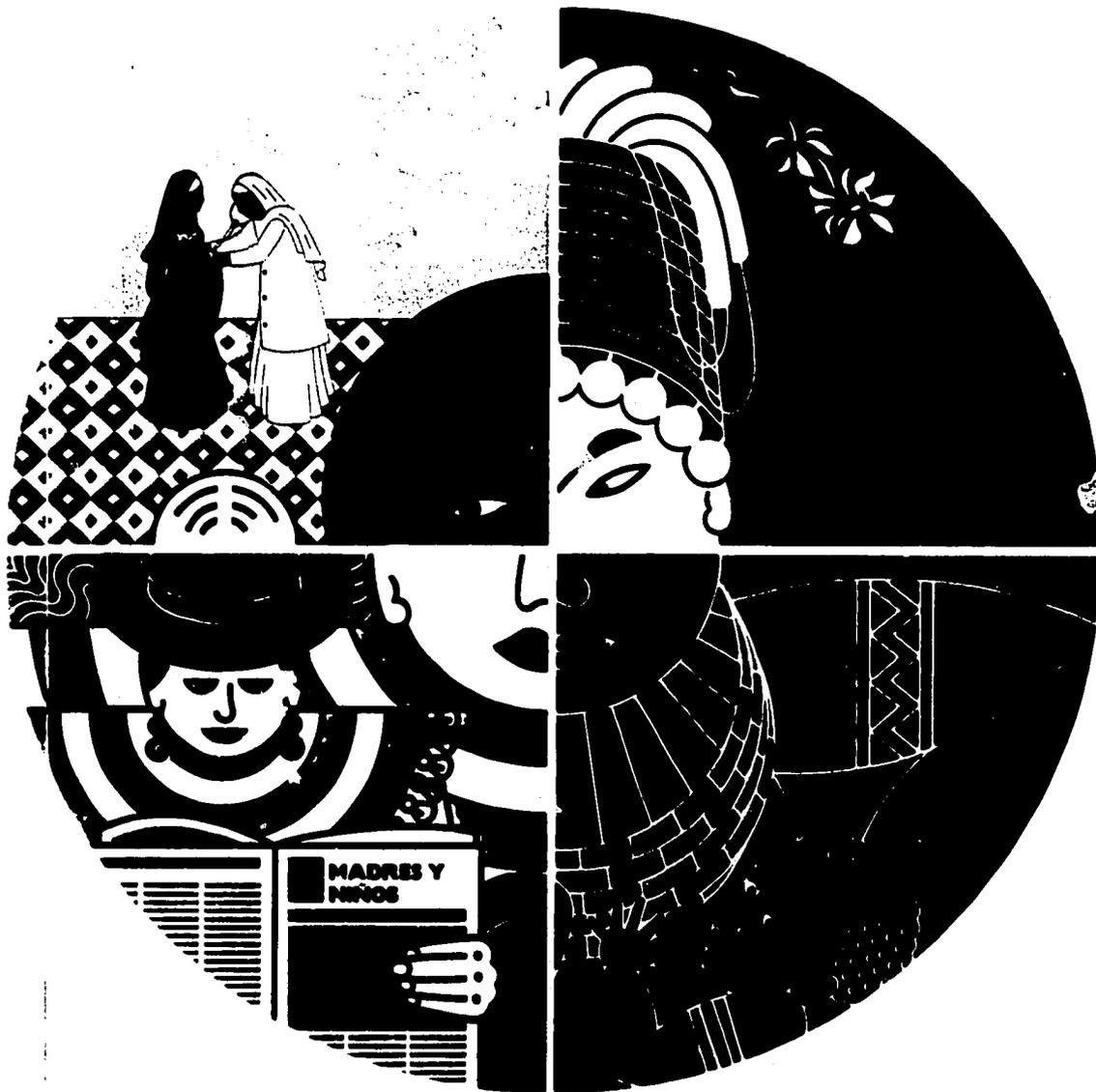


# Breastfeeding: A Report on A.I.D. Programs



U.S. Agency for International Development  
Washington, D.C. 20523

# Table of Contents

<i>Foreword</i>	<i>i</i>
<i>Breastfeeding -- A Fact Sheet</i>	<i>ii</i>
<i>Executive Summary</i>	<i>iii</i>
<b>CHAPTER 1</b>	
<b>Introduction</b>	<b>1</b>
<b>CHAPTER 2</b>	
<b>Breastfeeding -- An Underused and Undervalued Resource</b>	<b>3</b>
<b>CHAPTER 3</b>	
<b>Health Consequences, or Why "Breast is Best"</b>	<b>9</b>
The Best Nutrition	9
Diarrheal Disease Prevention	10
Immunization	11
Child Spacing	11
Maternal Health	12
<b>CHAPTER 4</b>	
<b>Promoting Breastfeeding -- A Decade of A.I.D. Experience</b>	<b>13</b>
Applied Research	13
Data Collection and Information Exchange	14
Hospital Reform	15
Training and Curriculum Development	18
Communication and Social Marketing	20
Mother-to-Mother Support	21
<b>CHAPTER 5</b>	
<b>Looking Ahead -- The A.I.D. Breastfeeding Strategy</b>	<b>25</b>
Policy Dialogue	26
International Collaboration	26
Quantifying the Economic Benefits of Breastfeeding	26
Training of Health Care Professionals	27
Community-Based Activities	27
Maternal Nutrition	28
<b>APPENDICES</b>	
<b>Appendix A: A.I.D. Funding for Breastfeeding Activities, Fiscal Year 1989</b>	<b>30</b>
<b>Appendix B: Breastfeeding and Weaning Patterns in Selected Countries, 1986-89</b>	<b>32</b>

Cover illustration by Grundy and North-  
edge Designers from the 1990 Calendar  
of the Clearinghouse on Infant Feeding  
and Maternal Nutrition, American  
Public Health Association, produced  
through a cooperative agreement of the  
Office of Nutrition, A.I.D.

Foreword photo by UNICEF.

## *Foreword*

I am pleased to provide Congress with this report on the Agency for International Development's breastfeeding programs. The report documents a decade of experience and leadership by A.I.D. in breastfeeding promotion and support.

Using the talents of private organizations, educational institutions, individuals and communities, the Agency has successfully demonstrated how to reverse the trends away from breastfeeding. Health workers have been trained. Hospital practices have been critically analyzed and reformed. Support groups for breastfeeding mothers have been organized. Media campaigns have spread the message "breast is best."

Clearly, breastfeeding is one of the most cost-effective means of improving child survival. Recognizing the need to strengthen the breastfeeding component of the Agency's programs, I have recently approved a Breastfeeding for Child Survival Strategy which outlines a plan of action. This report will serve as a useful benchmark against which to chart A.I.D. progress in implement-



ing that strategy in the 1990s. With the support of the U.S. Congress and the American people, we are committed to promoting and protecting breastfeeding for the survival and well-being of children and mothers, and as a most precious, natural resource.

