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Breastfeeding USAID Background Paper

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Acronyms and Foreign Terms

ADS	Automated Directive Systems
AIDS	Acquired Immune Deficiency Syndrome
APHA	American Public Health Association
ARI	Acute Respiratory Illness
ARV	Antiretroviral
BASICS	Basic Support for Institutionalizing Child Survival
BFHI	Baby Friendly Hospital Initiatives
BHR	Bureau for Humanitarian Response
CSD	Child Survival and Development
CYP	Couple Years of Protection
DHS	Demographic and Health Surveys
EPB	Expanded Promotion of Breastfeeding
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
IGAB	Interagency Group for Action on Breastfeeding
IRH	Institute for Reproductive Health
LAC	Latin America and the Caribbean
LAM	Lactational Amenorrhea Method
LME	Lactational Management Education
MIN	Maternal and Infant Nutrition Project
MNH	Maternal and Neonatal Health Program
MTCT	Mother To Child Transmission
NGO	Non-governmental Organization
NICHD	National Institute of Child Health and Human Development
PPC	Policy and Program Coordination
PVO	Private Voluntary Organization
REDSO	Regional Economic Development Services Office
SIDA	Swedish International Development Fund
UNICEF	United Nations Children's Fund
U.S.	United States
USAID	United States Agency for International Development
VCCT	Voluntary and Confidential Counseling and Testing
WABA	World Alliance for Breastfeeding Action
WHA	World Health Assembly
WHO	World Health Organization
WIN	Womens and Infant Nutrition Project
ZDV	Zidovudine

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Introduction

This background paper is a compendium of United States Agency for International Development (USAID) breastfeeding policy and practice up to FY 2001. It covers the history of U.S. breastfeeding policy, benefits of breastfeeding, and lessons learned from breastfeeding activities funded by USAID.

Recognizing that breastfeeding is one of the most valuable gifts a mother and a society can give to a child, USAID and its partners face an important challenge for the next decade: *how to promote safe and effective breastfeeding practices while maximizing the use of limited resources, minimizing the risk of transmitting Human Immunodeficiency Syndrome (HIV) infection through breastfeeding, and recognizing the increasing role of women in the workplace.* To meet this challenge, the Division of Nutrition/Maternal Health, along with representatives from the divisions of Child Survival and Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS), the Bureaus of Policy and Program Coordination (PPC) and Humanitarian Response (BHR), the regional Bureaus, and others from the agency including Human Resources, have undertaken this review of breastfeeding practices. This background paper traces the history of U.S. breastfeeding policy, provides a brief overview of recent literature regarding the benefits of breastfeeding, and summarizes “lessons learned” from nearly 20 years of breastfeeding promotion activities funded by USAID.

Following both international and national activities calling attention to artificial infant feeding, the U.S. government started to develop policies and program actions supporting the importance of the role of breastfeeding in nutrition, population, and health in international programs. USAID helped shape the language for the World Health Organization’s *International Code of Marketing of Breast-Milk Substitutes*, the accepted international guidance on use of breastmilk substitutes. USAID launched its “Breastfeeding for Child Survival Strategy” in 1990, which encouraged USAID health, population, and nutrition programs to recognize breastfeeding as a critical component. In support of this strategy USAID enhanced its funding for country and global initiatives.

Scientific research and literature provide strong evidence demonstrating that breastmilk meets the complete nutritional needs of a human infant through six months of age, protects against disease, enhances brain development and learning readiness, and improves newborn and child survival. Breastfeeding also benefits the health and survival of the mother by reducing the risk of certain diseases, serves as the physiological basis for the Lactational Amenorrhea Method (LAM) for family planning, and confers an economic benefit at the national, public sector, hospital, and household levels.

The HIV pandemic and the risk of virus transmission from infected mothers to nursing infants is now at the forefront of attention. In addition, renewed interest in micronutrients and the changing roles of women create a new set of issues for breastfeeding policy and programs. Other issues that pose challenges for the new millennium include the impact of women's employment on exclusive breastfeeding, the potential detrimental effects on

infant health of providing free breast milk substitutes in emergency relief situations, and barriers to full integration of LAM into reproductive health programs.

Based on lessons learned over two decades of involvement in breastfeeding activities, in 2001 USAID developed the “Cross-Sectoral Implementation Guidance ADS 212: Breastfeeding Promotion Policy” (77) for the next decade, which encompasses:

- the need for unified, consistent breastfeeding indicators in all operating unit strategic plans;
- the need for continuity of breastfeeding indicators for documentation of progress in breastfeeding practices;
- the need for unified, consistent child nutrition and maternal nutrition indicators;
- the need to integrate promotion into an inter-sectoral approach; and
- USAID recommendations for meeting emerging challenges.

I. Advances in U.S. Policy and Programs in International Breastfeeding

U.S. Policy in International Breastfeeding

Since the mid-1970s, the U.S. has registered concern over the decline in breastfeeding rates in developing countries and the high rates of mortality stemming from artificial infant feeding. Activities in the mid-70s, including the Kennedy Congressional Hearings and the Nestle boycott, provided impetus for the development of a series of U.S. government policy and program actions.

The intensity of argument over the potential deleterious effects of formula use and bottle-feeding in developing countries resulted in the World Health Organization (WHO) developing the *International Code of Marketing of Breast-milk Substitutes* (1), which was adopted by many countries.

USAID participated in the development of the International Code’s language. The Code aims “to contribute to the provision of safe and adequate nutrition for infants, by the protection and promotion of breast-feeding, and by ensuring the proper use of breast-milk substitutes, when these are necessary, on the basis of adequate information and through appropriate marketing and distribution.” (1) In 1981, the World Health Assembly (WHA), of which the U.S. is a member, approved a resolution supporting the Code. (Although the U.S. was not a signatory at that time, the U.S. delegate participated in “reconfirming” the code in 1994.) A series of resolutions after the 1981 assembly further strengthened the WHA’s commitment to support and promote breastfeeding as the optimal method of infant nutrition. Congress encouraged USAID action. This led to a significant conference coordinated in partnership with the National Institute of Child Health and Human Development (NICHD) in 1981. The conference focused on the determinants of choice regarding infant feeding practices and marked the beginning of support for breastfeeding within USAID as an important aspect of programs in nutrition and health. The importance of the role of breastfeeding in nutrition, population, and health became an aspect of several Agency policy papers (Table I).

Table I. Summary of USAID Breastfeeding Policy Statements, 1982–2001

USAID Policy Paper	Date	Breastfeeding Statement
Nutrition (2)	1982	<p>“It is the policy of A.I.D. to support <i>breastfeeding</i> and proper infant feeding practices. Traditionally infants were breastfed for two or more years, but now ‘modern’ women bottle-feed their infants, often without knowing enough about the nutritional needs of infants. Babies fed barley water, cornstarch gruels, and diluted infant formulas, often prepared with unsafe water and contaminated utensils, may die before their mothers find out how to feed them properly. The more serious problem in rural areas is late introduction of complementary foods to breastfed infants. Proper complementary feeding of the weaning child is often a problem of dietary practices, home food preparation and preservation constraints, and other demands on women’s time. A more multifaceted approach, going beyond breastfeeding promotion and food availability, is therefore often required. Nutrition education, including encouragement of <i>breastfeeding</i>, improved child feeding practices, food fortification, and strong national nutrition policies, can avert these negative nutritional impacts.” (p. 7)</p> <p>“The absence of a truly equivalent manufactured substitute for breastmilk has highlighted the unique role of <i>breastfeeding</i> in infant nutrition, even in the United States. In developing countries <i>breastfeeding</i> is essential to infants in low income households because breastmilk substitutes are often unhygienic because they are improperly prepared using unclean utensils and unsafe water.” (p. ii)</p>
Domestic Water & Sanitation (3)	1982	<p>“Water supply and sanitation interventions can be most effective in improving health when they are coordinated with other primary health care activities, especially health and hygiene education, and maternal and child health services. Examples of user education which seem obvious but which are often overlooked...promotion of <i>breastfeeding</i>, especially during the first six months of life...” (p. 11)</p>
Population Assistance (4)	1982	<p>“The concept of spacing or limiting births is not new, nor is it Western. Traditionally, for instance in Africa, birth spacing has been ensured by...extended <i>breastfeeding</i>.” (p. 3)</p> <p>“Demographers agree that four direct biological factors determine fertility patterns [including] <i>breastfeeding</i> and lactation patterns.” (p. 3)</p> <p>“There are a variety of government policies and socioeconomic changes which often tend to encourage (or at least not discourage) high fertility...[including] the trend away from prolonged <i>breastfeeding</i> (one of the most important traditional means of postponing the next pregnancy) to intermittent <i>breastfeeding</i> and early weaning.” (p. 8)</p>

