charted with a graphic, and references in global and US documents compiled. Then each document and application listed in the *Global Strategy* was analyzed and compared with US documents, specifically the BFHI, Innocenti Declaration and *International Code* and applications cited in the *Global Strategy*. Finally, the WBTi questionnaire was completed and recommendations

formulated. Completing the WBTi questionnaire involved re-reading and identifying US source documents, locating US statistics, and interviewing global and US key informants.

Results and Analysis

US policy supports the *Global Strategy*'s core goals (duration of exclusive and any breastfeeding); partly supports the *Global Strategy*'s cited documents (BFHI, Innocenti and *International Code*); and addresses many of the *Global Strategy*'s specifically-identified situations/applications (disasters, workplaces, HIV-positive mothers, and extraordinary situations). US policy recommendations are targeted toward all of the *Global Strategy*'s stakeholders. US monitoring and reporting mechanisms are consistent with the *Global Strategy*'s targets and outcome measures.

Core Goals: Exclusive Breastfeeding for 6 Months; Breastfeeding for 2 or More Years (WBTi Indicators 1, 10, 12, 13, 14)

The US Government issues no specific recommendations on individual clinical decisions on infant feeding, or any other health topic. The actions promoted in the Surgeon General's *Call to Action to Support Breastfeeding* (CTA) are framed around a consensus goal of exclusive breastfeeding for "about 6 months" and continued breastfeeding "for at least 12 months" as recommended by several prominent organizations of health professionals including AAP, ACOG, ACNM, ADA, and APHA. The US government has developed many indicators and intermediate goals which are tracked through national and state survey instruments and reported through multiple outlets including Healthy People, Vital Signs, MMWR[7], The Joint Commission, and other channels. By tracking progress and providing material support for activities, the federal government moves the population toward end points that professional associations and other entities have deemed important. Therefore, the current policy expressed in

[7]Morbidity and Mortality Weekly Report

the CTA is inconsistent with the *Global Strategy*, exceeding the *Global Strategy* in duration of exclusive breastfeeding, while falling short in duration of any breastfeeding for 2 or more years.

US policies on complementary feeding of children 6-36 months old compared with the *Global Strategy* were not analyzed in this project. Appropriate feeding of non-breastfed children, including the safe preparation, storage and use of infant formula, infant feeding in emergencies and disasters, and infant feeding in the context of HIV was explored and is included in the 2009 update and expansion of the *Baby-Friendly Hospital Initiative (BFHI)*. BFUSA Criteria and Guidelines are consistent with WHO/UNICEF guidelines for evaluating BFHI training programs.

Baby Friendly Hospital Initiative (BFHI) and Ten Steps to Successful Breastfeeding (WBTi Indicator 2)

In 1989, WHO and UNICEF issued the landmark statement "*Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services*" (World Health Organization & United Nations Childrens Fund, 1989) outlining Ten Steps to Successful Breastfeeding. The *Joint Statement* and *Ten Steps* clarified specific evidence-based actions that health care facilities and health care professionals should take to support optimal breastfeeding. After global participation in identifying appropriate indicators and measurement criteria, The Baby Friendly Hospital™ Initiative (BFHI) was officially launched globally in 1992. UNICEF appoints a BFHI Coordinating Authority for each nation, which is then tasked with implementing the BFHI according to global standards developed and updated periodically by WHO and UNICEF. The national BFHI Coordinators gather every two years to discuss criteria, fine-tune evaluation tools, and propose expansions for the BFHI into other clinical settings. Globally, BFHI has been called

the most successful initiative that UNICEF has ever launched[8] (Randa Saadeh, 2008). Many studies have reported public health improvements, including research in Canada, Brazil, Jamaica, Nigeria, Russia, Switzerland, Taiwan, Turkey, and Ukraine (Abolyan, 2006; Abrahams & Labbok, 2009; Caldeira & Goncalves, 2007; Duyan Camurdan et al., 2007; Martens, Phillips, Cheang, & Rosolowich, 2000; Moura de Araujo Mde & Soares Schmitz Bde, 2007; Okolo & Ogbonna, 2002; Perez-Escamilla, 2007; Saadeh & Casanovas, 2009; Schubiger, Schwarz, & Tonz, 1997; Weng, Hsu, Gau, Chen, & Li, 2003).

Baby-Friendly USA, Inc. is the UNICEF-designated BFHI authority for the United States. BFUSA is a non-profit organization with headquarters in New York. As of November 17, 2011, 121 US hospitals and birth centers are designated as Baby-Friendly™ facilities. The 4-D pathway[9] was launched in early 2010 to streamline the implementation process for facilities that are working toward BFHI designation.

In the US, BFHI is a strongly recommended strategy in the 2011 *Call to Action;* has specific line-item funding requested in the 2012 proposed federal budget; is recommended by name in the 2010 White House Obesity Report; and is recommended by the American Academy of Pediatrics and other organizations. The CDC tracks the number and percent of births occurring in BFHI hospitals and other specific practices through the mPINC surveys, and reports outcome and process data in the MMWR and Breastfeeding Report Cards. The Joint Commission's Speak Up initiative of August 2011 recommends that hospitals implement the

[8]At the 2008 Informal Meeting of BFHI Coordinators of Industrialized Nations in Geneva, Dr. Kumar Sanvij of UNICEF reported remarkable results of the BFHI in Central and Eastern Europe: Turkey and Armenia established Baby-friendly Provinces; in Uzbekistan's Baby-Friendly Health Institutions, breastfeeding rates dramatically increased; Ukraine's BFHI program dramatically reduced infant abandonment. Bosnia and Herzegovina integrated BFHI with Early Childhood Development. In the Russian Federation, BFHI was decentralized to regional levels; Macedonia used emergency funds to promote BFHI; and Romania integrated BFHI into national Programs for Mother and Child Health.

[9]The 4-D Pathway takes facilities through 4 phases of implementation that adhere to BFHI's high standards while breaking down the process into manageable and achievable tasks: Discovery; Development; Dissemination; then Designation. www.babyfriendlyusa.org/eng/docs/4D%20Pathway%20Q&A%20_%202011.pdf

BFHI, and encourages parents to request practices consistent with BFHI standards. Thus, implementation of BFHI within US policy framework is expanding and accelerating.

Innocenti Declaration (addressed in WBTi Indicators 1, 2, 3 and 4)

Dr. Audrey Hart Nora, US Deputy Surgeon General, attended the August 1990 meeting convened in Florence, Italy and signed the Innocenti Declaration on behalf of the US. The Declaration's Operational Targets are: "All governments by 1995 should have:

1. appointed a national breastfeeding coordinator of appropriate authority, and established a multisectoral national breastfeeding committee composed of representatives from relevant government departments, non-governmental organizations, and health professional associations;
2. ensured that every facility providing maternity services fully practices all ten of the *Ten Steps to Successful Breastfeeding* set out in the joint WHO/UNICEF statement *Protecting, Promoting and Supporting Breast-feeding: the Special Role of Maternity Services*;
3. taken action to give effect to the principles and aim of all Articles of the International Code of Marketing of Breast-milk Substitutes and subsequent relevant World Health Assembly resolutions in their entirety; and
4. enacted imaginative legislation protecting the breastfeeding rights of working women and established means for its enforcement." (United Nations Childrens Fund, 1990)

Target 1 (WBTi Indicator 1): The United States Breastfeeding Committee was established in 1998 in partial fulfillment of the *Innocenti Declaration*. The USBC currently has 41 voting member organizations, 8 government agencies, one advisory member, and one

individual member. No national breastfeeding coordinator position exists. Within the federal government, a Breastfeeding Working Group was created in 2010 to foster collaboration between the Department of Health and Human Services (CDC, HRSA, and FDA); Department of Agriculture (WIC); Department of Labor (Affordable Health Care Act) and other relevant agencies. This Breastfeeding Working Group coordinates cross-agency issues, policies and projects involving breastfeeding.

Target 2 (WBTi Indicator 2): Baby-Friendly USA has designated 121 facilities as Baby-Friendly Hospitals as of November 17, 2011. Many more facilities are actively engaged in the BFHI implementation process.

Target 3 (WBTi Indicator 3): No substantial progress toward meeting this Target has been made in three decades. This is despite many efforts: the 1984 Surgeon General's Workshop report recommended a marketing code to address widespread and unethical marketing of infant formula and artificial feeding products, as did the 1990 *Call to Action* and the 2001 Blueprint for Action on Breastfeeding. The 2011 US Surgeon General's *Call to Action* 6 is "Ensure that the marketing of infant formula is conducted in a way that minimizes its negative impacts on exclusive breastfeeding." A growing number of professional associations adhere to and actively assist international agencies in monitoring the *International Code*, including the majority of voting members of USBC. Notably absent among organizations that endorse the *International Code* are some of the most influential infant feeding policymakers: AAP, ACOG, ANA, AWHONN, and NAPNAP.

Target 4 (WBTi Indicator 4): Maternity protection laws in the US are far weaker than in most other nations, yet recent improvements have been made. The Affordable Health Care Act of 2010 mandates nursing (pumping) breaks for breastfeeding mothers in every workplace. The

2011 US Surgeon General's *Call to Action*s 13 and 14 partly fulfill the goals of Target 4: Work toward establishing paid maternity leave for all employed mothers (13) and ensure that employers establish and maintain comprehensive, high-quality lactation support programs for their employees (14).

Application: Disasters and Emergencies (WBTi Indicator 9)

No evidence of a consistent evidence-based policy for Infant Feeding in Emergencies (IFE) was found in Federal Emergency Management Agency (FEMA) documents, Red Cross documents, or the CDC web site section for Disaster Preparedness. Recently, the USBC issued a well-researched recommendation for Infant Feeding in Emergencies. A USBC representative discussed the IFE statement with Lauralee Kozlol, assistant to Craig Fugate at FEMA on Sept. 21, 2011, shortly before the hurricanes hit the east coast. Ms. Kozlol was uncertain about how the USBC recommendation could be used by FEMA. The International Lactation Consultant Association (ILCA) is currently updating its Infant Feeding in Emergencies Took Kit. Texas Department of Health created posters and other materials as a result of the response to Hurricane Katrina. AAP published a Fact Sheet on Infant Nutrition During a Disaster. Wellstart International has IFE guidance documents on its web site, referring to international guidance documents prepared by the Emergency Nutrition Network (ENN).

Application: Workplaces (WBTi Indicator 4)

See *Innocenti Declaration* Operational Target 4 above.

Application: Low Birth Weight and Premature Babies (Included in WBTi Indicator 5 and BFHI Expansion Programs, Indicator 2)

No national policies for feeding low birth weight (LBW) or premature babies were found, although some excellent sources of information are emerging. California's Perinatal Quality Care

Collaborative developed an excellent evidence-based tool kit for nutritional support of very low birth weight and premature babies. Stanford University (California) and Rush University (Illinois) have evidence-based information on supporting the mother who is pumping/expressing milk for her premature baby. At Case Western Reserve University, the United States Institute for Kangaroo Care (Ohio) developed a training course for Kangaroo Mother Care and other programs that support exclusive breastmilk feeding of premature infants. The Human Milk Banking Association of North America monitors operations of 10 Donor Milk Banks in the US.

Application: Malnourished children, malnourished mothers, and relactation (included in WBTi Indicator 5 and BFHI, Indicator 2)

No national policies for feeding malnourished infants with breastmilk, helping malnourished mothers, or relactation were found. Many otherwise well-trained health professionals still erroneously believe that the mother's nutritional status has a substantial effect on her ability to lactate (Hale & Hartmann, 2007; Lawrence & Lawrence, 2011). Members of several professional organizations have specific and extensive expertise in relactation, especially the Academy of Breastfeeding Medicine (ABM), International Lactation Consultant Association (ILCA), and La Leche League International (LLLI).

Application: Mothers who are HIV positive (WBTi Indicator 8)

US policy on infant feeding when the mother is known to be HIV positive differs from the 2009-2010 WHO Guidance Statement (World Health Organization, 2010). The US recommends that mothers who are HIV-positive not breastfeed at all (Department of Health and Human Services, 2000b). The World Health Organization policy and current research indicates that the risk of HIV infection through breastfeeding is approximately 1% and should be weighed

against the known risks of non-exclusive or absence of breastfeeding. (Doherty, Sanders, Goga, & Jackson, 2011; Neveu et al., 2011; World Health Organization, 2010).

Application: Orphans, non-breastfed children; safe preparation of formula (included in WBTi Indicators 5, 9 and BFHI, Indicator 2)

National recommendations for the safe preparation, storage and handling of infant formula are inconsistent. Powdered formula is not sterile, and about 15% has been shown to be contaminated with dangerous pathogens including salmonella and enterobacter sakazakii (Healy et al., 2010; Morrissey et al., 2011). Food and Drug Administration (FDA) guidance refers to WHO recommendations. Most formula manufacturers' instructions printed on containers differs substantially from WHO recommendations (World Health Organization, 2007). Reports and recalls of contaminated formula are tracked by the FDA's MEDWATCH program.