Ronald W. Roskens  
Administrator  
Agency for International Development  
May, 1990

# *Breastfeeding - A Fact Sheet*

---

---

- **BREASTFEEDING SAVES MONEY** - Breastfeeding is one of the most cost-effective child survival interventions, offering major economic benefits to families, to health sectors and to national economies.
- **BREASTFEEDING SAVES LIVES** - The risk of death for non-breastfed infants is twice that of those exclusively breastfed.
- **BREASTMILK IS IDEAL FOOD FOR INFANTS** - Breastmilk can fulfill the infant's total nutrient requirement through 4-6 months of age, and remains an invaluable source of energy, protein, vitamins and minerals well into the second year of life, when complemented by appropriate weaning foods.
- **BREASTFEEDING PREVENTS DIARRHEA** - Infants not breastfed are up to 25 times more likely to die from diarrhea during the first 2 months of life and at least twice as likely to get diarrhea, compared to those exclusively breastfed. Continued breastfeeding during diarrhea reduces dehydration, severity, duration and negative nutritional consequences of diarrhea.
- **BREASTFEEDING CONFERS IMMUNITY** - Breastmilk is the first immunization, protecting the infant from bacterial and viral pathogens prior to and during the time of acquiring active immunity through vaccination. The anti-infective properties of the first milk, colostrum, are especially beneficial.
- **BREASTFEEDING IS EFFECTIVE FAMILY PLANNING** - Exclusive or almost exclusive breastfeeding provides women more than 98% protection from pregnancy during the first six months if menses have not returned, and helps substantially thereafter, especially in conjunction with another family planning method. Breastfeeding helps to space births, with health benefits to both mother and child.
- **BREASTFEEDING PROTECTS MOTHERS' HEALTH** - Breastfeeding may reduce the mother's risk of fatal postpartum hemorrhage. It may also lower risk of breast and ovarian cancer. By postponing menses, it alleviates anemia.
- **SUB-OPTIMAL BREASTFEEDING AND BOTTLEFEEDING ARE WIDESPREAD** - In many developing countries, the number of mothers who breastfeed and the duration of breastfeeding have declined, especially in urban areas. Exclusive breastfeeding through 4-6 months of age maximizes maternal and child health and family planning benefits, and yet this has become rare. Partial breastfeeding plus breastmilk substitutes are commonplace.
- **BREASTFEEDING DECLINES ARE REVERSIBLE** - Where breastfeeding has been actively promoted and supported, declines have been stabilized or reversed. Effective interventions include training health professionals and reform of hospital practices that are obstacles to breastfeeding, mother-to-mother support groups and mass media educational campaigns.