Health Assistance (5)	1986	<p>“Children saved from death due to measles or diarrheal dehydration may succumb, however, to the next disease episode especially if nutritional status is low. Concurrent efforts to reduce malnutrition through a focused nutrition package including <i>breastfeeding</i>...can help prevent this ‘replacement mortality’ effect.” (p. 2)</p> <p>“Improved maternal health as a result of better nutrition also affects child survival through <i>breastfeeding</i> and the mother’s ability to provide better child care.” (p. 2)</p> <p>“‘Reduction of Infant and Early Childhood Mortality and Morbidity’...will be achieved...through...Improving nutrition in young children through adequate <i>breastfeeding</i> and improved weaning practices, growth monitoring, and targeted supplementary feeding (using PL 480 Title II resources and programs when available)...” (p. 3)</p>
Breastfeeding for Child Survival Strategy (6)	1990	<p>“Appropriate <i>breastfeeding</i> is one of the most cost-effective means of ensuring child survival...The Agency will strengthen and focus <i>breastfeeding</i> promotion within its child survival, health, population, and nutrition programs...There is great potential for promoting and supporting <i>breastfeeding</i> within ongoing efforts aimed at diarrheal disease control, immunization, nutritional improvement, child spacing, prenatal care, health care financing, and food aid. Existing programs should not present inherent obstacles to optimal <i>breastfeeding</i>.” (p. iii – iv)</p>
Breastfeeding: A Report on A.I.D. Programs (7)	1990	<p>“Clearly, <i>breastfeeding</i> is one of the most cost-effective means of improving child survival. Recognizing the need to strengthen the <i>breastfeeding</i> component of the Agency’s programs, I have recently approved a Breastfeeding for Child Survival Strategy which outlines a plan of action...With the support of the U.S. Congress and the American people, we are committed to promoting and protecting <i>breastfeeding</i> for the survival and well-being of children and mothers, and as a most precious, natural resource.” (Foreword by Ronald W. Roskens, Administrator, USAID, 1990)</p>
ADS 212: Breastfeeding Promotion Policy (76)	2001	<p>The goal of USAID-supported breastfeeding activities is to increase the percentage of infants that are immediately and exclusively breastfed, that receive appropriate complementary foods in addition to breastfeeding from six months, and that continue breastfeeding for two years or longer.</p>
Cross-Sectoral Implementation Guidance ADS 212: “Breastfeeding Promotion Policy” (77)	2001	<p>“This cross-sectoral field guidance is designed to assist in the implementation of the new ADS 212, a cross-sectoral approach to protection and promotion, and support of <i>breastfeeding</i>. <i>Breastfeeding</i> is a unique behavior and life-saving intervention that is cost-effective and do-able. Breastfeeding provides low cost, high quality food for infants and young children, improves their health and increases infant survival six-fold, lowers family expenditures for food and health care, improves nutrient status thus increasing productivity, contributes to fertility reduction, and is the safest form of young child feeding in emergency situations. <i>Breastfeeding</i> is also environmentally friendly, reducing need for firewood, and reducing pharmaceutical, plastics, and dairy waste. Both workplace efficiency and productivity benefit in that there is less absence due to family illness when children are <i>breastfed</i>, and <i>breastfed</i> children demonstrate more rapid cognitive development in the early months and years.” (Introduction)</p>

During the early 1980s, USAID linked two of its major development priorities, child nutrition/survival and slowing population growth, by funding international research in the LAM of family planning. Building on this work and that of other breastfeeding researchers, Family Health International convened the Bellagio Consensus Meeting in 1988. Scientists endorsed the value and validity of LAM by concluding that, “women who are not using family planning, but who are fully or nearly fully breastfeeding and

amenorrhoeic are likely to experience a risk of pregnancy of less than 2 percent in the first six months after delivery.” (8)

USAID launched its Breastfeeding for Child Survival Strategy in 1990, following Congressional impetus to further strengthen support for breastfeeding. As part of the development of this strategy, the Agency conducted a Gap/Potential Analysis in November 1989 to determine the magnitude of breastfeeding programming within the Agency’s portfolio of projects and activities and to determine the additional actions needed to strengthen the Agency’s support for breastfeeding. The analysis revealed that funding levels for breastfeeding paled in comparison to funds being devoted to the twin engines of USAID’s child survival program—oral rehydration therapy and immunization—and the Agency’s child spacing and family planning activities. In response to a request by the Senate Committee on Appropriations, USAID prepared a Breastfeeding Report to Congress in 1990 highlighting accomplishments of the decade and suggesting that with additional congressional support, the Agency was poised to strengthen and expand its breastfeeding programming. At that time, USAID undertook several actions to demonstrate increased and concerted support for breastfeeding.

The Agency began the design of a major breastfeeding support initiative and championed breastfeeding as the founding member of the ad hoc Interagency Group for Action on Breastfeeding (IGAB). In the summer of 1990, the group, which included the World Health Organization (WHO), the United Nations Children’s Fund (UNICEF), the Swedish International Development Authority (SIDA), and the World Bank, convened a series of global meetings, culminating with the conference entitled “Breastfeeding in the 1990’s: A Global Initiative” (8,9). The landmark result of this meeting was *The Innocenti Declaration on the Protection, Promotion, and Support of Breastfeeding* (see annex 1), which was signed on behalf of the United States by Dr. Audrey Nora, Director of the Maternal/Child Health Bureau, and Department for Health and Human Services. The Agency, through its programs, also partially supported the World Alliance for Breastfeeding Action (WABA), a consortium of international non-governmental organizations (NGOs) formed in early 1991 in response to the Innocenti meeting and declaration.

Following official adoption of the *Innocenti Declaration* by the WHA in 1992, UNICEF and WHO launched The Baby Friendly Hospital Initiative (BFHI) to support one of the Declaration’s primary objectives: to protect, promote, and support breastfeeding by capitalizing on the special role of maternity health services (10). Having established a set of rigorous criteria and a formal on-site review process, the BFHI network provides internationally recognized certification to health facilities, which fully implement the *Ten Steps to Successful Breastfeeding* (annex 2). Approximately 14,000 facilities worldwide have earned this designation. The U.S. matched this intent in 1992 when H.R. 4322 was enacted into law. The Breastfeeding Promotion Act of 1992 established a domestic breastfeeding promotion program in the U.S.

U.S. Programs in International Breastfeeding

The urgent nature of the discussion of breastfeeding declined and international policy actions resulted in a drive by USAID to integrate breastfeeding as a critical component of health, population, and nutrition programming. The Maternal and Infant Nutrition (MIN) Project (1979–89), supported by the Office of Nutrition, was a direct program outgrowth of policy actions by the USAID Office of Nutrition. Through the MIN Project, a landmark study was funded to examine the determinants of infant feeding practices in cities in four developing countries and to help inform future USAID programming. The study focused on the nature and magnitude of contributions to infant feeding patterns of health care systems, infant food marketing and distribution strategies, and women’s labor force participation.