Scoring the US Using the WBTi Indicators

WBTi: Indicator 1: National Policy, Program and Coordination

Key Question: Is there a national infant and young child feeding/breastfeeding policy that protects, promotes and supports optimal infant and young child feeding and is the policy supported by a government program? Is there a mechanism to coordinate, such as a National Infant and Young Child Feeding Committee and Coordinator? Score: 7.25/10.

The *Call to Action* reflects a consensus of AAP and other professional associations on duration of any breastfeeding. There is no funding associated with the full CTA, although federal programs fund parts of the CTA. The US Breastfeeding Committee is the effective national committee but does not address complementary feeding. USBC is increasing liaison activities with NGOs and other federal agencies. There is no single Coordinator; the USBC Board of

Directors maintains liaisons with government agency leadership. An Interagency Breastfeeding Work Group was formed in 2011 and meets monthly to develop cross-agency policies.

Indicator 2: Baby Friendly Hospital Initiative (Ten Steps to Successful Breastfeeding)

Key questions: What percentage of hospitals and maternity facilities that provide maternity services have been designated "Baby Friendly" based on the global or national criteria? What is the skilled training inputs and sustainability of BFHI? What is the quality of BFHI program implementation? Score: 6.5/10.

Baby-Friendly USA is a private non-profit association designated as the US BFHI Authority by UNICEF. As of November 17, 2011, 121 hospitals have been designated BFHI facilities, which is 3.7% of the 3281 maternity facilities in the US. Adequate infrastructure exists for the current level of implementation, and plans to accelerate and expand are in progress. The US is in full compliance with UNICEF guidelines (per interview with WHO officials, July 2011), included training, monitoring, reassessment, and mother interviews. As of August 2011, BFHI is widely and actively promoted by The Joint Commission, Centers for Disease Control and Prevention, Surgeon General, and many non-governmental organizations. National and government accreditation agencies do not address all BFHI Steps nor are recognized by UNICEF. Reassessment is integrated in BFHI designation; the national plan is silent on reassessment. There is no official timetable for increasing the number of BFHI institutions.

Indicator 3: Implementation of the International Code of Marketing of Breast-milk Substitutes

Key Question: Are the *International Code of Marketing of Breast-milk Substitutes* and subsequent WHA resolution given effect and implemented? Has any new action been taken to give effect to the provisions of the *International Code*? Score: 4.0/10

A limit on marketing of breastmilk substitutes (infant formula) has been recommended in multiple government reports including the *1984 Surgeon General's Workshop on Breastfeeding*. Scoring this indicator reflected the lack of federal action on implementing the *International Code* and or other actions to regulate the ethical marketing of infant formula.

The Federal Trade Commission is studying the effect of marketing practices. CTA Action 6 addresses the ethical marketing of formula; the USBC has a Reduce Marketing Committee. No national measures to implement the *International Code* are currently in active development (as of December 2011). No government administrative directives apply to formula marketing in health facilities. Some provisions of the *International Code* (no distribution of free samples to patients) are in place in BFHI-designated facilities, some other hospitals, and all birthing hospitals in the state of Rhode Island. The US participates in Codex Alimentarius guidelines regarding labelling of infant food products. No articles of the Code are in place as voluntary measures or laws.

Indicator 4: Maternity Protection

Key Question: Is there legislation and are there other measures (policies, regulations, practices) that meet or go beyond the International Labor Organization (ILO) standards for protecting and supporting breastfeeding for mothers, including those working mothers in the informal sector? Score: 4/10

The Patient Protection and Affordable Care Act of 2010 requires employers to provide private, non-bathroom space for milk expression (Department of Labor & Wage and Hour Division, 2011). CTA Actions 13, 14, 15 and 16 recommend more extensive maternity protections. The *Breastfeeding Promotion Act of 2011* (H.R. 2758, S. 1463) was re-introduced on August 2, 2011 with two key provisions: (1) amend the Civil Rights Act of 1964 to protect

breastfeeding women from being fired or discriminated against in the workplace; and (2) protect breastfeeding mothers by ensuring that executive, administrative, and professional employees, including elementary and secondary school teachers (in addition to non-exempt employees covered by the previous amendment), have break time and a private place to pump in the workplace (Merkley & Maloney, 2011). No law mandates paid maternity leave for all employers and sectors, although CTA Action 13 calls for such a law. There are few protections for women in agricultural or informal sectors.

Indicator 5: Health and Nutrition Care System

Key Question: Do care providers in these systems undergo skills training, and do their pre-service education curriculum support optimal infant and young child feeding; do these services support mother and breastfeeding-friendly birth practices; do the policies of health care services support mothers and children, and are there health workers responsibilities to support the *International Code* in place*?* Score: 3.5/10

Professional education in breastfeeding has been noted as an area of deficit since the 1984 Surgeon General's Workshop Report (Grossman, et al., 2009; Ogburn, Philipp, Espey, Merewood, & Espindola, 2011; Philipp, Merewood, Gerendas, & Bauchner, 2004). Resources such as the AAP's Residency Curriculum on Breastfeeding and WHO's Model Chapter for Textbooks for Medical Students and Allied Health Professionals (World Health Organization, 2009) are effective yet under-utilized (Feldman-Winter et al., 2010). The AAP Breastfeeding Residency Curriculum is implemented in only a few universities and hospital residency programs. An evidence-based curriculum on breastfeeding is neither present nor required in medical, nursing, dietetic and midwifery schools and programs. Mother-friendly childbirth is rarely discussed in obstetric residency programs (Smith & Kroeger, 2010). Inservice education is

inconsistent across states, according to numerous educators in this field. Although *International Code* implementation is required in lactation consultant certification courses, BFHI courses, and Academy of Breastfeeding Medicine's courses and sessions, comprehensive and consistent *International Code* content is not universal in health professional educational programs. Accurate information on infant feeding-related content is not consistently included in US preservice training programs (Feldman-Winter et al., 2010; Naylor, 2010; Philipp et al., 2004).

Indicator 6: Mother support and Community Outreach

Key Question: Are there mother support and community outreach systems in place to protect, promote and support optimal infant and young child feeding*?* Score: 5/10

La Leche League USA, Breastfeeding USA, Nursing Mothers Councils in several cities, and the USDA's Special Supplemental Food Program for Women, Infants and Children (WIC) peer counsellor program are effective community-support organizations for breastfeeding mothers. Low income and minority mothers have the lowest rates of access to community support for breastfeeding. Women with disabilities may lack access to information and support. Unless designated as BFHI facilities, hospitals do not consistently and smoothly interface with community support services for pregnant and breastfeeding women. Unless trained through breastfeeding organizations or WIC, community-based health workers or volunteers are not consistently trained in counselling and listening skills for infant feeding.

Indicator 7: Information Support

Key question: Are comprehensive Information, Education and Communication (IEC) strategies for improving infant and young child feeding (breastfeeding and complementary feeding) being implemented? Score: 5/10

World Breastfeeding Week[10] and similar activities are variable recognized or celebrated at local levels. Individual and group education services are inconsistently implemented; mothers not eligible for WIC or who do not participate in WIC have access to few other group education resources. No known evaluation of IEC messages for accuracy has been done at national levels, even though evaluation tools are available (Smith, 1995). No systematic national IEC campaign using electronic media has been used in the past 12 months. Some partial programs are in place, including a text-messaging service sponsored by Healthy Mothers, Healthy Babies; World Breastfeeding Week 2011; and several WIC state agency web-based programs.

Indicator 8: Infant Feeding and HIV

Key Question: Are policies and programmes in place to ensure that HIV - positive mothers are informed about the risks and benefits of different infant feeding options and supported in carrying out their infant feeding decisions? Score: 1/10

The current US policy warns mothers who are HIV positive to not breastfeed at all (Centers for Disease Control and Prevention, 2010; Department of Health and Human Services, 2000b).

Indicator 9: Infant Feeding and Emergencies

Key Question: Are appropriate policies and programmes in place to ensure that mothers, infants and children will be provided adequate protection and support for appropriate feeding during emergencies? Score: 1.5/10

No federal guidelines or information on breastfeeding during emergency situations were found. The USBC *Statement on Infant Feeding in Emergencies* was presented to a FEMA official in October 2011.

[10]World Breastfeeding Week is celebrated August 1-7 every year to commemorate the signing of the Innocenti Declaration. In 2011, the USBC declared the entire month of August as National Breastfeeding Month. The World Alliance for Breastfeeding Advocacy (WABA) selects a different theme for WBW each year.

Indicator 10: Monitoring and evaluation

Key Question: Are monitoring and evaluation data routinely collected and used to improve infant and young child feeding practices? Score: 7/10

Monitoring and evaluation components are inconsistent and may not measure breastfeeding and other infant feeding parameters accurately.

Indicator 11: Early Initiation of Breastfeeding

Key question: Percentage of babies breastfed within one hour of birth. Result: ~ 3.9 % of babies are breastfed within one hour of birth. Score: 3

This indicator has not been systematically tracked. BFHI designated maternity facilities and those adopting the Joint Commission Perinatal Core Measure on exclusive breast milk feeding have begun tracking this information (The Joint Commission, 2009).

Indicator 12: Exclusive breastfeeding for six months

Key question: Percentage of babies 0<6 months of age exclusively breastfed in the last 24 hours? Result: 14.8% of babies are exclusively breastfed at 6 months. Score: 3

The CDC began reporting this indicator in 2005.

Indicator 13: Mean duration of breastfeeding.

Key question: Babies are breastfed for a median duration of how many months: Result: unknown; estimated to be ~6 months. Score: 3

This indicator is not easily calculated from available records. Data from the 2011 CDC Breastfeeding Report Card:

- Ever breastfed: 74.6%
- Any breastfeeding at 6 months 44.3%
- Any breastfeeding at 1 year 23.8%
- Exclusive breastfeeding at 3 months 35%
- Exclusive breastfeeding at 6 months 14.8%.

Indicator 14: Bottle Feeding

Key question: What percentage of breastfed babies less than six months old receives other foods or drinks from bottles? Result: 48.5% of breastfed babies <6 months old receives food or drink from bottles. Score: 3

This indicator is not easily calculated from existing information. Data from the Infant Practices Survey II: Percent of babies fed expressed or pumped breast milk in the past 7 days among breastfed babies: 48.5%

Indicator 15: Complementary Feeding

Key question: Percentage of breastfed babies receiving complementary foods at 6-9 months of age? Result: unknown. Estimated to be >90%. Score: 10.

This indicator is not easily calculated from existing information. Data from the Infant Feeding Practices Survey II, Table 3.1.

Completing the WBTi Assessment and Scoring

The total score for policy indicators (Indicators 1-10) = 44.75/100. Total score for practice indicators (11-15) = 22/50. Overall score for the United States: 66.75/150. Of the 33 nations reporting their WBTi scores in 2010, the US score of 66.75 is approximately in the same range as Ecuador (65.5) and India (69); lower than Sri Lanka (125) and Nicaragua (99); and substantially higher than Taiwan (32.5) and Mexico (49).

Strengths for the US exist in:

- Indicator 1, National policy (7.25)
- Indicator 2, BFHI (6.5)
- Indicator 10, Monitoring & evaluation (7)
- Indicator 15, Complementary feeding (10)

Moderate strengths for the US exist in:

- Indicator 6, Mother support & community outreach (5)
- Indicator 7, Information and support (5).

Gaps for the US exist in:

- Indicator 8, Infant feeding and HIV (1)
- Indicator 9, Infant feeding in emergencies (1.5)
- Indicator 11, Early initiation of breastfeeding (3)
- Indicator 12, Exclusive breastfeeding for 6 months (3)
- Indicator 13, Mean duration of breastfeeding (3)
- Indicator 14, Bottle feeding of breastfed infants (3)

Discussion and Interpretation

The US took a wrong turn in 1981 by instructing its delegates to the World Health Assembly to cast the sole "no" vote on WHA 34.22, *the International Code of Marketing of Breast-milk Substitutes*. Aggressive marketing of infant formula, baby foods and related products has permeated and undermined virtually every aspect of the health care system, from unnecessary supplementation of infants shortly after birth to the lack of education of health care providers and lax regulation of foods for infants and young children distributed through government programs. US policy documents have urged implementation of a marketing code since 1984, yet no laws have been enacted or regulations issued to stem the flood of inaccurate, misleading messages to the general public and – even worse – to health professionals.