# *Executive Summary*

---

Promotion and support of breastfeeding have been included as elements of many of A.I.D.'s health, population and nutrition programs, including those for child survival. But breastfeeding has not generally been a major focus of these programs. Nevertheless, A.I.D.-assisted demonstration projects over the past decade have provided important experience. They have confirmed not only that breastfeeding is a key to child survival, but also that there are proven and cost-effective interventions for its promotion and support. For example, several approaches were successfully tested under the 1979-89 Nutrition: Improvement of Maternal and Infant Diet Project. One component of this project supported the San Diego-based Wellstart lactation management program, which will have benefitted well over 60 million mother/infant pairs by 1993 through training of key health care professionals and promotion of reforms in hospital practices. The cost of this program per pair benefitted is measured in pennies.

Other projects of the Offices of Health, Nutrition, and Population and the Bureau of Food for Peace and Voluntary Assistance, as well as some bilateral projects, have explored such interventions as promotion of breastfeeding through mass media and social marketing (e.g., the Weaning Project), mother-to-mother support groups (e.g., La Leche League), curriculum development (e.g., the Georgetown University Institute for International Studies in Natural Family Planning), data collection (e.g., Demographic and Health Surveys), and information exchange

(e.g., the Global Clearinghouse on Infant Feeding and Maternal Nutrition). In addition, A.I.D.-assisted research has helped to clarify the determinants of breastfeeding, its value in protecting against diarrhea and other infections, and its importance as a natural family planning technique. The underlying premises of all these projects were that (1) appropriate breastfeeding is a skill which needs to be taught, (2) early initiation is critical to obtaining the maximum benefits from breastfeeding, and (3) the techniques used to promote other child survival interventions are applicable to breastfeeding as well.

The time is now ripe for strengthening and focusing breastfeeding promotion within A.I.D.'s child survival, health, population and nutrition programs at both central and field levels. To this end, A.I.D. has developed a *Breastfeeding for Child Survival Strategy*, whose goals are to increase the percentage of infants who are: (1) breastfed within one hour of delivery; (2) exclusively breastfed from birth through 4-6 months of age; (3) fed appropriate complementary foods in addition to breastmilk by the end of their sixth month; and (4) breastfed for one year or longer. Among the approaches that will receive priority attention, within funding constraints, are training, hospital reform, community-based activities, and maternal care. Enhanced dialogue with policymakers, increased international collaboration with WHO, UNICEF, and other agencies, and further quantification of economic and health benefits from breastfeeding promotion and support will also be undertaken.