Women’s and Infants’ Nutrition (WIN): A Family Focus (1989–98), the continuation project to MIN, also incorporated activities to expand technical assistance for the development of infant/child nutrition programs, including breastfeeding, complementary foods, weaning, and dietary management of diarrhea. One component of MIN/WIN that was solely breastfeeding-focused was the Lactation Management Education (LME) Project, managed by Wellstart International. LME provided education, leadership development, and ongoing technical assistance to health care professionals to implement breastfeeding programs at the local, national, and regional levels and to create an international network of trained “Wellstart Associates.” Also during the 1980s, the Office of Population initiated the Breastfeeding Division of the Institute for Reproductive Health (IRH) at Georgetown University in recognition of the importance of breastfeeding as a proximate determinant of fertility. IRH developed and implemented LAM in more than 40 countries and helped at least two major family planning programs mainstream LAM and breastfeeding support, as integral components of their program work. The success of LAM as a natural, effective, and low-cost family planning strategy has been verified through numerous studies and programs supported by USAID.

The early 1990s represented a period of intense breastfeeding support with the launch of the Agency’s first major health-funded breastfeeding-focused initiative: the Expanded Promotion of Breastfeeding (EPB) Program (1991–96). Managed by Wellstart International, EPB’s goal was to identify, promote, and expand practical, successful breastfeeding projects into nation-wide programs in support of optimal breastfeeding practices in ten targeted countries. USAID’s Offices of Population, Health and Nutrition also provided financial support for breastfeeding activities through WIN (LME, American Public Health Association (APHA) Clearinghouse on Infant Feeding and Maternal Nutrition), IRH, MotherCare II, BASICS, and Nutricom. [For activity descriptions see pages 18-20.] Some cost-effectiveness studies were completed with LAC Bureau funds through the LAC/HNS Project.

Following EPB, a project was launched to incorporate lessons learned from EPB and include activities previously funded under WIN (LME, APHA), IRH, MotherCare II, and Nutricom. Started in 1996, LINKAGES is the current USAID flagship activity for breastfeeding promotion. It focuses on global policy, research, and service through

partnerships with communities, NGOs, and other cooperating agencies to promote behavior change that supports optimal breastfeeding practices. By providing training and technical assistance to a broad audience that includes not only health care professionals, but other potential advocates as well, LINKAGES seeks to help institutionalize and integrate breastfeeding into a broad range of health, family planning, and nutrition programs and services.

USAID increased its financial support of breastfeeding activities from \$5.6 million in FY 89 (7) to \$16.2 million in FY 99 (Figure 1). The Child Survival and Development (CSD) account continues to be the largest single source of breastfeeding support, providing 56 percent of breastfeeding funds in FY 99 (Figure 1). Population funds have consistently supported approximately one-third of breastfeeding activity costs (28 percent in FY 89 and 34 percent in FY 99, coded primarily as Development Assistance funds).

By region, the amount of funding programmed for breastfeeding has increased most dramatically in Africa, from only 4 percent (\$223,640) of breastfeeding funds in FY 89 to 43 percent (\$6,887,000) in FY 99. In the Europe/Eurasia region, no funds were specifically coded for breastfeeding.

[\(See text description of Figure 1.\)](#)

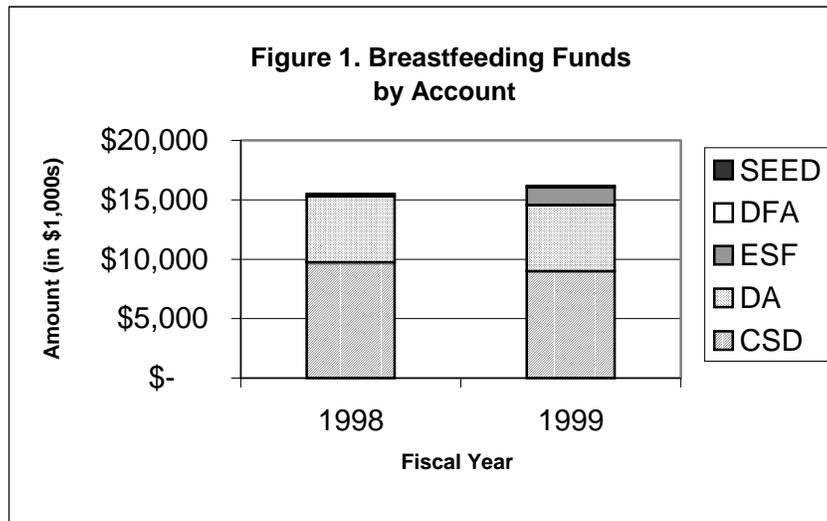
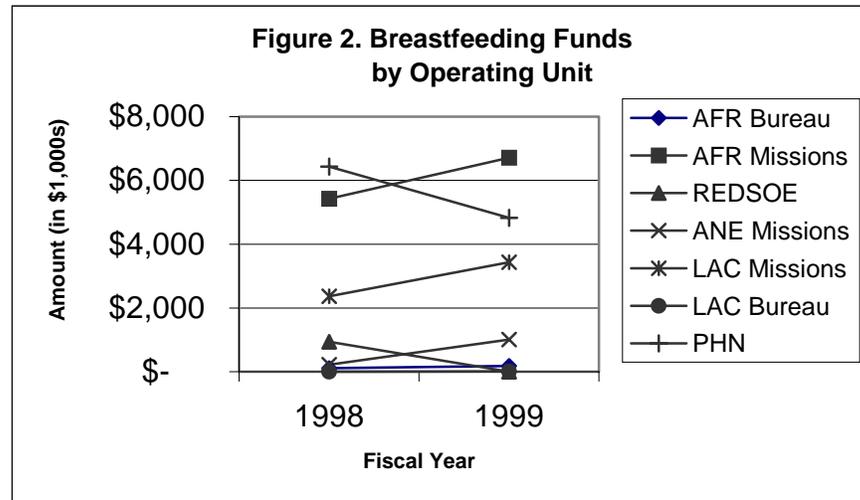


Figure 2 shows which operating units have programmed funds for breastfeeding activities (coded as either PNB [Breastfeeding/Population] or BREC [Breastfeeding/Child Survival]) during fiscal years 1998 and 1999. Unfortunately, in FY 2000 and 2001, funding for breastfeeding support declined due to limited resources and the pressing needs of emerging infectious diseases including HIV/AIDS.



II. Benefits of Breastfeeding

Scientific literature provides strong evidence of the benefits of breastfeeding, including nutritional, immunological, developmental, child-spacing, infant/child survival, maternal/child health, and economic benefits.

Improved Newborn and Child Survival

According to *The World Health Report, 1995: Bridging the Gaps* published by WHO, of the 11.6 million children under age 5 who die each year in the developing world, approximately half succumb to infectious diseases such as acute respiratory infections (including pneumonia), diarrhea, measles, and malaria. The nutritional status of children has a significant impact on their chances of surviving an infectious disease episode. Studies have estimated that malnutrition is a contributing factor in 54 percent of deaths among young children in developing countries (16). Breastfeeding can help decrease child morbidity and mortality not only by improving a child’s nutritional status, but also by protecting against infection through its immunologically active elements and by preventing dehydration in infants with diarrhea. In addition, breastfeeding helps prevent hypothermia (low body temperature) and hypoglycemia (low blood sugar) among newborns (17).

There are numerous studies demonstrating breastfeeding’s contribution to saving children’s lives:

➤ Diarrhea

An infant who is breastfed has a reduced risk of developing diarrhea. Moreover, there appears to be a “dose-response” relationship between breastfeeding and risk of diarrhea, that is, infants who are exclusively breastfed have the lowest risk of developing diarrhea, infants who are partially breastfed have an intermediate risk level, and infants who are not breastfed at all have the highest risk (18, 19). In Peru, for example, infants under six

months of age who were partially breastfed had a 2–3 times greater risk of developing diarrhea compared to infants who were exclusively breastfed. Infants who were not breastfed at all were at even higher risk for diarrhea, 3–5 times greater than infants fed only breastmilk (20).