On the positive side, the past decade has witnessed an enormous positive shift in focus of US policies on infant feeding. Federal agencies collaborated with non-government agencies to form the US Breastfeeding Committee in 1998. Since then, improvements in breastfeeding policies, practices and outcomes have been made especially in monitoring, evaluation, and community outreach programs. The USBC's National Agenda for Breastfeeding in the US was cited in the 2001 *Blueprint for Action*, which was the first truly comprehensive policy on infant feeding. The 2011 *Call to Action* is an even more comprehensive policy, and is based on the *Innocenti Declaration* and *Global Strategy*. The current attention to breastfeeding is the highest

ever, and momentum appears to be increasing. According to a bulletin released by USBC on Dec 12, 2011 (United States Breastfeeding Committee, 2011a), these actions occurred in 2011:

- *The Surgeon General's Call to Action to Support Breastfeeding* was launched in January, echoing the USBC Vision with 20 recommended actions to support mothers in reaching their personal breastfeeding goals.
- The Let's Move! Campaign (commenced by First Lady Michelle Obama) is addressing breastfeeding from both the hospital and child care angles. In December 2011, Kaiser Permanente, the nation's largest integrated health care system caring for mothers and babies, announced its commitment to support breastfeeding as a measure of hospital quality and a key strategy in preventing childhood obesity.
- Significant appropriations commitments have been made to improve hospital and employment support through the Community Transformation Grants and the CDC/NICHQ project to increase the number of Baby-Friendly hospitals.
- Beginning August 1, 2012, new private health insurance plans will be required to cover breastfeeding support, supplies, and counseling without a co-payment or deductible.
- The federal "Break Time for Nursing Mothers" law is being implemented across the country, and President Obama has called for full support for federal employees. The Breastfeeding Promotion Act of 2011 includes a provision to extend the law's coverage.
- The Internal Revenue Service reversed its decision and now allows breast pumps and other related supplies to be tax deductible.

Using the WBTi, the US scored 66.75 out of a possible 100. The WBTi is designed to be a collaborative process, with diverse stakeholders engaged in the assessment. A limitation of this analysis is that it was conducted by a sole researcher, albeit an individual familiar with national

and international infant feeding policies and practices. A more collaborative analysis might result in different scores for the US. Another limitation is lack of clear available data for some of the WBTi indicators. The CDC Breastfeeding Report Card tracks process and outcome indicators, reporting some of the WBTi indicators yet omitting others (Centers for Disease Control and Prevention, 2011b). A third limitation was identifying relevant elements and documents that constitute US policy on infant and young child feeding. For this analysis, the US policy framework was derived from government-issued reports; global agreements signed by officials of the US government; printed and electronic documents published by government agencies; and public position papers of national health professional and non-governmental organizations.

To date, 33 nations have used the WBTi to analyze their national policies against the standard of the *Global Strategy*. No countries in the North American region have reported results of any indicators. No country with an income per capita closer to the US has reported scores. A comparison was made of three large and three small countries with higher WBTi scores than the US using population size, income per person, infant mortality, and maternal mortality:

Country	Population	Infant mortality	Maternal mortality	Income per person	WBTI score
US	298,444,215	6.7	17	41,256	66.75
India	1,095,351,995	52	254	2,731	69
Brazil	188,078,227	18	55	9,570	81
Afghanistan	34,882,409	165	1575	1,217	86.5
China	1,310,823,807	18	40	7,226	80.5
Ghana	22,409,572	51	409	1,383	105.5
Costa Rica	1,031,782	9.6	25	9,552	95

Figure 5. Data from Gapminder World http://www.gapminder.org/world and WBTi 2010 reports

It is unclear why some nations have elected to use the WBTi to analyze national infant feeding policies as part of a strategy to improve outcomes, yet others – especially industrialized countries – have not reported using the WBTi as an evaluation tool. The theme for World

Breastfeeding Week will be "Understanding the Past - Planning the Future: *Celebrating 10 years of WHO/UNICEF's Global Strategy for Infant and Young Child Feeding.*" WBW 2012 objectives include use of the WBTi to assess national status and highlight national progress toward the *Global Strategy*[11].

Finally, the US health system is structurally different from health systems in most other industrialized nations, which likely plays a substantial role in US participation in global initiatives and conventions. Virtually all of the nations reporting WBTi scores have centralized, government-operated single-payer health care systems. The free-market aspect of health care delivery, free-enterprise influence of formula marketing, and free-market relationship of health care providers in the US differs profoundly from the role of governments in delivering health care in most other nations.

Recommendations

Full, enthusiastic and systemic implementation of the 2011 US Surgeon General's *Call to Action* could substantially improve infant and young child feeding practices, which as a result would significantly reduce under-five mortality and morbidity rates. Furthermore, full implementation of the CTA would likely reduce maternal morbidity and mortality, reduce financial burdens on individual families and the US taxpayer, and improve the overall health of the nation. Of the 10 Action Steps, Step 6 is possibly the most important: "Ensure that marketing of infant formula is conducted in a way that minimizes its negative impacts on exclusive breastfeeding." Ideally, national legislation should be enacted that is consistent with *the*

[11]Objectives: 1. To recall what has happened in the past 20 years. 2. To celebrate successes and achievements. 3. To assess the status of implementation of the *Global Strategy for Infant and Young Child Feeding*. 4. To call for action to bridge the remaining gaps in policy and programs on breastfeeding /infant and young child feeding (IYCF). 5. To draw public attention on the state of policy and programs on breastfeeding and infant and young child feeding. 6. To showcase national work at global level. http://www.waba.org.my/

International Code of Marketing of Breast-milk Substitutes. The Action steps in the CTA are solidly backed by research evidence. Even more importantly, implementing the CTA would strongly support mothers' intentions for feeding their children.

The CTA does not address applying the *Global Strategy* goals to disasters and emergencies, low birth weight and premature babies, malnourished mothers and infants, mothers who are HIV positive, nor non-breastfed babies. Nor does the CTA address some cross-discipline practices and health issues that are impacted by breastfeeding or impact breastfeeding, such as shared sleep (bedsharing) (Hauck, Thompson, Tanabe, Moon, & Vennemann, 2011; McKenna, Ball, & Gettler, 2007; McKenna & McDade, 2005) and the impact of birth practices and interventions on breastfeeding (Smith, 2007).

Given the resources of this nation, the US could do better. There is little excuse for continuing to tolerate the US's recent increases in infant mortality, maternal mortality (Hogan et al., 2010; MacDorman & Mathews, 2009; MacDorman & Mathews, 2008), maternal mortality and failure of ~25% of mothers from reaching their own breastfeeding goals due to policy gaps and outdated professional practices in our health care system (Centers for Disease Control and Prevention, 2011c; Declercq, Labbok, Sakala, & O'Hara, 2009).

The 2011 *Call to Action* is a broad framework that addresses most of the policies and practices in the *Global Strategy.* Expanding, funding, and implementing the *Call to Action* to address all the elements of the Global Strategy would improve the health of mothers, infants, children, and families in the US.

References

Abolyan, L. V. (2006). The Breastfeeding Support and Promotion in Baby-Friendly Maternity Hospitals and Not-as-Yet Baby-Friendly Hospitals in Russia. *Breastfeeding Medicine, 1*(2), 71-78).

Abrahams, S. W., & Labbok, M. H. (2009). Exploring the impact of the Baby-Friendly Hospital Initiative on trends in exclusive breastfeeding. *International Breastfeeding Journal, 4*(1), 11. doi: 1746-4358-4-11 [pii] 10.1186/1746-4358-4-11 [doi]

Adhisivam, B., Srinivasan, S., Soudarssanane, M. B., Deepak Amalnath, S., & Nirmal Kumar, A. (2006). Feeding of infants and young children in tsunami affected villages in Pondicherry. *Indian Pediatrics, 43*(8), 724-727.

Allain, A., & Kean, Y. J. (2010). Protecting Infant Health: A Health Workers' Guide to the International Code of Marketing of Breastmilk Substitutes. In I. C. D. Center (Ed.), *International Baby Food Action Network* (11th ed.). Penang: International Baby Food Action Network.

American Academy of Pediatrics. (1997). Breastfeeding and the Use of Human Milk. *Pediatrics, 100*(6), 1035-1039. doi: 10.1542/peds.100.6.1035

American Academy of Pediatrics, Section on Breastfeeding, Gartner, L. M., Morton, J., Lawrence, R. A., Naylor, A. J., . . . Eidelman, A. I. (2005). Breastfeeding and the use of human milk. *Pediatrics*, *115*, 496-506.

American Academy of Pediatrics Section on Breastfeeding, Schanler, R. J., Commitee, E., Feldman-Winter, L., Landers, S., Noble, L., . . . Viehmann, L. (2011). Concerns With Early Universal Iron Supplementation of Breastfeeding Infants. *Pediatrics, 127*(4), e1097. doi: 10.1542/peds.2011-0201A

Anderson, A. K., Damio, G., Young, S., Chapman, D. J., & Perez-Escamilla, R. (2005). A randomized trial assessing the efficacy of peer counseling on exclusive breastfeeding in a predominantly Latina low-income community. *Archives of Pediatrics & Adolescent Medicine, 159*(9), 836-841.

Armstrong, H. (1988a). International code of marketing of breast-milk substitutes. Part one of a series. *Journal of Human Lactation, 4*(3), 137-142.

Armstrong, H. (1988b). The international code of marketing of breast-milk substitutes. Part two of a series. *Journal of Human Lactation, 4*(4), 194-199.

Armstrong, H. (1989a). The international code of marketing of breast-milk substitutes. Part four of a series. *Journal of Human Lactation, 5*(2), 103-111.

Armstrong, H. (1989b). The international code of marketing of breast-milk substitutes. Part three of a series. *Journal of Human Lactation, 5*(1), 46-52.

Baker, R. D., & Greer, F. R. (2010). Diagnosis and prevention of iron deficiency and iron-deficiency anemia in infants and young children (0-3 years of age). *Pediatrics, 126*(5), 1040-1050. doi: 10.1542/peds.2010-2576

Baker, R. D., & Greer, F. R. (2011). In Reply. *Pediatrics, 127*(4), e1101-e1104. doi: 10.1542/peds.2011-0201D

Ball, T. M., & Wright, A. L. (1999). Health Care Costs of Formula-feeding in the First Year of Life. *Pediatrics, 103*(4), 870-876. doi: 10.1542/peds.103.4.S1.870

Bartick, M., & Reinhold, A. (2010). The Burden of Suboptimal Breastfeeding in the United States: A Pediatric Cost Analysis. *Pediatrics*, 125(5), e1048-e1056. doi:10.1542/peds.2009-1616

Black, R. E., Morris, S. S., & Bryce, J. (2003). Where and why are 10 million children dying every year? *Lancet, 361*(9376), 2226.

Blackwell, A. (1981). Petition to Alleviate Domestic Infant Formula Misuse and Povide Informed Infant Feeding Choice. San Francisco: Public Advocates, Inc.

Bryce, J., el Arifeen, S., Pariyo, G., Lanata, C., Gwatkin, D., & Habicht, J. P. (2003). Reducing child mortality: can public health deliver? *Lancet, 362*(9378), 159-164. doi:S0140673603138706 [pii]

Caldeira, A. P., & Goncalves, E. (2007). Assessment of the impact of implementing the Baby-Friendly Hospital Initiative. *Journal of Pediatrics, 83*(2), 127-132. doi:10.2223/JPED.1596

Centers for Disease Control and Prevention. (2010, March 2010). Human Immunodeficiency Virus (HIV), and Acquired Immunodeficiency Virus (AIDS). Retrieved December 12, 2011, from http://www.cdc.gov/breastfeeding/disease/hiv.htm.

Centers for Disease Control and Prevention. (2011a). Breastfeeding. Retrieved November 7, 2011, from www.cdc.gov/breastfeeding.

Centers for Disease Control and Prevention. (2011b). Breastfeeding Report Card - United States, 2007-2011. Atlanta, GA: Centers for Disease Control and Prevention.

Centers for Disease Control and Prevention. (2011c). Vital signs: hospital practices to support breastfeeding - United States, 2007 and 2009. *Morbidity and Mortality Weekly Report, 60*, 1020-1025.

Chapman, D. J., Damio, G., & Perez-Escamilla, R. (2004). Differential response to breastfeeding peer counseling within a low-income, predominantly Latina population. *Journal of Human Lactation, 20*(4), 389-396.

Claeson, M., Gillespie, D., Mshinda, H., Troedsson, H., Victora, C. G., & Bellagio Study Group on Child, S. (2003). Knowledge into action for child survival. *Lancet, 362*(9380), 323-327. doi:S0140673603139773 [pii]

Declercq, E., Labbok, M., Sakala, C., & O'Hara, M. (2009). Hospital Practices and Women's Likelihood of Fulfilling Their Intention to Exclusively Breastfeed. *American Journal of Public Health, 99*(5), 929-935. doi:10.2105/ajph.2008.135236

Department of Health and Human Resources. (1984). Surgeon General's Workshop on Breastfeeding and Human Lactation. Washington DC: US Department of Health and Human Resources.

Department of Health and Human Services. (1990). *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*. Washington, D.C: U.S. Government Printing Office.

Department of Health and Human Services. (2000a). *Healthy People 2010, 2nd ed. Understanding and Improving Health and Objectives for Improving Health*. (ISBN: 0-16-050498-8 (Vol. 1) ISBN: 0-16-050499-6 (Vol. 2)). Washington, D.C.: U.S. Government Printing Office.

Department of Health and Human Services. (2000b). *HHS Blueprint for Action on Breastfeeding*. Washington DC: U.S. Department of Health and Human Services, Office on Women's Health Retrieved from http://www.cdc.gov/breastfeeding/pdf/bluprntbk2.pdf.