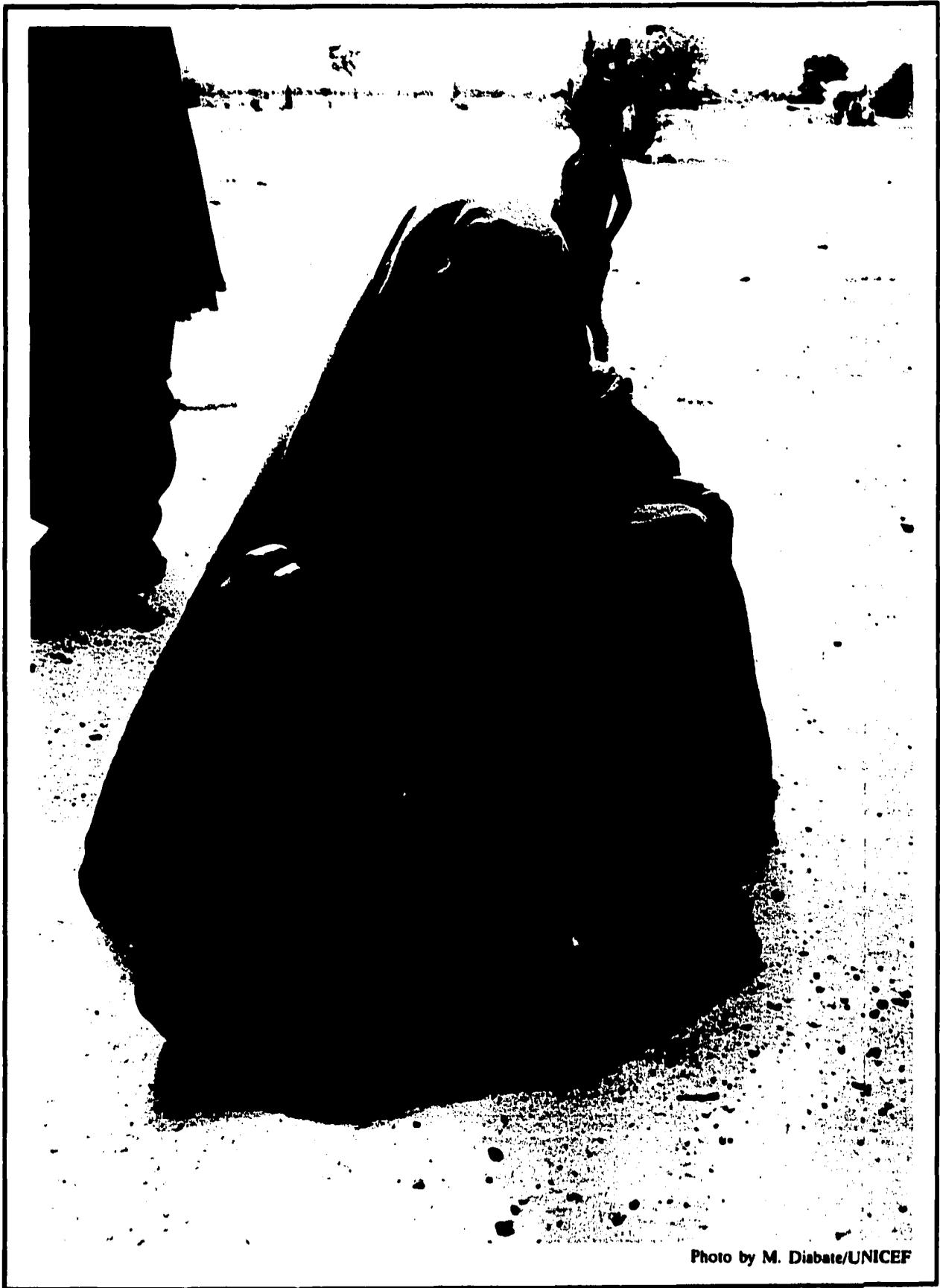


Photo by M. Diabate/UNICEF

# Chapter 1

## *Introduction*

---

Breastfeeding is a pillar of A.I.D.'s Child Survival strategy. In addition to its direct impact on infants' health, it enhances each of the key child survival interventions — diarrheal disease control, immunization, nutrition, and child spacing — and benefits maternal health as well. The billions of liters of human milk that mothers produce each year augment the world's food supply while easing strains on family budgets. Insofar as imports of breastmilk substitutes are avoided, governments have less need to use scarce foreign exchange. Furthermore, the reduced burden of illness and death brought about by breastfeeding represents a savings to families, to communities, to the formal health care sector, and to governments.

In the past, promotion of breastfeeding has been included as an element of many of A.I.D.'s child survival programs, but not generally as a major focus. In part because breastfeeding is often assumed to be universal, many child survival projects simply extol its virtues but do little to enhance the specific breastfeeding skills and practices that reinforce its many benefits.