Breastfeeding also dramatically reduces an infant's risk of dying from diarrheal disease. Again, there appears to be a “dose-response” protective effect. In Brazil, a partially breastfed infant has a fourfold greater risk of dying from diarrhea than does an exclusively breastfed baby, and an infant who is not breastfed at all has a 14 times greater risk of dying (21). A Philippines study showed that infants under 6 months of age who were not being breastfed had a ten times greater risk of dying from diarrheal disease compared to breastfed infants of the same age (22).

➤ Acute Respiratory Infections

Breastfeeding also helps protect infants against acute respiratory illnesses (ARI). A study in Peru showed that infants under 6 months of age who were not breastfed had a fourfold greater risk of developing acute respiratory infections compared with exclusively breastfed babies (20). In China, infants who were not breastfed had a twofold higher risk of being hospitalized for ARI compared to those who were breastfed (23).

➤ All-Cause Mortality

Breastfeeding also contributes to a reduction in overall child mortality. The effects are greater with exclusive breastfeeding and for younger infants (under 6 months of age). In Malaysia, a month of full breastfeeding for infants less than 29 days old prevents the deaths of 68 babies per 1000. Even partial breastfeeding during the first month can save 22 lives per 1,000 infants (24). More recently, a pooled analysis of data from three countries showed that the relative risk of death due to artificial feeding declined during the course of infancy from 5.8 during the first two months to 1.4 during the last three months. Even during the second year of life, nonbreastfed infants were between 1.6 and 2.1 times more likely to die than breastfed infants (25).

Immunological Benefits

Breastmilk's immunological properties protect against disease. This has been recognized for hundreds of years. However, only in the past few decades have investigators begun to identify the specific anti-infective components of human milk that make it a peerless substance for child feeding. Breastmilk contains hundreds of special components, such as antibodies, white blood cells, lactoferrin, and enzymes that help protect infants against infections (13). Breastmilk also contains enzymes, immunoglobulins, and leukocytes in abundance. These components, each frequently enhancing the efficacy of another, account for most of the unique anti-infective properties of human milk. These biologically active elements have not been duplicated in infant formula. This protective effect is most striking in communities with poor sewage systems, poverty, and malnutrition.

Because of the presence of protective antibodies in breastmilk, breastfeeding is sometimes referred to as a baby's first immunization. Findings suggest that breastfeeding may also stimulate an infant's immune system and improve the immunologic response to vaccines (14). Breastfeeding can also confer long-term protection by stimulating an active immune response. Active immunity is a specific immunity whereby the immune system formulates a long-term memory of exposure to a certain antigen.

Nutritional Benefits

Mother's milk is recommended for all infants under ordinary circumstances, even if the mother's diet is not perfect. Breastmilk is a food uniquely suited to meet the complete nutritional needs of a human infant through 6 months of age. Because breastfeeding is an interactive process, the infant helps determine the composition of the feed. The composition varies with the stage of lactation, the time of day, the sampling time during a given feeding, maternal nutrition, and individual variation. Fat content changes during a given feeding, increasing throughout the duration of the feeding.

The nutritional content of breastmilk is dynamic, changing over time to match the infant's developmental requirements. It is rich in proteins, amino acids, oligosaccharides, and cholesterol, which are essential for normal growth and development (11). Breastmilk remains an important source of nutrition for two years or more after birth. It is especially vital during the transitional period when the infant or young child is adjusting to solid foods and alternative sources of fluids.

For the nursing infant, breastmilk is also an important source of micronutrients such as vitamin A, iron, and folate, and the positive impact on child health is significant. For example, a study in Bangladesh showed a 74 percent reduction in the risk of vitamin A deficiency (manifested clinically as xerophthalmia) among children who were breastfed (12).

Developmental Benefits

Breastfeeding enhances brain development and learning readiness. Breastfeeding protects babies from illnesses that can cause malnutrition, hearing problems, and learning difficulties. Breastmilk is a rich source of vitamin A, which reduces the risk of eye problems, growth failure, illness, and death. Breastfeeding provides frequent interaction between mother and infant, fostering bonding, a sense of security, and stimulus to the baby's developing brain. A meta-analysis of 20 controlled studies showed that breastfeeding was associated with a 3.2-point higher cognitive development score than formula feeding, after adjusting for key cofactors (15). These differences were seen early in development and were sustained through childhood and adolescence. Increased breastfeeding duration was accompanied by a gradual increase in cognitive development. The benefits were greater for low birth weight infants than for normal-weight infants.

Improved Maternal Health and Survival

Breastfeeding benefits the health and survival of the mother as well. For example, early initiation of breastfeeding stimulates the release of the hormone oxytocin, which helps decrease the risk of excessive bleeding after delivery (post-partum hemorrhage) (26). Breastfeeding may also reduce the risk of anemia as well as ovarian cancer, premenopausal breast cancer, and osteoporosis (11, 27, 28). Improved self-esteem and social status for the mother may be other benefits of breastfeeding (11, 29).

Reduced Fertility

Breastfeeding delays the resumption of ovulation and the return of a woman's menstrual cycle, thus serving as the physiological basis of LAM. Data from the Demographic and Health Surveys (DHS) show that the duration of lactational amenorrhea (absence of a menstrual period due to breastfeeding) was strongly associated with the duration of breastfeeding ($r = 0.63$, $p < 0.01$) (30). If a woman who is fully or nearly fully breastfeeding has not resumed her period and is less than 6 months post-partum (after delivery), she is 98 percent protected against becoming pregnant (31). In addition to its benefit in decreasing fertility, breastfeeding also contributes to improved child survival by increasing the interval between the births of children. An analysis of DHS data showed that babies born less than 2 years after their next older sibling are twice as likely to die compared to children with at least a 2-year interval. A 3-year interval between births provides even more protection (32).

Economic Benefits

The economic value of breastfeeding can be evaluated at several different levels: national, public sector, hospital, and household (33). At the national level, breastmilk can be considered a food resource alongside others in food supply statistics (34). Using the cost of formula as a "shadow price," including breastmilk in national food production statistics would increase the Gross Domestic Product (GDP) of selected sub-Saharan African countries by 2–5 percent (35). At the household level in poor countries, the value of breastmilk production can easily exceed total household income (36). The "shadow price" undervalues breastmilk's true economic contribution because it does not account for the improved health of breastfed infants and the lower health care costs to governments and families (37, 38, 39). Nor does it consider breastmilk's critical role in saving family planning resources by reducing the number of months of family planning method use needed to achieve a healthy 3-year spacing between births (40, 41).

III. Emerging Challenges

Breastfeeding and the HIV Epidemic

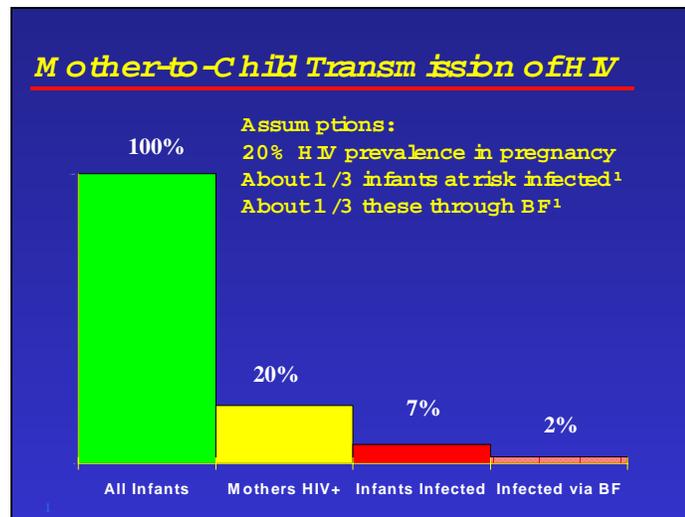
Risk of HIV Transmission through Breastfeeding

The global HIV epidemic has created controversy among breastfeeding, maternal health, and child survival advocates. Since the mid-1980s, when HIV was cultured from the

breastmilk of HIV-infected mothers and cases of transmission through breastmilk to nursing infants were documented, public health experts in industrial countries like the U.S. have recommended that HIV-positive women avoid breastfeeding (42). This policy is appropriate where safe and nutritionally adequate alternatives to breastmilk are readily available, infectious disease burden is low, and adequate health facilities are accessible to treat the excess illness that will result when breastfeeding is stopped. The situation is more complex in developing countries where alternatives to breastmilk may be unsafe or unavailable. For example, preparing infant formula using contaminated water and utensils can result in illness and death from diarrhea. Babies who are not breastfed also miss the immunological protection against other infections. Economically disadvantaged families may try to extend the supply of formula by over-diluting the preparation, thus causing malnutrition, or they may run out of formula altogether and substitute something even more dangerous. In settings where breastfeeding is the cultural norm, there are also negative social and emotional consequences for a mother who does not nurse her infant.