Department of Health and Human Services. (2011). Healthy People 2020. Retrieved November 7, 2011, from http://healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicid=26.

Department of Labor, & Wage and Hour Division. (2011). *Wage and Hour Fact Sheet #73 "Break Time for Nursing Mothers under the FLSA"*. Washington DC: US Department of Labor. Retrieved from http://www.dol.gov/whd/nursingmothers/.

Doherty, T., Sanders, D., Goga, A., & Jackson, D. (2011). Implications of the new WHO guidelines on HIV and infant feeding for child survival in South Africa. *Bulletin World Health Organization, 89*(1), 62-67. doi:10.2471/blt.10.079798

Drago, R. (2011). The WIC Program: An Economic Analysis of Breastfeeding and Infant Formula. *The Academy of Breastfeeding Medicine, 6*, 281-286. doi:10.1089/bfm.2011.0070

Drago, R., Hayes, J., & Yi, Y. (2010). Better Health for Mothers and Children: Breastfeeding Accommodations under the Affordable Care Act (Vol. #B292, pp. 28). Washington DC: Institute for Women's Policy Research.

Duyan Camurdan, A., Ozkan, S., Yuksel, D., Pasli, F., Sahin, F., & Beyazova, U. (2007). The effect of the baby-friendly hospital initiative on long-term breast feeding. *International Journal of Clinical Practice, 61*(8), 1251-1255. doi:IJCP926 [pii] 10.1111/j.1742-1241.2007.00926.x

Eglash, A. (2009). La Leche League International (LLLI) is foundational to all aspects of breastfeeding. *The Academy of Breastfeeding Medicine, 4*(1), 51. doi:10.1089/bfm.2008.9979

Emergency Nutrition Network, & Infant Feeding in Emergencies Core Group. (2009). Protecting babies in emergencies: the role of the public Retrieved November 3, 2009, from http://www.ennonline.net/pool/files/generalpublic/ife-guide.pdf.

Fein, S. B., Mandal, B., & Roe, B. E. (2008). Success of Strategies for Combining Employment and Breastfeeding. *Pediatrics, 122*(Supplement 2), S56-62. doi:10.1542/peds.2008-1315g

Feldman-Winter, L., Barone, L., Milcarek, B., Hunter, K., Meek, J., Morton, J., . . . Lawrence, R. A. (2010). Residency Curriculum Improves Breastfeeding Care. *Pediatrics, 126*(2), 289-297. doi:10.1542/peds.2009-3250

Friel, J. K., Aziz, K., Andrews, W. L., Harding, S. V., Courage, M. L., & Adams, R. J. (2003). A double-masked, randomized control trial of iron supplementation in early infancy in healthy term breast-fed infants. *Journal of Pediatrics, 143*(5), 582-586. doi:10.1067/s0022-3476(03)00301-9

Furman, L. M. (2011). Exclusively Breastfed Infants: Iron Recommendations Are Premature. *Pediatrics, 127*(4), e1098-e1099. doi:10.1542/peds.2011-0201B

Gartner, L. (2011). [Duration of any breastfeeding - comment on AAP policy statement].

Goldman, A. S. (2007). The immune system in human milk and the developing infant. *The Academy of Breastfeeding Medicine, 2*(4), 195-204. doi:10.1089/bfm.2007.0024

Gribble, K. D., McGrath, M., Maclaine, A., & Lhotska, L. (2011). Supporting breastfeeding in emergencies: protecting women's reproductive rights and maternal and infant health. *Disasters, 35*(4), 720-738. doi:10.1111/j.1467-7717.2011.01239.x

Grossman, X., Chaudhuri, J., Feldman-Winter, L., Abrams, J., Newton, K. N., Philipp, B. L., & Merewood, A. (2009). Hospital Education in Lactation Practices (Project HELP): does clinician education affect breastfeeding initiation and exclusivity in the hospital? *Birth, 36*(1), 54-59. doi:BIR295 [pii] 10.1111/j.1523-536X.2008.00295.x

Guise, J. M., & Freed, G. (2000). Resident physicians' knowledge of breastfeeding and infant growth. *Birth, 27*(1), 49-53.

Hale, T. W., & Hartmann, P. E. (2007). *Textbook of Human Lactation*. Amarillo, TX: Hale Publishing.

Hauck, F. R., Thompson, J. M. D., Tanabe, K. O., Moon, R. Y., & Vennemann, M. M. (2011). Breastfeeding and Reduced Risk of Sudden Infant Death Syndrome: A Meta-analysis. *Pediatrics, 128*(1), 103-110. doi:10.1542/peds.2010-3000

Healy, B., Cooney, S., O'Brien, S., Iversen, C., Whyte, P., Nally, J., . . . Fanning, S. (2010). Cronobacter (Enterobacter sakazakii): an opportunistic foodborne pathogen. *Foodborne Pathogens and Disease, 7*(4), 339-350. doi:10.1089/fpd.2009.0379

Helsing, E. (2008). The power of obstinacy. Keynote address delivered at State of the Art of Mother Support Summit (WABA/LLLI), 18-19 July 2007, Chicago. *Breastfeeding Review, 16*(2), 5-7.

Hernell, O., & Lönnerdal, B. (2011). Recommendations on Iron Questioned. *Pediatrics, 127*(4), e1099-e1101. doi:10.1542/peds.2011-0201C

Hogan, M. C., Foreman, K. J., Naghavi, M., Ahn, S. Y., Wang, M., Makela, S. M., . . . Murray, C. J. (2010). Maternal mortality for 181 countries, 1980-2008: a systematic analysis of progress towards Millennium Development Goal 5. *Lancet, 375*(9726), 1609-1623. doi:S0140-6736(10)60518-1 [pii] 10.1016/S0140-6736(10)60518-1 [doi]

Horta, B. L., Bahl, R., Martines, J. C., & Victora, C. G. (2007). Evidence on the long-term effects of breastfeeding: Systematic Reviews and Meta-Analyses. Geneva: World Health Organization.

International Baby Food Action Network (IBFAN) Asia, & Breastfeeding Promotion Network of India (BPNI). (2008). World Breastfeeding Trends Initiative (WBTi). Retrieved October 12, 2011, from http://worldbreastfeedingtrends.org/index.php.

International Labor Organization. (2000). Maternity Protection Convention (Vol. C183). Geneva: International Labor Organization.

Ip, S., Chung, M., Raman, G., Chew, P., Magula, N., DeVine, D., . . . Lau, J. (2007a). Breastfeeding and Maternal and Infant Health Outcomes in Developed Countries. *Evidence Report Technology Assessment,* (153), 1-186.

Ip, S., Chung, M., Raman, G., Chew, P., Magula, N., DeVine, D., . . . Lau, J. (2007b). Breastfeeding and Maternal and Infant Health Outcomes in Developed Countries (pp. 186). Rockville: Agency for Healthcare Research and Quality.

Jones, E. (1997). Cracking the code--monitoring the International Code of Marketing of Breast-milk Substitutes (1997). *Modern Midwife, 7*(2), 27-28.

Jones, G., Steketee, R. W., Black, R. E., Bhutta, Z. A., Morris, S. S., & Bellagio Child Survival Study, G. (2003). How many child deaths can we prevent this year? *Lancet, 362*(9377), 65-71. doi:S0140-6736(03)13811-1 [pii] 10.1016/S0140-6736(03)13811-1 [doi]

Kleinman, R. E. (Ed.). (2004). *Pediatric Nutrition Handbook* (Fifth ed.). Elk Grove Village: American Academy of Pediatrics.

Kleinman, R. E. (Ed.). (2009). *Pediatric Nutrition Handbook* (Sixth ed.). Elk Grove Village: American Academy of Pediatrics.

Kramer, M. S., & Kakuma, R. (2002). Optimal duration of exclusive breastfeeding. *Cochrane Database System Review,* (1), CD003517.

Labbok, M. H., Hight-Laukaran, V., Peterson, A. E., Fletcher, V., von Hertzen, H., & Van Look, P. F. (1997). Multicenter study of the Lactational Amenorrhea Method (LAM): I. Efficacy, duration, and implications for clinical application. *Contraception, 55*(6), 327-336. doi:S0010-7824(97)00040-1 [pii]

Lawrence, R. A., & Lawrence, R. M. (2011). *Breastfeeding, a Guide for the Medical Profession* (Seventh ed.). St. Louis: Elsevier Mosby.

Li, R., Fein, S. B., Chen, J., & Grummer-Strawn, L. M. (2008). Why Mothers Stop Breastfeeding: Mothers' Self-reported Reasons for Stopping During the First Year. *Pediatrics, 122*(Supplement 2), S69-76. doi:10.1542/peds.2008-1315i

MacDorman, M., & Mathews, T. (2009). *Behind international rankings of infant mortality: How the United States compares with Europe.* Hyattsville, MD: National Center for Health Statistics Retrieved from http://www.cdc.gov/nchs/data/databriefs/db23.pdf.

MacDorman, M. F., & Mathews, T. J. (2008). Recent trends in infant mortality in the United States. *National Center for Health Statistics (NCHS) Data Brief,* (9), 1-8.

Martens, P. J., Phillips, S. J., Cheang, M. S., & Rosolowich, V. (2000). How Baby-Friendly are Manitoba hospitals? The Provincial Infant Feeding Study. Breastfeeding Promotion Steering Committee of Manitoba. *Canadian Journal of Public Health, 91*(1), 51-57.

McKenna, J. J., Ball, H. L., & Gettler, L. T. (2007). Mother-infant cosleeping, breastfeeding and sudden infant death syndrome: what biological anthropology has discovered about normal infant sleep and pediatric sleep medicine. *American Journal of Physical Anthropology, Suppl 45*, 133-161. doi:10.1002/ajpa.20736

McKenna, J. J., & McDade, T. (2005). Why babies should never sleep alone: a review of the co-sleeping controversy in relation to SIDS, bedsharing and breast feeding. *Paediatric Respiratory Reviews, 6*(2), 134-152.

Merewood, A., Chamberlain, L. B., Cook, J. T., Philipp, B. L., Malone, K., & Bauchner, H. (2006). The effect of peer counselors on breastfeeding rates in the neonatal intensive care

unit: results of a randomized controlled trial. *Archives of Pediatric & Adolescent Medicine, 160*(7), 681-685. doi:160/7/681 [pii] 10.1001/archpedi.160.7.681

Merewood, A., & Philipp, B. L. (2003). Peer counselors for breastfeeding mothers in the hospital setting: trials, training, tributes, and tribulations. *Journal of Human Lactation, 19*, 72.

Breastfeeding Promotion Act of 2011 (2011).

Morrissey, R., Begley, M., Oshima, S., Rea, M., Ross, R. P., & Hill, C. (2011). Real-time monitoring of luciferase-tagged Cronobacter sakazakii in reconstituted infant milk formula. *Journal of Food Protection, 74*(4), 573-579. doi:10.4315/0362-028x.jfp-10-403

Moura de Araujo Mde, F., & Soares Schmitz Bde, A. (2007). Reassessment of Baby-friendly Hospitals in Brazil. *Journal of Human Lactation, 23*(3), 246-252. doi:23/3/246 [pii] 10.1177/0890334407303899 [doi]

Naylor, A. J. (2010). The ten steps: ten keys to breastfeeding success. *The Academy of Breastfeeding Medecine, 5*(5), 249-251. doi:10.1089/bfm.2010.0056

Neveu, D., Viljoen, J., Bland, R. M., Nagot, N., Danaviah, S., Coutsoudis, A., . . . Newell, M. L. (2011). Cumulative Exposure to Cell-Free HIV in Breast Milk, Rather Than Feeding Pattern per se, Identifies Postnatally Infected Infants. *Clinical Infectious Disease, 52*(6), 819-825. doi:10.1093/cid/ciq203

Noel-Weiss, J., & Hebert, D. (2004). Breastfeeding peer support programs. *Canadian Nurse, 100*(8), 29-33.

Office on Womens' Health. (2010). National Breastfeeding Awareness Campaign, 2004-2006. Retrieved from http://www.womenshealth.gov/breastfeeding/government-in-action/national-breastfeeding-campaign/.

Ogburn, T., Philipp, B. L., Espey, E., Merewood, A., & Espindola, D. (2011). Assessment of breastfeeding information in general obstetrics and gynecology textbooks. *Journal of Human Lactation, 27*(1), 58-62. doi:10.1177/0890334410375960

Okolo, S. N., & Ogbonna, C. (2002). Knowledge, attitude and practice of health workers in Keffi local government hospitals regarding Baby-Friendly Hospital Initiative (BFHI) practices. *European Journal of Clinical Nutrition, 56*(5), 438-441. doi:10.1038/sj.ejcn.1601331

Perez-Escamilla, R. (2007). Evidence based breast-feeding promotion: the Baby-Friendly Hospital Initiative. *Journal of Nutrition, 137*(2), 484-487.

Philipp, B. L., Merewood, A., Gerendas, E. J., & Bauchner, H. (2004). Breastfeeding information in pediatric textbooks needs improvement. *Journal of Human Lactation, 20*(2), 206-210.