In 1999, about 620,000 cases of pediatric HIV infection occurred worldwide, accounting for 11 percent of all new infections (43). Although Africa accounts for only 10 percent of the world's population, about 90 percent of infected children live there (44). Almost all pediatric HIV infections are due to MTCT, which can occur during pregnancy, during delivery, or through breastfeeding. Current estimates suggest that 15–30 percent of infants born to mothers infected with HIV will be born infected (acquiring the virus during either pregnancy or delivery) and that an additional 10–20 percent of infants of HIV-positive mothers will become infected if partially breastfed for 18–24 months (45). Therefore, in a country where HIV prevalence among pregnant women is 20 percent, and where all of these mothers partially breastfeed for 18–24 months, 2–3 percent of infants will become infected through breastfeeding (Figure 3). New studies have shown that exclusive breastfeeding may cut this level in half (52). Exclusive breastfeeding is “Safe” Breastfeeding when the mother's viral levels are low (she is neither newly infected nor has AIDS), and she has good breast health (no cracked nipples, mastitis, etc.) (45).

Figure 3



1. De Cock KM, Fowler MG, Mercier E, de Vincenzi I, Saba J, Hoff E, et al. "Prevention of mother-to-child HIV transmission in resource-poor countries: translating research into policy and practice." *JAMA* 2000; 283: 1175-82.

Because it is not possible to distinguish infected from uninfected infants at birth, all infants born to infected mothers are considered at risk of becoming infected through breastfeeding (46). One of the greatest public health policy challenges in this situation is how to balance the risk of HIV infection through breastfeeding with the risk of death due to the use of breastmilk substitutes. Current international policy, which USAID supports suggests, "...that women be empowered to make fully informed decisions about infant feeding, and that they be suitably supported in carrying them out" (47). Because of the many uncertainties, "full information" about the risks and benefits of different infant feeding strategies in this context is difficult to provide, and has been widely misinterpreted by providers and HIV+ women alike.

Some factors that increase the risk of transmission through breastfeeding:

- Mastitis, cracked nipples, and other breast problems increase the risk of transmission (48). Since sub-clinical mastitis is caused by the weaning process, weaning itself may be associated with increased risk.
- The risk of infection continues as long as the infant is exposed, so longer duration of breastfeeding increases the risk (49, 50, 51).
- In South Africa, infants receiving a mixed diet (breastmilk and other foods and fluids) before 3 months of age had higher infection rates than infants who were exclusively breastfed for the first 3 months (52).
- Mothers who are newly infected or whose immune system has already begun to falter have higher levels of the virus in their breastmilk and are more likely to transmit it through breastfeeding. Each of these risk factors has implications for risk reduction.

Strategies for Decreasing the Risk of Mother-to-Child Transmission (MTCT)

➤ Primary Prevention

From a global and individual perspective, primary prevention of HIV infection, especially among women of reproductive age and adolescents, is the optimal strategy for preventing MTCT. Prevention efforts include behavior change interventions; diagnosis, treatment, and prevention of all sexually transmitted infections; and social marketing of condoms. Methods of protection that women themselves can control are urgently needed. Improving the economic and social conditions of women and girls also would reduce their vulnerability to coercive and other unsafe sexual situations.

➤ Voluntary and Confidential Counseling and Testing (VCCT)

Costs, logistical constraints, and staffing problems make VCCT unavailable to most people in high-prevalence countries. Even where VCCT is available, the fear of stigmatization and the perceived lack of benefits act as barriers to testing. Therefore, very few people know their HIV status. Yet VCCT may be particularly important for pregnant women. Pregnant women may be at higher risk for HIV infection because of their history of unprotected sex and because they may be nutritionally and immunologically compromised. VCCT for pregnant women provides an opportunity for appropriate counseling. For an HIV-negative pregnant woman, education about AIDS prevention should be provided and breastfeeding can be encouraged as the optimal mode of infant feeding. For an HIV-infected pregnant woman, information on nutrition and staying healthy, family planning counseling, and a discussion of the risks and benefits of breastfeeding versus replacement feeding should be provided.

➤ Use of Anti-Retroviral (ARV) Therapy

For nonbreastfed infants, a number of antiretroviral (ARV) regimens of varying cost, complexity, and efficacy have been shown to reduce the risk of MTCT in clinical trials. Although breastfeeding results in some reduction of efficacy, ARV reduced MTCT by 21 to 35 percent in the four trials of perinatal ARV regimens that have so far reported long-term (12-24 month) efficacy among breastfed infants (53). However, despite efforts to reduce costs and to simplify ARV regimens, most remain unaffordable to public health services in poor countries. An exception is nevirapine. A single dose given to the mother during labor and to the infant during the first 72 hours after delivery costs only \$4 per treatment and reduces MTCT among breastfed infants by 35 percent at 12 months, in comparison with an equivalent treatment with zidovudine (ZDV) (54). In comparison with a placebo and with longer-term postpartum treatment, nevirapine would likely be even more effective. Concerns about the development of drug resistance have so far limited the use of nevirapine to research and pilot studies. Trials of ARV during breastfeeding are currently underway or being planned.

➤ Safer Breastfeeding

For mothers who choose to breastfeed, there are ways in which the risk of transmission may be reduced. These include breastfeeding exclusively, using good breastfeeding techniques to prevent breast problems, treating breast problems that do occur, and, where appropriate, stopping breastfeeding early (55). Although there is no clear evidence that better nutrition reduces the risk of transmission during breastfeeding, all lactating mothers need nutritional support to enable them to breastfeed without compromising their own health and nutritional status which may in turn lead to higher viral load and consequent problems.

Breastfeeding and the Changing Role of Women in the Developing World

Breastfeeding as a Gender Issue in Development

In addition to being an important health promotion strategy, breastfeeding is also a human rights and gender issue with implications for improving the status of women in the developing world. An enabling environment that supports a woman's ability to make an informed decision about breastfeeding requires system-wide changes that concurrently empower women and contribute to gender equality. For example:

- “Breastfeeding requires structural changes in society to improve the position and condition of women.
- Breastfeeding confirms a woman's power to control her own body, and challenges medical hegemony...
- Breastfeeding requires a new definition of women's work—one that more realistically integrates women's productive and reproductive activities.
- Breastfeeding encourages solidarity and cooperation among women at the household, community, national, and international level.” (56)

Supportive breastfeeding practices also challenge men to re-examine their own gender roles in terms of contributing to maternal and child well-being and nurturing family life.

The economic empowerment of women as they enter the workforce presents a unique challenge to breastfeeding promotion. Approximately one in three women in Latin America and Africa who have children under age 5 are employed outside the home (30). Developing support systems within society and at the workplace is essential to enable a woman to breastfeed while maintaining her employment. Laws to provide maternity and family leave, breaks to allow breastfeeding during work hours, private places at the worksite to accommodate breastfeeding, and the right to breastfeed in public are examples of a supportive environment (57). The role of civil society to support breastfeeding, through public policy, private sector employers, and non-governmental organizations such as mother-to-mother support groups, is essential to promote and preserve maternal and children's health and economic well-being.

Breastfeeding and Food Security

Breastmilk as a Food Resource

Food security means that an adequate supply of nutritionally wholesome food is available to a population. Since over half of child mortality in the developing world is attributable to malnutrition as a primary cause or as a contributing factor, providing adequate nutrition for this vulnerable population is a critical development priority (16). Breastmilk is a natural resource, which provides total food security for infants up to 6 months of age. No other food is more accessible, available, and better utilized than breastmilk. An estimated 25 million metric tons of breastmilk are consumed annually in the developing world and represent the major source of food for over 140 million infants born each year (58). Breastmilk plays a major role in protecting against life-threatening micronutrient deficiencies, particularly vitamin A deficiency, and provides the only reliable source of food for infants in an emergency. By increasing child spacing and reducing total fertility rates, breastfeeding reduces population and the demands on food resources.

Breastfeeding in Emergency Relief Situations

In emergency situations, humanitarian disasters, conflicts, and refugee settings, the risk of infant mortality from infection and/or malnutrition is dramatically increased. Because breastmilk helps protect vulnerable infants through its many health and nutrition benefits, the active support, protection, and promotion of breastfeeding is especially important in emergency situations. Breastmilk provides high quality food, enhances the chances of child survival, provides sustainable food security, and reduces the demand on other emergency services.

A number of harmful myths surround the issue of breastfeeding in emergency situations. For example, it is a mistaken belief that women under stress cannot breastfeed. In fact, stress does not reduce breastmilk production, although it may impact “let down” (milk release). A supportive environment and increased nursing can alleviate difficulties with milk release. Another myth is that women in emergency situations are so malnourished that they cannot produce enough breastmilk for infant needs. In fact, even in malnourished women, milk supply is regulated physiologically in response to nursing frequency and duration in order to meet the infants’ nutritional requirements. The best public health intervention, therefore, is to provide adequate nutrition and support for the mother and to actively promote optimal breastfeeding practices, including exclusive breastfeeding for the first 6 months and the continuation of breastfeeding for two years and beyond (59, 60). Breastfeeding plays an even greater role in surviving emergencies, so feeding recommendations remain the same in emergencies. What changes are the increased challenges.

Breastmilk substitutes, as a rule, are neither necessary nor advisable as humanitarian aid. Artificial feeding is especially dangerous in emergency situations because of unsanitary conditions, limited and contaminated water, limited fuel, indiscriminate and free distribution of breastmilk substitutes, and caregivers’ lack of knowledge about the appropriate use of these substitutes. The WHO *International Code of Marketing of*

Breastmilk Substitutes (1) and supporting WHA resolutions provide specific guidance that can be applied to emergency situations. *Operational Guidance for Relief Staff and Program Managers* of 2001 reconfirms this approach (75). In general, breastmilk substitutes should only be used under carefully controlled conditions for a limited target group of babies (i.e. orphans when no wet nurse is available) and when there is a guaranteed no-cost 6-month supply of formula, with additional health care services (including diarrhea treatment), clean water, and adequate fuel also available (59).

Breastfeeding and Reproductive Health

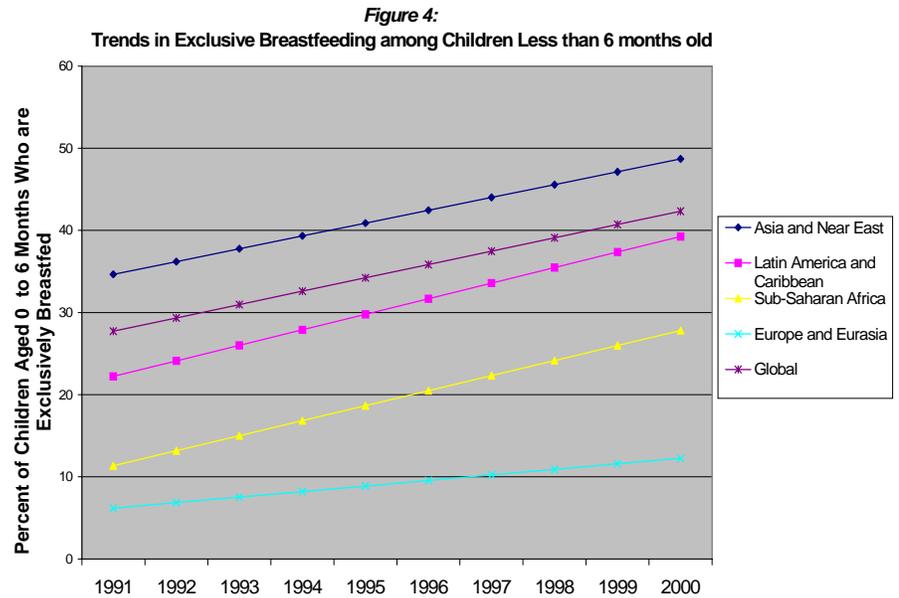
The Program of Action adopted at the 1994 International Conference on Population and Development states: “Family planning and reproductive health programmes should emphasize breastfeeding education and support services which can simultaneously contribute to birth spacing, better maternal and child health, and higher child survival” (61). In most cases, breastfeeding promotion has been an addendum rather than a key intervention in reproductive health programs. Moreover, situation analyses have shown that the reproductive health needs of breastfeeding women are not being adequately addressed. Women seeking family planning services are not routinely asked about their breastfeeding status. Many providers are unaware that initiation of some methods, in particular combined hormonal pills and injectables, should be delayed during breastfeeding (62). Family planning programs include LAM in their variety of methods offered but have not succeeded in marketing LAM as a modern transitioning family planning method that can support longer optimal breastfeeding patterns, decrease anemia, and perhaps even “buy” an additional three to six months of Couple Years Protection (CYP) per pregnancy.

Maternal health programs such as the MotherCare (1989–2000) and Maternal and Neonatal Health (MNH) Program (1998–Present), have begun to emphasize the importance of the postpartum period within safe motherhood programs. Key messages on breastfeeding are included in training and behavior change communication activities. However, just as competency-based skills must be mastered for family planning services and life savings skills, so too must lactation management skills be emphasized. A new framework is needed that eliminates the earlier “vertical” programming of Child Survival and Safe Motherhood. By emphasizing the important health, social, and economic links that breastfeeding makes between infant and maternal health, both will be strengthened.

IV. Lessons Learned from Two Decades of USAID Breastfeeding Activities

Lessons Learned - Breastfeeding Practices in the Developing World

An analysis of DHS data collected from approximately 1990 through 1996 showed several general trends in self-reported breastfeeding practices (63). In general, regional trends have been positive (Figure 4). For comparison purposes, the “gold standard” of breastfeeding is considered to be immediate initiation of breastfeeding (within 1 hour of birth) and exclusive breastfeeding (no other fluids or solids fed to the infant) through age 6 months. The observations below reflect the variability of practices.



Some observations:

- Asia has the lowest rate (15 percent) of women who initiate breastfeeding within 1 hour of birth (compared with 33–37 percent in other regions).
- Nearly all children age 0–5 months are breastfed to some degree, with close to 100 percent in Sub-Saharan Africa, and 90 percent in the other regions.
- In Sub-Saharan Africa, 20 percent of women reported exclusive breastfeeding and 58 percent reported full breastfeeding of their last born infant less than four months old. In North Africa, the rates for exclusive/full breastfeeding are 41/50 percent respectively, 44/55 percent in Asia, and lowest in Latin America at 30/38 percent.
- Weaning ages vary widely among different regions, with prolonged breastfeeding being most common in Asia (more than half of children at age 20–23 months are still being breastfed). In Sub-Saharan Africa, more than half of children are breastfed to the age of 20 months. Weaning occurs earlier in Near East/North Africa and Latin America (50 percent of children are weaned by age 14–15 months).
- Shorter duration of breastfeeding seems to correlate inversely with mother’s educational level, that is, the more educated a woman is, the shorter duration of breastfeeding.
- Breastfeeding significantly prolongs post-partum amenorrhea, by almost sixfold.

Lessons Learned – USAID Breastfeeding Programs

American Public Health Association (APHA) Maternal and Infant Nutrition Clearinghouse (1979–96) initially focused on maternal and child nutrition, especially breastfeeding, and later branched out to provide more information on other child survival and development topics. From its 16 years of experience in information dissemination, the Clearinghouse stressed the need for projects to *articulate an information and communication strategy* that addresses issues of equitable access to information, client profiles, context, and timing (64).