Roe, B., Whittington, L. A., Fein, S. B., & Teisl, M. F. (1999). Is there competition between breast-feeding and maternal employment? *Demography, 36*(2), 157-171.

Saadeh, R. (2008). Informal Meeting of BFHI Coordinators and Focal Points in Industrialized Countries (N. f. H. a. Development, Trans.). Geneva: World Health Organization.

Saadeh, R., & Casanovas, C. (2009). Implementing and revitalizing the Baby-Friendly Hospital Initiative. *Food and Nutrition Bulletin, 30*(2 Suppl), S225-229.

Schanler, R. J., Feldman-Winter, L., Landers, S., Noble, L., Szucs, K. A., & Viehmann, L. (2011). Concerns With Early Universal Iron Supplementation of Breastfeeding Infants. *Pediatrics, 127*(4), e1097. doi:10.1542/peds.2011-0201A

Schubiger, G., Schwarz, U., & Tonz, O. (1997). UNICEF/WHO baby-friendly hospital initiative: does the use of bottles and pacifiers in the neonatal nursery prevent successful

breastfeeding? Neonatal Study Group. *European Journal of Pediatrics, 156*(11), 874-877.

Sedgwick, J. P., & Fleischner, E. C. (1921). Breastfeeding in the Reduction of Infant Mortality. *American Journal of Public Health, 11*(2), 153-157.

Shealy, K. R., Li, R., Benton-Davis, S., & Grummer-Strawn, L. M. (2005). The CDC Guide to Breastfeeding Interventions. Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention.

Shubber, S. (2011). *The WHO International Code of Marketing of Breast-Milk Substitutes: History and Analysis* (Second ed.). London: Pinter and Martin.

Shulman, R. J., Schanler, R. J., Lau, C., Heitkemper, M., Ou, C. N., & Smith, E. O. (1998). Early feeding, antenatal glucocorticoids, and human milk decrease intestinal permeability in preterm infants. *Pediatric Research, 44*(4), 519-523.

Smith, L. J. (1995). A score sheet for evaluating breastfeeding educational materials. *Journal of Human Lactation, 11*(4), 307-311.

Smith, L. J. (2007). Impact of birthing practices on the breastfeeding dyad. *Journal of Midwifery & Women's Health, 52*(6), 621-630. doi:S1526-9523(07)00295-4 [pii] 10.1016/j.jmwh.2007.07.019 [doi]

Smith, L. J., & Kroeger, M. (2010). *Impact of Birthing Practices on Breastfeeding* (Second ed.). Sudbury, MA: Jones and Bartlett Publishers.

Sterken, E. (2011). [Friel - connections to Industry].

The Joint Commission. (2009). National Hospital Inpatient Quality Measures- Perinatal Care Core Measure Set *Perinatal Care PC-05* (Vol. Perinatal Care PC-05). Oakbrook Terrace, IL: The Joint Commission.

United Nations. (1989). Convention on the Rights of the Child. New York: United Nations.

United Nations Childrens Fund. (1990). Innocenti Declaration on the Promotion, Protection, and Support of Breastfeeding. New York: UNICEF Nutrition Cluster.

United Nations Childrens Fund. (2005). Information on Infant and Young Child Feeding in Emergencies for UNICEF Offices and Partners. In N. S. NYHQ (Ed.). New York: United Nations Childrens Fund.

United States Breastfeeding Committee. (2011a). Breastfeeding Is Getting Easier. *USBC e-News*. Retrieved from http://www.usbreastfeeding.org.

United States Breastfeeding Committee. (2011b). United States Breastfeeding Committee Retrieved Nov 7, 2011, from http://www.usbreastfeeding.org.

US Department of Health and Human Services. (2011). *The Surgeon General's Call to Action to Support Breastfeeding*. Washington, DC: US Department of Health and Human Services, Office of the Surgeon General, Retrieved from http://www.surgeongeneral.gov/topics/breastfeeding/index.html.

Victora, C. G., Wagstaff, A., Schellenberg, J. A., Gwatkin, D., Claeson, M., & Habicht, J. P. (2003). Applying an equity lens to child health and mortality: more of the same is not enough. *Lancet, 362*(9379), 233-241. doi:S0140-6736(03)13917-7 [pii] 10.1016/S0140-6736(03)13917-7 [doi]

Weng, D. R., Hsu, C. S., Gau, M. L., Chen, C. H., & Li, C. Y. (2003). Analysis of the outcomes at baby-friendly hospitals: appraisal in Taiwan. *The Kaohsiung Journal of Medical Sciences, 19*(1), 19-28.

World Health Organisation. (1974). Resolution 27.43 Infant Nutrition and Breast feeding (Vol. WHA 27.43). Geneva: World Health Organization.

World Health Organization. (1978). Declaration of Alma-Ata: International Conference on Primary Health Care Alma-Ata, USSR: World Health Organization.

World Health Organization. (2004). Guiding Principles for Feeding Infants and Young Children During Emergencies. Geneva: World Health Organization.

World Health Organization. (2007). Safe preparation, storage and handling of powdered infant formula. In W. H. Organization (Ed.). Geneva: World Health Organization.

World Health Organization. (2009). *Infant and young child feeding: Model Chapter for textbooks for medical students and allied health professionals*. Geneva: World Health Organization.

World Health Organization. (2010). Guidelines on HIV and infant feeding 2010: Principles and recommendations for infant feeding in the context of HIV and a summary of evidence (pp. 58). Geneva: World Health Organization.

World Health Organization, & Linkages. (2003). Infant and young child feeding: A tool for assessing national practices, policies and programmes (pp. 140). Geneva: World Health Organization.

World Health Organization, & United Nations Childrens Fund. (1989). Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services. Geneva: World Health Organization Nutrition Unit.

World Health Organization, & United Nations Childrens Fund. (2003). Global Strategy for Infant and Young Child Feeding (pp. 30). Geneva: World Health Organization.

World Health Organization, & United Nations Childrens Fund. (2007). Planning guide for national implementation of the Global strategy for infant and young child feeding (pp. 46). Geneva: World Health Organization.

Appendix 1 - WBTi Worksheet/Report with Detailed Scoring of the US

The World Breastfeeding Trends Initiative (WBT*i*)

United States of America
December 19, 2011

Introduction and Background

This is the first known use of the WBTi to assess implementation of the *Global Strategy* in the United States of America.

Assessment process followed by the country

This analysis is a *Master of Public Health* Culminating Experience project at Wright State University conducted by Linda J. Smith from June 2011 through December 2011. All scoring and analysis was conducted solely and independently by the author. Analysis was conducted by examining published global and national policy documents, utilization of personal knowledge and experience, and guidance received from interviews with selected individuals.

List of the partners for the assessment process

Informal interviews, emails and conversations with selected individuals from the US Breastfeeding Committee including the American Academy of Pediatrics, Academy of Breastfeeding Medicine, Centers for Disease Control and Prevention, Office on Women's Health, US DHHS Maternal-Child Health Bureau; Elisabeth Sterken from IBFAN North America; Rebecca Norton from IBFAN / GIFA; Lawrence Gartner, MD; Geri Fitzgerald, RN; and Miriam Labbok, MD.

Assessment Findings

Indicator 1: ***National Policy, Programme and Coordination***

Key Question: Is there a national infant and young child feeding/breastfeeding policy that protects, promotes and supports optimal infant and young child feeding and the policy is supported by a government programme? Is there a mechanism to coordinate like National Infant and Young Child Feeding Committee and Coordinator?

Criteria of Indicator 1	Scoring	Results
1.1) A national Infant and Young Child Feeding/Breastfeeding policy has been officially adopted/approved by the government	2	*2*

1.2) The policy promotes exclusive breastfeeding for the first six months, complementary feeding to be started after six months and continued breastfeeding up to 2 years and beyond.	2	1.5
1.3) A National Plan of Action has been developed with the policy	2	1
1.4) The plan is adequately funded	1	.5
1.5) There is a National Breastfeeding Committee	1	1
1.6) The National Breastfeeding (Infant and Young Child Feeding) Committee meets and reviews on a regular basis	1	.75
1.7) The National Breastfeeding (Infant and Young Child Feeding) Committee links with all other sectors like health, nutrition, information etc., effectively	0.5	.25
1.8) Breastfeeding Committee is headed by a coordinator with clear terms of reference	0.5	.25
Total Score	**7.25 / 10**	

Information and Sources Used: Surgeon General's Call to Action 2011; Blueprint for Action 2001; Innocenti Declaration 1990; previous related US government reports and publications

Gaps:
1.2 SGCTA reflects consensus of AAP and other professional associations on duration of any breastfeeding; should extend "any breastfeeding" recommendation to "two years or beyond"
1.4 No funding associated with the SGCTA; other federal programs fund parts of the CTA
1.6 US Breastfeeding Committee meets part of this criteria; USBC does not address complementary feeding
1.7 USBC is increasing liaison activities with NGOs and other federal agencies
1.8 No single Coordinator; USBC Board of Directors maintains liaisons with government agency leadership. An Interagency Breastfeeding Work Group was formed in 2011 and meets monthly to develop cross-agency policies.

Recommendations:
1.4 Assure adequate and ongoing funding for all CTA Action Steps
1.7 Coordinate and link with government and NGC sectors for integrated complementary feeding and reproductive health policies

Indicator 2: ***Baby Friendly Hospital Initiative (Ten Steps to Successful Breastfeeding)***

Key Question:

2A) Quantitative: *2.1) What percentage of hospitals and maternity facilities that provide maternity services have been designated "Baby Friendly" based on the global or national criteria? 3.5 %* (4.53% of births) U.S. maternity hospitals (n=3143) and birth centers (n=138) = 3281 from CDC mPINC survey 2009; 121 Designated BFHI as of Dec 3, 2011 = .037%. Using IBFAN scoring <7% is scored as 1 point out of a possible 4.

2B) Qualitative: 2.2*) What is the skilled training inputs and sustainability of BFHI?* BFHI designated hospitals that have been certified after a minimum recommended training of 18 hours for all its staff working in maternity services at 100 % of BFHI-designated hospitals.

Adequate infrastructure for current level of implementation; plans to accelerate and expand are in progress. Using IBFAN scoring >75 is scored as 3.5 points out of a possible 3.5.

2C) Qualitative: 2.3) *What is the quality of BFHI program implementation?* Full compliance with UNICEF guidelines per interview with WHO officials, July 2011, included monitoring, reassessment, mother interviews, and federal recommendation to accelerate implementation of BFHI.

Criteria	Score	Results
2.1) Percent of hospitals designated as BFHI facilities	4	1
2.2) Skilled training at BFHI designated facilities	3.5	3.5
2.3) BFHI programme relies on training of health workers	.5	.5
2.4) A standard monitoring system is in place	.5	.5
2.5) An assessment system relies on interviews of mothers	.5	.5
2.6) Reassessment systems have been incorporated in national plans	.5	.25
2.7) There is a time-bound program to increase the number of BFHI institutions in the country	.5	.25
Total Score		
Total Score 2A, 2B and 2C	**6.5 /10**	

Information and Sources Used:
Baby-Friendly USA reports; CDC Breastfeeding Report Cards 2007-2011; CDC mPINC Surveys 2007 and 2009. Baby-Friendly USA is a private non-profit association designated as the US BFHI Authority by UNICEF.

Gaps:
2.1 Fewer than 5% of births occur in BFHI-designated facilities; national and government accreditation agencies do not address all BFHI Steps nor are recognized by UNICEF
2.6 Reassessment is integrated in BFHI designation; national plan is silent on reassessment
2.7 No official timetable for increasing the number of BFHI institutions

Recommendations:
2.1 Increase collaboration and coordination between BFUSA and The Joint Commission, Medicaid, and other accreditation agencies
2.7 Develop a realistic timetable for expanding the number of BFHI institutions with adequate funding provided

Note: As of August 2011, BFHI is widely and actively promoted by The Joint Commission, Centers for Disease Control and Prevention, Surgeon General, and many non-governmental organizations. Rapid improvement in this indicator is expected.

Indicator 3: *Implementation of the International Code*

Key Question: Are the *International Code of Marketing of Breastmilk Substitutes* and subsequent WHA resolution given effect and implemented? Has any new action been taken to give effect to the provisions of the Code?