Maternal and Infant Nutrition (MIN) Project (1979–89) found that *“attitudes and practices of health care providers were important factors affecting initiation and duration of breastfeeding in hospitals”* (65). Also noted was the importance of *developing knowledgeable, skilled local counterparts to maintain breastfeeding programs*. MIN emphasized the importance of conducting *local needs assessments* to design targeted breastfeeding programs.

The Women and Infant Nutrition Field Support (WIN) Project (1990–95) recommended that USAID address nutrition problems in *“an integrated and holistic way,”* emphasizing *the need for additional attention to women’s nutritional issues* and the benefits of regional approaches, especially in Africa (66).

The Nutrition Communication Project (1987–95) emphasized breastfeeding and complementary feeding in its activities and a behavior change perspective in bringing about changes in feeding practices. One of the key lessons learned was the need to *identify the various individuals and groups that influence the mother’s breastfeeding behaviors and target each of these with an appropriate message* (67).

BASICS I (1993-98) developed a “Minimum Package” (MinPak) of six nutrition interventions, including exclusive breastfeeding to about 6 months of age and appropriate complementary feeding with continued breastfeeding until 24 months of age. MinPak provides a tangible role for the health sector in supporting households and communities to adopt nutrition-related practices. One of the lessons learned was the *need for closer cooperation among NGOs, community groups, and leaders and greater attention to local conditions and needs* (68).

MotherCare (1989–2000) developed a *standard guide for conducting national breastfeeding assessments* (69) and produced several country reports based on the guide. The MotherCare II efforts in Indonesia focused on life-saving skills with an expanded postpartum component. This offered the opportunity to *include lactation management into competency-based skills checklists*.

Georgetown University’s Institute for Reproductive Health (IRH) Breastfeeding and Maternal and Child Health Division (1987–97) developed and disseminated guidelines and training materials on breastfeeding, family planning, and LAM; served as the technical secretariat in planning the related series of technical meetings and the *Innocenti* meeting; conducted clinical and field tests on LAM’s acceptability and efficacy; provided training to program managers and field personnel; and supported pilot projects and

country-level activities. IRH supported the evolution of that method from being a research issue to being a policy and service provision issue. IRH supported programmatic expansion of LAM and continued advocacy to increase recognition and acceptance of LAM as an effective, modern method of contraception. Programmatic lessons included the importance of *incorporating breastfeeding and LAM counseling into family planning service delivery systems, including a practical/clinical component in training, and adding LAM to the national or institutional standardized management information systems (MIS)* (8).

The Lactation Management Education (LME) Program (1983–98) provided education, leadership development, and ongoing technical support to senior perinatal health care providers. With 15 years of experience and the development of an international network of Associates committed to breastfeeding promotion, Wellstart International concluded that a successful program must be flexible enough to *adapt to local needs*, although the scientific basis and quality of care standards for breastfeeding are the same in any setting. LME also emphasized *building institutional/political support as well as local/national/regional capacity* to increase the likelihood of sustainability for breastfeeding programs (70).

The Expanded Promotion of Breastfeeding (EPB) Program (1991–96) evolved from the LME experience as USAID sought to foster the development of comprehensive country programs with the following key elements: policy/advocacy, training and curriculum development, community outreach, social marketing and communications activities, and applied research. Once again, however, project staff found countries had “diverse needs requiring custom-tailored assistance” and were not always open or ready to provide resources for all components of a comprehensive program (71). At the end of the 5–year project, EPB *strongly urged the integration of efforts to promote improved infant feeding into a range of program types*, including child survival, family planning, safe motherhood, and related sectors. EPB recommended that training be part of a *long-term training strategy*, with added attention to instruction in effective teaching techniques, interpersonal counseling, and pre-service curricular reform. EPB concurred with the Nutrition Communication Project that *messages should target key behaviors and that the benefits and cost-effectiveness of breastfeeding should be presented to financial planners as part of a policy/advocacy strategy*. EPB began to test models for breastfeeding support in the community, confirming the role that a *network of trained and supervised breastfeeding counselors and mother-to-mother support groups could play in improving availability, accessibility, and quality of care* (72).

LINKAGES: The Breastfeeding and Related Complementary Feeding and Maternal Nutrition Program (1996–2001) was designed by USAID to consolidate the technical emphases of predecessor projects, to build on their experience, and to demonstrate the programmatic links between breastfeeding, nutrition, and birth spacing. Unique features of this project are

1. design and implementation of large-scale focus country programs in Ghana, Bolivia, and Madagascar to document measurable change in exclusive breastfeeding through a community-based, results-oriented behavior change approach;
2. technical and programmatic attention to MTCT of HIV through breastfeeding;
3. extensive collaboration with Private Voluntary Organizations (PVOs), NGOs, and community-based organizations, including those outside of the health sector, to implement breastfeeding, complementary feeding, and maternal nutrition promotion strategies to improve behaviors;
4. mainstreaming¹ as one of the project's mandates; and
5. initiatives in Africa.

LINKAGES, more than preceding projects, has ***directly addressed the issue of how to improve breastfeeding behavior***. LINKAGES builds on the lessons learned by previous projects on data-based message and strategy development, audience segmentation and targeting, and the use of supervised practice for health worker performance improvement. Training modules have been developed for use by community-based organizations for training in communication skills, negotiation skills in home visits, and mother-to-mother support groups.

One of the policy lessons learned by LINKAGES is that ***engaging policy makers and technical advisors from different sectors in cost-benefit analyses and risk analyses builds organizational support along with institutional capacity and allows different stakeholders to immediately see the outcomes of alternate program investments and options***. LINKAGES' policy work in the area of HIV and breastfeeding gained credibility in part because of its ***complementary activities***. The project developed a model to simulate the risk of HIV transmission, conducted formative research, collaborated with local partners in setting up a demonstration project in Ndola, Zambia, and participated in and sponsored meetings with key stakeholders at the international, regional, national, and local levels. The Ndola Demonstration Project has been proposed as a model for addressing MTCT of HIV and serving as a catalyst for replication and expansion of that approach in Zambia and elsewhere in the region.

One programmatic issue that confronted the project was the desire on the part of some providers to substitute exclusive breastfeeding for full or nearly full breastfeeding as one of the LAM criteria. Although this would harmonize messages, it would not be in keeping with the consensus reached at the Bellagio II meeting. Agreement was reached by USAID and LINKAGES that the terminology of LAM [73] since its development and reconfirmed at the Bellagio II meeting would be used in all global-level materials and training.

The box on the following two pages attempts to highlight some of the main lessons learned through USAID-funded breastfeeding projects over the past 2 decades.

¹ LINKAGES defines *mainstreaming* as an organization's process to make routine an innovation that successfully addresses an opportunity or problem identified by the organization and its beneficiaries. The process begins when an organization recognizes a problem and identifies a possible solution. The process is completed when the solution is accepted, maintained, and used routinely by a critical mass of the organization.

USAID Breastfeeding Programs 1980–2000: Examples of Lessons Learned

POLICY

- **Policy reform is a long-term, incremental activity.** Sustainable policy reform usually comes after long years of policy learning and dialogue and often through coalitions and alliances. Once adopted, a policy is seldom a “done deal.” Counterforces will continue. Therefore it is necessary to continue work in support of policy implementation and “mainstreaming” beyond the life of one project.
- **Information is a powerful tool for policy reform.** Health and nutrition data can be presented graphically and in a way understandable to non-experts, as demonstrated by PROFILES and the MACRO chartbooks.
- **Advocacy requires a readiness to confront controversy, test solutions, and forge consensus.** IRH and USAID’s advocacy for LAM as a contraceptive option illustrates how this can be done. The LINKAGES Project’s handling of the challenge to breastfeeding posed by HIV is an example of a project’s thoughtful effort to link policies with programs and resources.
- **Advocacy should extend beyond the health community.** Current breastfeeding policy raises awareness of the links between breastfeeding and the environment, food security, women and development, and emergency response.