Criteria	Scoring	Results
3.1) No action taken	0	0
3.2) The best approach is being studied	1	.5
3.3) National breastfeeding policy incorporating the Code in full or in part but not legally binding and therefore unenforceable	2	1
3.4) National measures (to take into account measures other than law), awaiting final approval	3	.5
3.5) Administrative directive/circular implementing the Code in full or in part in health facilities with administrative sanctions	4	.5
3.6) Some articles of the Code as a voluntary measure	5	1
3.7) Code as a voluntary measure	6	0
3.8) Some articles of the Code as law	7	.5
3.9) All articles of the Code as law	8	0
3.10) All articles of the Code as law, monitored and enforced	10	0
Total Score:	**4.0/10**	

Information and Sources Used: US government reports including Surgeon General's Workshop reports of 1984, 1985, 1991; Call to Action on Nutrition 1990; Blueprint for Action 2001, Call to Action to Support Breastfeeding 2011; Position Papers of the Academy of Breastfeeding Medicine, American Academy of Pediatrics; Wellstart International; Lamaze International; International Lactation Consultant Association and other professional associations; research reports; IBFAN Code Documentation Center reports; NABA "Breaking the Rules, Stretching the Rules" reports; Minutes of USBC meetings

Gaps:
3.2. Federal Trade Commission is studying the effect of marketing practices
3.3 CTA Action 6 addresses marketing of formula; USBC has a Reduce Marketing committee;
3.4 No national measures are currently in active development (as of December 2011)
3.5 No government administrative directive applying to health facilities
3.6 Some provisions (no discharge bags) in place by BFHI and some other hospitals
3.8 US participates in Codex Alimentarius guidelines regarding labelling.
3.7, 2.9, 3.10 No articles of the Code are in place as voluntary measures or laws.

Recommendations:
A limit on marketing of breastmilk substitutes (infant formula) has been recommended in multiple government reports including the *1984 Surgeon General's Workshop on Breastfeeding*. Scoring this indicator was problematic due to the lack of federal action on implementing the Code in particular or any regulation of formula marketing in general. A comprehensive plan for regulating and monitoring marketing of formula and other products covered under the scope of the Code should be developed and appropriate legislation and administrative rules implemented.

Indicator 4: *Maternity Protection*

Key Question: Is there legislation and are there other measures (policies, regulations, practices) that meet or go beyond the International Labor Organization (ILO) standards for protecting and supporting breastfeeding for mothers, including those working mothers in the informal sector?

Criteria	Score	Results
4.1) Women covered by the national legislation are allowed the following weeks of paid maternity leave		
a. Any leave less than 14 weeks	0.5	0.5
b. 14 to 17weeks	1	
c. 18 to 25 weeks	1.5	
d. 26 weeks or more	2	
4.2) Women covered by the national legislation are allowed at least one breastfeeding break or reduction of work hours daily. a. Unpaid break b. Paid Break	 0.5 1	 1
4.3) Legislation obliges private sector employers of women in the country to give at least 14 weeks paid maternity leave and paid nursing breaks.	1	0
4.4) There is provision in national legislation that provides for work site accommodation for breastfeeding and/or childcare in work places in the formal sector.	1	1
4.5) Women in informal/unorganized and agriculture sector are: a. accorded some protective measures b. accorded the same protection as women working in the formal sector	 0.5 1	 0.25
4.6) a. Information about maternity protection laws, regulations, or policies is made available to workers b. There is a system for monitoring compliance and a way for workers to complain if their entitlements are not provided.	0.5 0.5	0.25 0.5
4.7) Paternity leave is granted in public sector for at least 3 days.	0.5	0.5
4.8) Paternity leave is granted in the private sector for at least 3 days.	0.5	0
4.9) There is legislation providing health protection for pregnant and breastfeeding workers and the legislation provides that they are informed about hazardous conditions in the workplace and provided alternative work at the same wage until they are no longer pregnant or breastfeeding.	0.5	0.5
4.10) There is legislation prohibiting employment discrimination and assuring job protection for women workers during breastfeeding period.	0.5	0
4.11) ILO MPC No 183 has been ratified, or the country has a national law equal to or stronger than C183.	0.5	0
4.12) The ILO MPC No 183 has been enacted, or the country has enacted provisions equal to or stronger than C183.	0.5	0
Total Score:	**3.5/10**	

Information and Sources Used:
Affordable Health Care Act of 2010; Family and Medical Leave Act; Department of Labor regulations

Gaps:
4.1 No law mandating paid maternity leave for all employers and sectors
4.5 Few protections for women in agricultural or informal sectors

Recommendations:
Accelerate implementation of the 2011 Surgeon General's *Call to Action* Actions 13, 14, 15, and 16. Ratify ILO Convention 183 and Recommendation 191.

Indicator 5: *Health and Nutrition Care System*

Key Question: Do care providers in these systems undergo *skills training,* and do their pre-service education curriculum support optimal infant and young child feeding; do these services support mother and breastfeeding friendly birth practices, do the policies of health care services support mothers and children, and whether health workers responsibilities to Code are in place*?*

Criteria	**Results**		
	Adequate	Inadequate	No Reference
5.1) A review of health provider schools and pre-service education programmes in the country[12] indicates that infant and young child feeding curricula or session plans are adequate/inadequate	2	1	0
		1	
5.2) Standards and guidelines for mother-friendly childbirth procedures and support have been developed and disseminated to all facilities and personnel providing maternity care.	2	1	0
			0
5.3) There are in-service training programmes providing knowledge and skills related to infant and young child feeding for relevant health/nutrition care providers.[13]	2	1	0
		1	
5.4) Health workers are trained with responsibility towards Code implementation as a key input.	1	0.5	0
		.5	
5.5) Infant feeding-related content and skills are integrated, as appropriate, into training programmes focusing on relevant topics (diarrhoeal disease, acute respiratory infection, IMCI, well-child care, family planning, nutrition, the Code, HIV/AIDS, etc.)	1	0.5	0
			0

12 Types of schools and education programmes that should have curricula related to infant and young child feeding may vary from country to country. Which departments within various schools are responsible for teaching various topics may also vary. The assessment team should decide which schools and departments are most essential to include in the review, with guidance from educational experts on infant and young child feeding, as necessary.

13 The types of health providers that should receive training may vary from country to country, but should include providers that care for mothers and children in fields such as medicine, nursing, midwifery, nutrition and public health.

5.6) These in-service training programmes are being provided throughout the country.[14]	1	0.5	0
		0.5	
5.7) Child health policies provide for mothers and babies to stay together when one of them is sick	1	0.5	0
		0.5	
Total Score:	**3.5/10**		

Information and Sources Used:
AAP Breastfeeding Residency Curriculum and Section on Breastfeeding web pages; National Breastfeeding Awareness Campaign; Academy of Breastfeeding Medicine Clinical Protocols; Research articles on professional education related to breastfeeding; Baby-Friendly Hospital Initiative Step 2 Criteria; CDC Breastfeeding web pages; Wellstart International; International Lactation Consultant Association; National WIC Association; various textbooks

Gaps
5.1 The AAP Breastfeeding Residency Curriculum is implemented in only a few universities and hospital residency programs. An evidence-based curriculum on breastfeeding is neither present nor required in medical, nursing, dietetic and midwifery schools and programs.
5.2 Mother-friendly childbirth is rarely discussed in obstetric residency programs.
5.3 and 5.6 Inservice education is inconsistent across states, according to numerous educators in this field
5.4 Although Code implementation is required in IBCLC certification courses, BFHI courses, and ABM courses and sessions, comprehensive and consistent Code content is not universal in health professional educational programs.
5.5 Accurate information infant feeding-related content is not consistently included in US training programs.

Recommendations
Implement 2011 Surgeon General's *Call to Action* Actions 9 and 10 by inserting the AAP Curriculum into all pediatric, obstetric and family medicine residency programs and other strategies. Develop curricula or modify the AAP curriculum for midwifery, nursing and dietetic professional schools. Compensate health professionals for attending continuing education programs on breastfeeding, human lactation, infant and young child feeding. Utilize the skills and expertise of IBCLCs in professional education programs.

Indicator 6: *Mother Support and Community Outreach*

Key Question: Are there mother support and community outreach systems in place to protect, promote and support optimal infant and young child feeding*?*

14 Training programmes can be considered to be provided "throughout the country" if there is at least one training programme in each region or province or similar jurisdiction.

Criteria	Results		
	Yes	To some degree	No
6.1) All pregnant women have access to community-based support systems and services on infant and young child feeding.	2	1	0
		1	
6.2) All women have access to support for infant and young child feeding after birth.	2	1	0
		1	
6.3) Infant and young child feeding support services have national coverage.	2	1	0
		1	
6.4) Community-based support services for the pregnant and breastfeeding woman are integrated into an overall infant and young child health and development strategy (inter-sectoral and intra-sectoral.	2	1	0
		1	
6.5) Community-based volunteers and health workers possess correct information and are trained in counselling and listening skills for infant and young child feeding.	2	1	0
		1	
Total Score:	**5/10**		

Information and Sources Used:
La Leche League International; Breastfeeding USA, Nursing Mothers Councils and other mother-support organizations; USDA WIC Peer Support programs; federal MCH Title V MCH Block Grant information; Office on Women's Health; National Partnership for Women; White House Office on Women and Girls; Moms Rising; US Breastfeeding Committee; Black Mothers Breastfeeding Association; Milk for Thought, Best for Babes Foundation

Gaps:
6.2 Low income and minority mothers have the lowest rates of access to community support for breastfeeding. Women with disabilities may lack access to information and support.
6.4 Unless designated as BFHI facilities, hospitals do not consistently and smoothly interface with community support services for pregnant and breastfeeding women.
6.5 Unless trained through breastfeeding organizations or WIC, community-based health workers or volunteers are not consistently trained in counselling and listening skills for infant feeding.

Recommendations:
Fully fund and expand comprehensive and integrated community-based support for all women, especially low-income and minority populations and other marginalized groups. Assure sufficient coordination with health care professionals that possess adequate knowledge of infant feeding.

Indicator 7: *Information Support*

Key question: Are comprehensive Information, Education and Communication (IEC) strategies for improving infant and young child feeding (breastfeeding and complementary feeding) being implemented?

Criteria	Results		
	Yes	To some degree	No
7.1) There is a comprehensive national IEC strategy for improving infant and young child feeding.	2	1	0
		1	
7.2) IEC programmes (e.g. World Breastfeeding Week) that include infant and young child feeding are being actively implemented at local levels	2	1	0
		1	
7.3) Individual counselling and group education services related to infant and young child feeding are available within the health/nutrition care system or through community outreach.	2	1	0
		1	
7.4) The content of IEC messages is technically correct, sound, based on national or international guidelines.	2	1	0
		1	
7.5) A national IEC campaign or programme[15] using electronic and print media and activities has channelled messages on infant and young child feeding to targeted audiences in the last 12 months.	2	1	0
		1	
Total Score:	**5/10**		

Information and Sources Used:
National Breastfeeding Awareness Campaign; Office on Women's Health; USDA WIC program; La Leche League International; Breastfeeding USA; US Lactation Consultant Association;

Gaps:
7.2 World Breastfeeding Week and similar activities are inconsistently implemented at local levels
7.3 Individual and group education services are inconsistently implemented; mothers not eligible for WIC or who do not participate in WIC have access to few other group education resources.
7.4 No known evaluation of IEC messages for accuracy has been done at national levels, even though evaluation tools are available.
7.5 No systematic national IEC campaign using electronic media has been used in the past 12 months. Some partial programs are in place, including a text-messaging service, World Breastfeeding Week 2011, and several WIC state agency web-based programs.

Recommendations:
Expand national IEC program to include fathers, family members, and grandparents.
Develop IEC programs that address disparities and populations with low breastfeeding rates.
Study outcomes from various approaches to IEC messages. Continue to collaborate with subject-matter and cultural experts to assure accuracy of information.

[15] An IEC campaign or programme is considered "national" if its messages can be received by the target audience in all major geographic or political units in the country (e.g., regions or districts).

Indicator 8: *Infant Feeding and HIV*

Key Question: Are policies and programmes in place to ensure that HIV - positive mothers are informed about the risks and benefits of different infant feeding options and supported in carrying out their infant feeding decisions?

Criteria	Results		
	Yes	To some degree	No
8.1) The country has a comprehensive policy on infant and young child feeding that includes infant feeding and HIV	2	1	0
			0
8.2) The infant feeding and HIV policy gives effect to the International Code/ National Legislation	1	0.5	0
			0
8.3) Health staff and community workers receive training on HIV and infant feeding policies, the risks associated with various feeding options for infants of HIV-positive mothers and how to provide counselling and support.	1	0.5	0
			0
8.4) Voluntary and Confidential Counselling and Testing (VCCT) is available and offered routinely to couples who are considering pregnancy and to pregnant women and their partners.	1	0.5	0
		0.5	
8.5) Infant feeding counselling in line with current international recommendations and locally appropriate is provided to HIV positive mothers.	1	0.5	0
			0
8.6) Mothers are supported in making their infant feeding decisions with further counselling and follow-up to make implementation of these decisions as safe as possible.	1	0.5	0
			0
8.7) Special efforts are made to counter misinformation on HIV and infant feeding and to promote, protect and support 6 months of exclusive breastfeeding and continued breastfeeding in the general population.	1	0.5	0
			0
8.8) On-going monitoring is in place to determine the effects of interventions to prevent HIV transmission through breastfeeding on infant feeding practices and overall health outcomes for mothers and infants, including those who are HIV negative or of unknown status.	1	0.5	0
			0
8.9) The Baby-friendly Hospital Initiative incorporates provision of guidance to hospital administrators and staff in settings with high HIV prevalence on how to assess the needs and provide support for HIV positive mothers.	1	0.5	0
		0.5	
Total Score:	**1/10**		

Information and Sources Used:

CDC information and web site; Surgeon General's *Call to Action*; Baby-Friendly USA; AAP and other professional position papers on infant feeding; AIDS Information from DHHA.

Gaps:
The current US policy for warns mothers who are HIV positive to not breastfeed at all. At least one state agency threatened to remove a child from any HIV-positive mothers who attempt to breastfeed.

Recommendations:
Update infant feeding recommendations to be consistent with WHO 2010 policy and current research. Support women who wish to exclusively breastfeed safely according to published research criteria.

Indicator 9: *Infant Feeding during Emergencies*

Key Question: Are appropriate policies and programmes in place to ensure that mothers, infants and children will be provided adequate protection and support for appropriate feeding during emergencies?

Criteria	**Results**		
	Yes	To some degree	No
9.1) The country has a comprehensive policy on infant and young child feeding that includes infant feeding in emergencies	2	1	0
			0
9.2) Person(s) tasked with responsibility for national coordination with the UN, donors, military and NGOs regarding infant and young child feeding in emergency situations have been appointed	2	1	0
			0
9.3) An emergency preparedness plan to undertake activities to ensure exclusive breastfeeding and appropriate complementary feeding and to minimize the risk of artificial feeding has been developed	2	1	0
		1	
9.4) Resources identified for implementation of the plan during emergencies	2	1	0
		0.5	
9.5) Appropriate teaching material on infant and young child feeding in emergencies has been integrated into pre-service and in-service training for emergency management and relevant health care personnel.	2	1	0
			0
Total Score:	**1.5/10**		

Information and Sources Used:
American Red Cross; Federal Emergency Management Agency; American Academy of Pediatrics, International Lactation Consultant Association, Wellstart International, UNICEF, Emergency Nutrition Network, US Breastfeeding Committee

Gaps:
9.1 No federal guidelines or information on breastfeeding during emergency situations were found.

9.5 The USBC *Statement on Infant Feeding in Emergencies* was presented to a top FEMA in October 2011.

Recommendations:
Integrate infant and young child feeding guidelines from the Emergency Nutrition Network into all US emergency preparedness agencies' curricula, policies and training programs.

Indicator 10: *Monitoring and Evaluation*

Key Question: Are monitoring and evaluation data routinely collected and used to improve infant and young child feeding practices?

Criteria	**Results**		
	Yes	To some degree	No
10.1) Monitoring and evaluation components are built into major infant and young child feeding programme activities.	2	1	0
		1	
10.2) Monitoring or Management Information System (MIS) data are considered by programme managers in the integrated management process.	2	1	0
		1	
10.3) Baseline and follow-up data are collected to measure outcomes for major infant and young child feeding programme activities.	2	1	0
		1	
10.4) Evaluation results related to major infant and young child feeding programme activities are reported to key decision-makers	2	1	0
	2		
10.5) Monitoring of key infant and young child feeding practices is built into a broader nutritional surveillance and/or health monitoring system or periodic national health surveys.	2	1	0
	2		
Total Score:	**7/10**		

Information and Sources Used:
Infant Feeding Practices II Survey; National Immunization Survey; Breastfeeding Report Card; Maternity Practices in Infant Nutrition and Care (mPINC) Survey; Health Styles Survey; Pregnancy Risk Assessment Monitoring System; other state or national survey instruments

Gaps:
10.1 Monitoring and evaluation components are inconsistent and may not measure breastfeeding and other infant feeding parameters accurately.

Recommendations:
Improve coordination and communication between monitoring programs and infant feeding programs. Increase public access to available data on infant feeding practices and outcomes.

Indicator 11: Early Initiation of Breastfeeding

Key question: Percentage of babies breastfed within one hour of birth

Result: ~ 3.9 % of babies are breastfed within one hour of birth. Score: 3/10

Source of data:
Baby-Friendly USA data; The Joint Commission Perinatal Core Measure 2011; Infant Feeding Practices II Survey; National Immunization Survey; Breastfeeding Report Card; Maternity Practices in Infant Nutrition and Care (mPINC) Survey

Summary Comments
This indicator has not been systematically tracked. BFHI designated maternity facilities and those adopting the Joint Commission Perinatal Core Measure on exclusive breastfeeding have begun tracking this information.

Indicator 12: Exclusive breastfeeding for the first six months

Key question: *Percentage of babies 0<6 months of age exclusively breastfed in the last 24 hours?*

Result: 14.8 .% of babies are exclusively breastfed at 6 months. Score: 3/10

Source of data:
CDC 2011 Breastfeeding Report Card, Infant Feeding Practices II Survey; National Immunization Survey

Summary Comments:
The CDC began reporting this indicator in 2005.

Indicator 13: Median duration of breastfeeding

Key question: Babies are breastfed for a median duration of how many months? ……. months

Result: unknown; estimate 6 months. Score: 3/10
Data from the 2011 CDC Report card: Ever Breastfed: 74.6%; any BF at 6 months 44.3%; any BF at 1 year 23.8%; exclusive at 3 months 35%; exclusive at 6 months 14.8%.

Source of data:
CDC 2011 Breastfeeding Report Card, Infant Feeding Practices II Survey; National Immunization Survey

Summary Comments:
This indicator is not easily calculated from existing data sets.

Indicator 14: Bottle feeding

Key question: What percentage of breastfed babies less than 6 months old receives other foods or drinks from bottles?

Result: 48.5% of breastfed babies less than 6 months old receive food or drinks from bottles. Score: 3/10

- Percent of babies who were put to bed with a bottle of formula, breast milk, juice, juice drink, or any other kind of milk at each frequency in the past 2 weeks by infant age 12-15%
- Percent of babies who used a pacifier in the past 7 days 80.8%
- Percent of babies who drank all of their bottle or cup of formula with each frequency by infant age, among formula fed babies 58-63%
- Percent of babies fed expressed or pumped breast milk in the past 7 days among breastfed babies 48.5

Source of data: Infant Feeding Practices II Survey

Summary Comments:
This indicator is not easily calculated from existing data sets.

Indicator 15: Complementary feeding

Key question: Percentage of breastfed babies receiving complementary foods at 6-9 months of age?

Result: unknown. Estimated to be >90%. Score: 10/10
Percent of babies who were fed each food in the past 7 days by infant age (click link)
Table 3.1. Percent of babies who were fed each food in the past 7 days by infant age (click link)

Source of data: Infant Feeding Practices II Survey

Summary Comments
This indicator is not easily calculated from existing data sets.

Summary of Scoring

Indicator	Score		IBFAN Color ranking
1-National Policy, program, coordination	7.25	blue	
2- Baby-Friendly Hospital Initiative	6.5	blue	
3-International Code of Marketing of Breastmilk Substitutes	4.0	yellow	
4-Maternity Protection	4.0	yellow	
5-Health and Nutrition Care Systems	3.5	yellow	
6-Mother support and community based outreach/support	5.0	yellow	
7- Information support	5.0	yellow	
8-Infant feeding and HIV	1.0	red	
9-Infant feeding in emergencies	1.5	red	
10- Monitoring and Evaluation	7.0	blue	
TOTAL FOR INDICATORS 1-10 (possible 100)	44.75	yellow	

11 – Early Initiation of breastfeeding	3.9%	3	
12 – Exclusive breastfeeding for first 6 months	14.8%	3	
13 – Mean Duration of Breastfeeding	6 months	3	
14 – Bottle Feeding of breastfed infants	46%	3	
15 – Complementary Feeding	90%	10	
TOTAL FOR INDICATORS 11-15 (out of 50)		22	
TOTAL for all indicators (out of 150)	**66.75**	**yellow**	

Key Gaps

Red scores in Part I, policies and programs

8. Infant feeding and HIV (1.0): US policy is inconsistent with current research and the 2010 WHO statement on Infant feeding and HIV. With appropriate use of retroviral, the risk of HIV transmission through breastfeeding is less than 1%.
9. Infant feeding in emergencies (1.5): US federal policy is inconsistent with WHO recommendations on infant feeding in emergencies.

Red scores in part II, practices

11. Early initiation of breastfeeding
12. Exclusive breastfeeding for 6 months
13. Mean duration of breastfeeding
14. Bottle feeding of breastfed infants

Yellow scores in Part 1, Policies and programs

3. International Code of Marketing of Breastmilk Substitutes
4. Maternity Protection
5. Health and Nutrition Care Systems
6. Mother support and community based outreach/support
7. Information support

Key Strengths

1. National policy, program and coordination
2. BFHI
10. Monitoring and Evaluation
15. Complementary feeding

Key Recommendations

- Take substantive actions to implement the International Code of Marketing of Breastmilk Substitutes as a minimum standard.
- Expand the 2011 Call to Action to address infant feeding related to HIV, and mother-friendly childbirth practices contained in the 2009 BFHI.
- Secure adequate and sustainable funding for all CTA Actions.
- Expand and institutionalize systems for cross-agency and cross-profession/discipline/program coordination and collaboration on all topics that impact or are impacted by breastfeeding.

Criteria of Indicator 1	Scoring	Results
1.1) A national Infant and Young Child feeding/breastfeeding policy has been officially adopted/approved by the government	2	2
1.2) The policy promotes exclusive breastfeeding for the first six months, complementary feeding to be started after six months and continued breastfeeding up to 2 years and beyond.	2	1.5
1.3) A national plan of action has been developed with the policy	2	1
1.4) The plan is adequately funded	1	0.5
1.5) There is a National Breastfeeding Committee	1	1
1.6) The national breastfeeding (infant and young child feeding) committee meets and reviews on a regular basis	1	0.75
1.7) The national breastfeeding (infant and young child feeding) committee links with all other sectors like health, nutrition, information etc., effectively	0.5	0.25
1.8) Breastfeeding Committee is headed by a coordinator with clear terms of reference	0.5	0.25
Total Score	**7.25 / 10**	**7.25**

Criteria	Score	Results
2.1) Percent of hospitals designated as BFHI facilities	4	1
2.2) Skilled training at BFHI designated facilities	3.5	3.5
2.3) BFHI programme relies on training of health workers	0.5	0.5
2.4) A standard monitoring system is in place	0.5	0.5
2.5) An assessment system relies on interviews of mothers	0.5	0.5
2.6) Reassessment systems have been incorporated in national plans	0.5	0.25
2.7) There is a time-bound program to increase the number of BFHI institutions in the country	0.5	0.25
Total Score		
Total Score 2A, 2B and 2C	**6.5 /10**	**6.5**

Criteria	Scoring	Results
3.1) No action taken	0	0
3.2) The best approach is being studied	1	0.5

3.3) National breastfeeding policy incorporating the Code in full or in part but not legally binding and therefore unenforceable	2	1
3.4) National measures (to take into account measures other than law), awaiting final approval	3	0.5
3.5) Administrative directive/circular implementing the Code in full or in part in health facilities with administrative sanctions	4	0.5
3.6) Some articles of the Code as a voluntary measure	5	1
3.7) Code as a voluntary measure	6	0
3.8) Some articles of the Code as law	7	0.5
3.9) All articles of the Code as law	8	0
3.10) All articles of the Code as law, monitored and enforced	10	0
Total Score:	**4.0/10**	**4**

Criteria	**Score**	**Results**
4.1) Women covered by the national legislation are allowed the following weeks of paid maternity leave		
a. Any leave less than 14 weeks	0.5	0.5
b. 14 to 17weeks	1	0
c. 18 to 25 weeks	1.5	0
d. 26 weeks or more	2	0
4.2) Women covered by the national legislation are allowed at least one breastfeeding break or reduction of work hours daily.		
A. Unpaid break	0.5	0
b. Paid Break	1	1
4.3) Legislation obliges private sector employers of women in the country to give at least 14 weeks paid maternity leave and paid nursing breaks.	1	0
4.4) There is provision in national legislation that provides for work site accommodation for breastfeeding and/or childcare in work places in the formal sector.	1	1
4.5) Women in informal/unorganized and agriculture sector are:		
a. accorded some protective measures	0.5	0.25
b. accorded the same protection as women working in the formal sector	1	0
4.6) a. Information about maternity protection laws, regulations, or policies is made available to workers	0.5	0.25

4.7) Paternity leave is granted in public sector for at least 3 days.	0.5	0.5
4.8) Paternity leave is granted in the private sector for at least 3 days.	0.5	0
4.9) There is legislation providing health protection for pregnant and breastfeeding workers and the legislation provides that they are informed about hazardous conditions in the workplace and provided alternative work at the same wage until they are no longer pregnant or breastfeeding.	0.5	0.5
4.10) There is legislation prohibiting employment discrimination and assuring job protection for women workers during breastfeeding period.	0.5	0
4.11) ILO MPC No 183 has been ratified, or the country has a national law equal to or stronger than C183.	0.5	0
4.12) The ILO MPC No 183 has been enacted, or the country has enacted provisions equal to or stronger than C183.	0.5	0
Total Score:	**4/10**	**4**