HEALTH SERVICES

- **Pre-service and in-service training must address providers’ lack of understanding of breastfeeding, lactation management, and LAM, and their ineffective communication skills.** Many health care providers are ill equipped to counsel women on breastfeeding and LAM. Through curricular reform and in-service training, the LME Program developed a network of knowledgeable and skilled providers and advocates. Several projects’ experience confirms that “hands-on” practice and interactions with mothers during training of providers and promoters at all levels can enhance the learning experience and improve interpersonal counseling.
- **Reproductive health and family planning programs provide another avenue for supporting breastfeeding, with benefits for both family planning and breastfeeding communities.** While informed choice, quality of care, safer motherhood, child survival, and lower fertility are common objectives of both communities, stronger partnerships between the family planning and breastfeeding communities are needed to achieve these objectives.

COMMUNITY

- **Messages should be consistent, designed for defined audiences, action-oriented, and communicated with appropriate timing and frequency.** The Nutrition Communication Project and BASICS found that most “teachable moments” for nutrition do not occur within health facilities. To influence attitudes, norms, and daily practices, breastfeeding messages

must be communicated in communities, shops, and homes.

- **Formative research can help to identify specific action-oriented behaviors and suggest steps to overcome barriers to change.** The challenge, as evidenced by LINKAGES' experience in India with its PVO partners, is to streamline the applied behavior change approach.
- **Community-based groups extend access to breastfeeding information and support.** La Leche League International's 40+ year history testifies to this. Mother-to-mother support is a powerful strategy for catalyzing change, bringing knowledge to a community, and modeling behavior. Breastfeeding projects have continually worked with microenterprise groups, mother-to-mother support groups, women's religious groups, mothers' clubs, NGOs, and others to expand outreach.

TECHNICAL AND PROGRAMMATIC ISSUES

- **Promotion, protection, and support of optimal breastfeeding practices is the foundation for any breastfeeding program.** Early programs often promoted breastfeeding and its benefits. Experience shows that it is the *pattern* and *duration* of breastfeeding (exclusivity, frequency, and continuation) that is critical to child survival and fertility reduction.
- **Knowledge of the health benefits of breastfeeding is usually inadequate to motivate women to adopt optimal practices.** Mothers need specific, culturally appropriate information that responds to their constraints and concerns to enable them to make better feeding choices. Messages also need to be targeted to others (husbands, mothers-in-law) who have significant influence over a woman's breastfeeding behavior and decisions.
- **Placing breastfeeding within a life cycle approach demonstrates its impact beyond child survival.** Breastfeeding is important for a child's physical, emotional, and intellectual development. It also can contribute to a woman's health.
- **The risks of HIV transmission through breastfeeding need to be balanced against the risks from artificial feeding.** The best way to approach this controversial issue is to begin with the science. Risk analysis models are tools for calculating the risks. Keeping informed of research, programmatic, and policy developments is essential for thoughtful dialogue on this complex issue.
- **LAM needs to be offered by all Family Planning Cooperating Agencies if widespread expansion of LAM is to occur.** Some organizations and service providers will be more likely to include LAM if they are held accountable for integrating LAM in their programs and service information systems.

Lessons Learned – Breastfeeding Program Literature

A recent review of the published literature was conducted to identify effective strategies to improve and promote breastfeeding behaviors (74). The author cautioned that many of the breastfeeding studies had serious methodological flaws, thus making interpretation and generalization of the results difficult. However, the literature did seem to support two conclusions:

- In a hospital setting, lactation training for staff, and individual mother counseling of mothers, preferably in groups can improve early breastfeeding practices.
- Peer counseling and social support, especially home visits, have a positive effect on breastfeeding initiation and duration, giving of colostrum, exclusive breastfeeding, and breastfeeding duration.

The review of the literature on the impact of breastfeeding interventions identified seven major gaps in the literature

1. audience analysis to identify groups of mothers most in need of breastfeeding support,
2. effectiveness of mothers' support groups in promoting exclusive and continued breastfeeding,
3. influence of peer counselors on breastfeeding behaviors,
4. role of mass media in changing breastfeeding behaviors and sustaining behavior change,
5. influence on others of individuals who already practice optimal behaviors,
6. cost-effectiveness of programs, and
7. impact of changing national policies on the quality of services, breastfeeding behaviors, and providers' knowledge, attitudes, and practices.

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V. Annexes

Annex 1 - *The Innocenti Declaration on the Protection, Promotion, and Support of Breastfeeding*

Annex 2 - *Ten Steps to Successful Breastfeeding*

Annex 1

Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding

RECOGNISING that

Breastfeeding is a unique process that:

- provides ideal nutrition for infants and contributes to their healthy growth and development;
- reduces incidence and severity of infectious diseases, thereby lowering infant morbidity and mortality;
- contributes to women's health by reducing the risk of breast and ovarian cancer, and by increasing the space between pregnancies;
- provides social and economic benefits to the family and the nation;
- provides most women with a sense of satisfaction when successfully carried out; and that

Recent research has found that:

- these benefits increase with increased exclusiveness of breastfeeding (exclusive breastfeeding means that no other drink or food is given to the infant)
- the infant should feed frequently and for unrestricted periods during the first six months of life, and thereafter with increased duration of breastfeeding with complementary foods, and
- programme interventions can result in positive changes in breastfeeding behaviour;

WE THEREFORE DECLARE that

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 breast milk 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. This child feeding ideal is to be achieved by creating an appropriate environment of awareness and support so that women can breastfeed in this manner.

Attainment of the goal requires, in many countries, the reinforcement of a "breastfeeding culture" and its vigorous defence against incursions of a "bottle-feeding culture". This requires commitment and advocacy for social mobilization, utilizing to the full the prestige and authority of acknowledged leaders of society in all walks of life.

Efforts should be made to increase women's confidence in their ability to breastfeed. Such empowerment involves the removal of constraints and influences that manipulate perceptions and behaviour towards breastfeeding, often by subtle and indirect means. This requires sensitivity, continued vigilance, and a responsive and comprehensive communications strategy involving all media and addressed to all levels of society. Furthermore, obstacles to breastfeeding within the health system, the workplace and the community must be eliminated.

Measures should be taken to ensure that women are adequately nourished for their optimal health and that of their families. Furthermore, ensuring that all women have access to family planning information and services allows them to sustain breastfeeding and avoid shortened birth intervals that may compromise their health and nutritional status, and that of their children.

All governments should develop national breastfeeding policies and set appropriate national targets for the 1990's. They should establish a national system for monitoring the attainment of their targets, and they should develop indicators such as the prevalence of exclusively breastfed infants at discharge from maternity services, and the prevalence of exclusively breastfed infants at four months of age.

National authorities are further urged to integrate their breastfeeding policies into their overall health and development policies. In so doing they should reinforce all actions that protect, promote and support breastfeeding within complementary programmes such as prenatal and perinatal care, nutrition, family planning services, and prevention and treatment of common maternal and childhood diseases. All healthcare staff should be trained in the skills necessary to implement these breastfeeding policies.

OPERATIONAL TARGETS:

All governments by the year 1995 should have:

- appointed a national breastfeeding coordinator of appropriate authority, and established a multisectoral national breastfeeding committee composed of representatives from relevant government departments, non-governmental organisations, and health professional associations;
- 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 (World Health Organisation, Geneva, 1989) "Protecting, promoting and supporting breast-feeding: the special role of maternity services";
- 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
- enacted imaginative legislation protecting the breastfeeding rights of working women and established means for its enforcement.

We also call upon international organisations to:

- draw up action strategies for protecting, promoting and supporting breastfeeding, including global monitoring and evaluation of their strategies;
- support national situation analyses and surveys and the development of national goals and targets for action; and
- encourage and support national authorities in planning, implementing, monitoring and evaluating their breastfeeding policies.

Annex 2

The Ten Steps to Successful Breastfeeding (BFHI)

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

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