Criteria	**Results**		
	Adequate	Inadequate	No Reference
5.1) A review of health provider schools and pre-service education programmes in the country[1] indicates that infant and young child feeding curricula or session plans are adequate/inadequate	2	1	0
		1	
5.2) Standards and guidelines for mother-friendly childbirth procedures and support have been developed and disseminated to all facilities and personnel providing maternity care.	2	1	0
			0
5.3) There are in-service training programmes providing knowledge and skills related to infant and young child feeding for relevant health/nutrition care providers.[2]	2	1	0
		1	
5.4) Health workers are trained with responsibility towards Code implementation as a key input.	1	0.5	0
		0.5	
5.5) Infant feeding-related content and skills are integrated, as appropriate, into training programmes focusing on relevant topics (diarrhoeal disease, acute respiratory	1	0.5	0
			0

infection, IMCI, well-child care, family planning, nutrition, the Code, HIV/AIDS, etc.)			
5.6) These in-service training programmes are being provided throughout the country.[3]	1	0.5	0
		0.5	
5.7) Child health policies provide for mothers and babies to stay together when one of them is sick	1	0.5	0
		0.5	
Total Score:	**3.5/10**		

Criteria	**Results**		
	Yes	To some degree	No
6.1) All pregnant women have access to community-based support systems and services on infant and young child feeding.	2	1	0
		1	
6.2) All women have access to support for infant and young child feeding after birth.	2	1	0
		1	
6.3) Infant and young child feeding support services have national coverage.	2	1	0
		1	
6.4) Community-based support services for the pregnant and breastfeeding woman are integrated into an overall infant and young child health and development strategy (inter-sectoral and intra-sectoral.	2	1	0
		1	
6.5) Community-based volunteers and health workers possess correct information and are trained in counselling and listening skills for infant and young child feeding.	2	1	0
		1	
Total Score:	**5/10**		

Criteria	**Results**		
	Yes	To some degree	No
7.1) There is a comprehensive national IEC strategy for improving infant and young child feeding.	2	1	0
		1	
7.2) IEC programmes (e.g. World Breastfeeding Week) that include infant and young child feeding are being actively implemented at local levels	2	1	0
		1	
7.3) Individual counselling and group education services related to infant and young child feeding are available within the health/nutrition care system or through community outreach.	2	1	0
		1	
7.4) The content of IEC messages is technically correct, sound, based on national or international guidelines.	2	1	0
		1	

7.5) A national IEC campaign or programme[1] using electronic and print media and activities has channelled messages on infant and young child feeding to targeted audiences in the last 12 months.	2	1	0
		1	
Total Score:	**5/10**		

Criteria	**Results**		
	Yes	To some degree	No
8.1) The country has a comprehensive policy on infant and young child feeding that includes infant feeding and HIV	2	1	0
			0
8.2) The infant feeding and HIV policy gives effect to the International Code/ National Legislation	1	0.5	0
			0
8.3) Health staff and community workers receive training on HIV and infant feeding policies, the risks associated with various feeding options for infants of HIV-positive mothers and how to provide counselling and support.	1	0.5	0
			0
8.4) Voluntary and Confidential Counselling and Testing (VCCT) is available and offered routinely to couples who are considering pregnancy and to pregnant women and their partners.	1	0.5	0
		0.5	
8.5) Infant feeding counselling in line with current international recommendations and locally appropriate is provided to HIV positive mothers.	1	0.5	0
			0
8.6) Mothers are supported in making their infant feeding decisions with further counselling and follow-up to make implementation of these decisions as safe as possible.	1	0.5	0
			0
8.7) Special efforts are made to counter misinformation on HIV and infant feeding and to promote, protect and support 6 months of exclusive breastfeeding and continued breastfeeding in the general population.	1	0.5	0
			0
8.8) On-going monitoring is in place to determine the effects of interventions to prevent HIV transmission through breastfeeding on infant feeding practices and overall health outcomes for mothers and infants, including those who are HIV negative or of unknown status.	1	0.5	0
			0
8.9) The Baby-friendly Hospital Initiative incorporates provision of guidance to hospital administrators and staff in settings with high HIV prevalence on how to assess the needs and provide support for HIV positive mothers.	1	0.5	0
		0.5	
Total Score:	**1/10**		
Criteria	**Results**		

	Yes	To some degree	No
9.1) The country has a comprehensive policy on infant and young child feeding that includes infant feeding in emergencies	2	1	0
			0
9.2) Person(s) tasked with responsibility for national coordination with the UN, donors, military and NGOs regarding infant and young child feeding in emergency situations have been appointed	2	1	0
			0
9.3) An emergency preparedness plan to undertake activities to ensure exclusive breastfeeding and appropriate complementary feeding and to minimize the risk of artificial feeding has been developed	2	1	0
		1	
9.4) Resources identified for implementation of the plan during emergencies	2	1	0
		0.5	
9.5) Appropriate teaching material on infant and young child feeding in emergencies has been integrated into pre-service and in-service training for emergency management and relevant health care personnel.	2	1	0
			0
Total Score:	**1.5/10**		

Criteria	**Results**		
	Yes	To some degree	No
10.1) Monitoring and evaluation components are built into major infant and young child feeding programme activities.	2	1	0
		1	
10.2) Monitoring or Management Information System (MIS) data are considered by programme managers in the integrated management process.	2	1	0
		1	
10.3) Baseline and follow-up data are collected to measure outcomes for major infant and young child feeding programme activities.	2	1	0
		1	
10.4) Evaluation results related to major infant and young child feeding programme activities are reported to key decision-makers	2	1	0
	2		
10.5) Monitoring of key infant and young child feeding practices is built into a broader nutritional surveillance and/or health monitoring system or periodic national health surveys.	2	1	0
	2		
Total Score:	**7/10**		

Indicator	Result	Score	
11: Early Initiation of Breastfeeding	~ 3.9 %	3	
12: Exclusive breastfeeding for the first six months	14.80%	3	
13: Median duration of breastfeeding	6 mos	3	
14: Bottle feeding of breastfed infants	48.50%	3	
15: Complementary feeding	>90%	10	
Total of indicators 11-15		**22**	
Indicators 1-10 out of 100		44.75	
indicators 11-15 out of 50		22	
TOTAL SCORE FOR USA out of 150		**66.75**	

Indicator	Score		IBFAN Color ranking
1-National Policy, program, coordination	7.25	blue	
2- Baby-Friendly Hospital Initiative	6.5	blue	
3-International Code of Marketing of Breastmilk Substitutes	4	yellow	
4-Maternity Protection	3.5	yellow	
5-Health and Nutrition Care Systems	3.5	yellow	
6-Mother support and community based outreach/support	5	yellow	
7- Information support	5	yellow	
8-Infant feeding and HIV	1	red	
9-Infant feeding in emergencies	1.5	red	
10- Monitoring and Evaluation	7	blue	
TOTAL FOR INDICATORS 1-10 (possible 100)	**44.25**	**yellow**	
11 – Early Initiation of breastfeeding	3.90%	3	
12 – Exclusive breastfeeding for first 6 months	14.80%	3	
13 – Mean Duration of Breastfeeding	6 months	3	
14 – Bottle Feeding of breastfed infants	46%	3	
15 – Complementary Feeding	90%	10	
TOTAL FOR INDICATORS 11-15 (out of 50)	**22**	**22**	
TOTAL for all indicators (out of 150)	**66.25**	**yellow**	

IBFAN Scoring keys

Part I: Policies and Programme (Indicator 1-10)

For indicator 1 to10 on policies and programmes, there is a sub set of questions leading to key achievement, indicating how a country is doing in a particular area. Each question has possible score of 0-3 and the indicator has a maximum score of 10.

0 - 3	Red
4 - 6	Yellow
7 - 9	Blue
9.1 to 10	Green

Part I total (1-10 indicators)

Total score of infant and young child feeding policies and programmes (indicators 1-10) are calculated out of 100.

0 - 30	Red
31 - 60	Yellow
61 - 90	Blue
91 - 100	Green

Part II : Practices (Indicator 11-15)

In the case of indicators 11 to 15 on practices, key to rating is used from WHO's 'Infant and Young Child Feeding: A tool for assessing national practices, policies and programmes" . Scoring, color-rating and grading are provided according to IBFAN Asia's guidelines for WBTi. Each indicator is scored out of maximum of 10.

Practices (Indicator 11-15)		IBFAN Asia Guideline for WBTi	
	Key to rating	Scores	Colour-rating
Initiation of Breastfeeding (within 1 hour)	0.1-29%	3	Red
	30-49%	6	Yellow
	50-89%	9	Blue
	90-100%	10	Green
Exclusive Breastfeeding (for first 6 months)	0.1-11%	3	Red
	12-49%	6	Yellow
	50-89%	9	Blue
	90-100%	10	Green
Median Duration of Breastfeeding	0.1-17 Months	3	Red
	18-20 Months	6	Yellow
	21-22 Months	9	Blue
	23-24 Months	10	Green
Bottle Feeding (<6 months)	30-100%	3	Red
	5-29%	6	Yellow
	3-4%	9	Blue
	0.1-2%	10	Green

Complementary Feeding (6-9 months)	0.1-59%	3	Red
	60-79%	6	Yellow
	80-94%	9	Blue
	95-100%	10	Green

Total Score of all indicators 11 to 15:

Total score of infant and young child feeding practices (indicators 11-15) are calculated out of 50.

0 - 15	Red
16 - 30	Yellow
31 - 45	Blue
46 - 50	Green

Total Score of all indicators 1 to 15

Total score of infant and young child feeding practices, policies and programmes (indicators 1-15) are calculated out of 150. Countries are then graded as:

0 - 45	Red
46 - 90	Yellow
91 - 135	Blue
136 - 150	Green

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Appendix 2 – Public Health Competencies Met

Specific Competencies
Domain #1: Analytic Assessment Skill
Defines a problems
Determines appropriate uses and limitations of both quantitative and qualitative data
Selects and defines variables relevant to defined public health problems
Identifies relevant and appropriate data and information sources
Evaluates the integrity and comparability of data and identifies gaps in data sources
Applies ethical principles to the collection, maintenance, use, and dissemination of data and information
Partners with communities to attach meaning to collected quantitative and qualitative data
Makes relevant inferences from quantitative and qualitative data
Obtains and interprets information regarding risks and benefits to the community
Applies data collection processes, information technology applications, and computer systems storage/retrieval strategies
Recognizes how the data illuminates ethical, political, scientific, economic, and overall public health issues
Domain #2: Policy Development/Program Planning Skills
Collects, summarizes, and interprets information relevant to an issue
States policy options and writes clear and concise policy statements
Identifies, interprets, and implements public health laws, regulations, and policies related to specific programs
Articulates the health, fiscal, administrative, legal, social, and political implications of each policy option
States the feasibility and expected outcomes of each policy option
Utilizes current techniques in decision analysis and health planning
Decides on the appropriate course of action
Develops a plan to implement policy, including goals, outcome and process objectives, and implementation steps
Translates policy into organizational plans, structures, and programs
Develops mechanisms to monitor and evaluate programs for their effectiveness and quality
Domain #3: Communication Skills
Communicates effectively both in writing and orally, or in other ways
Solicits input from individuals and organizations
Advocates for public health programs and resources
Leads and participates in groups to address specific issues
Uses the media, advanced technologies, and community networks to communicate information
Effectively presents accurate demographic, statistical, programmatic, and scientific information for professional and lay audiences
Attitudes
Listens to others in an unbiased manner, respects points of view of others, and promotes the expression of diverse opinions and perspectives

Domain #4: Cultural Competency Skills
Utilizes appropriate methods for interacting sensitively, effectively, and professionally with persons from diverse cultural, socioeconomic, educational, racial, ethnic and professional backgrounds, and persons of all ages and lifestyle preferences
Identifies the role of cultural, social, and behavioral factors in determining the delivery of public health services
Develops and adapts approaches to problems that take into account cultural differences
Attitudes
Understands the dynamic forces contributing to cultural diversity
Domain #5: Community Dimensions of Practice Skills
Establishes and maintains linkages with key stakeholders
Utilizes leadership, team building, negotiation, and conflict resolution skills to build community partnerships
Collaborates with community partners to promote the health of the population
Identifies how public and private organizations operate within a community
Develops, implements, and evaluates a community public health assessment
Describes the role of government in the delivery of community health services
Domain #6: Basic Public Health Sciences Skills
Defines, assesses, and understands the health status of populations, determinants of health and illness, factors contributing to health promotion and disease prevention, and factors influencing the use of health services
Understands the historical development, structure, and interaction of public health and health care systems
Identifies and applies basic research methods used in public health
Identifies and retrieves current relevant scientific evidence
Identifies the limitations of research and the importance of observations and interrelationships
Attitudes
Develops a lifelong commitment to rigorous critical thinking
Domain #7: Financial Planning and Management Skills
Monitors program performance
Domain #8: Leadership and Systems Thinking Skills
Creates a culture of ethical standards within organizations and communities
Helps create key values and shared vision and uses these principles to guide action
Identifies internal and external issues that may impact delivery of essential public health services (i.e. strategic planning)
Facilitates collaboration with internal and external groups to ensure participation of key stakeholders
Promotes team and organizational learning
Uses the legal and political system to effect change
Applies the theory of organizational structures to professional practice