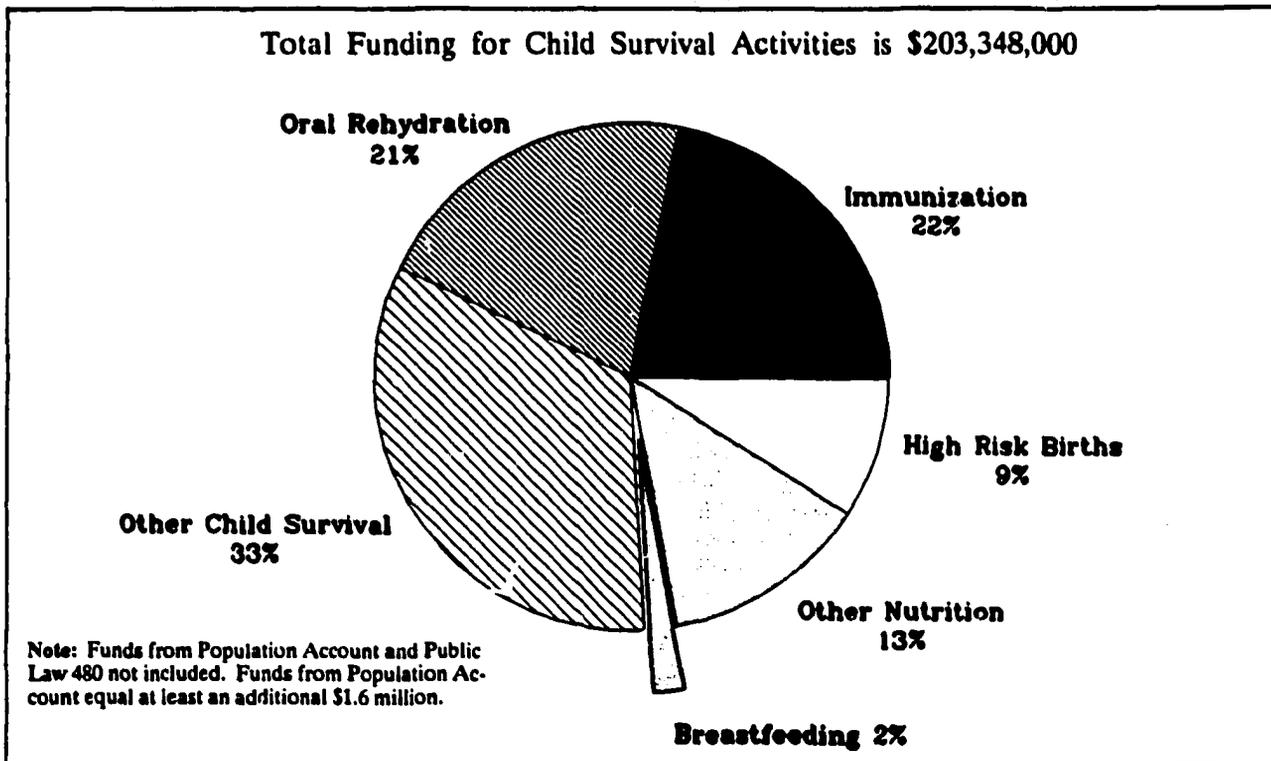
About \$5.6 million of A.I.D. funding could be clearly identified as going to support breastfeeding activities in fiscal year 1989 (see Figures 1 and 2). Figure 2 shows the total Agency funding for breastfeeding by account (including Population) and by region. Stand-alone projects are few, particularly in Africa. The Offices of Nutrition and Population have mounted several centrally funded projects, and the Office of Health and the Bureau of Food for Peace and Voluntary Assistance have supported others. There has been relatively less bilateral activity through A.I.D. missions overseas (see Appendix A). Now, however, as its value has become ever more evident, breastfeeding promotion and support is becoming a programming focus in its own right.

This report, prepared in response to a request by the 101st Congress<sup>1</sup>, highlights some of the major breastfeeding activities A.I.D. has supported over the past decade and discusses the opportunities A.I.D. sees for enhancing breastfeeding promotion and support in developing countries. It is not written to provide a comprehensive account of every A.I.D.-assisted breastfeeding activity.

---

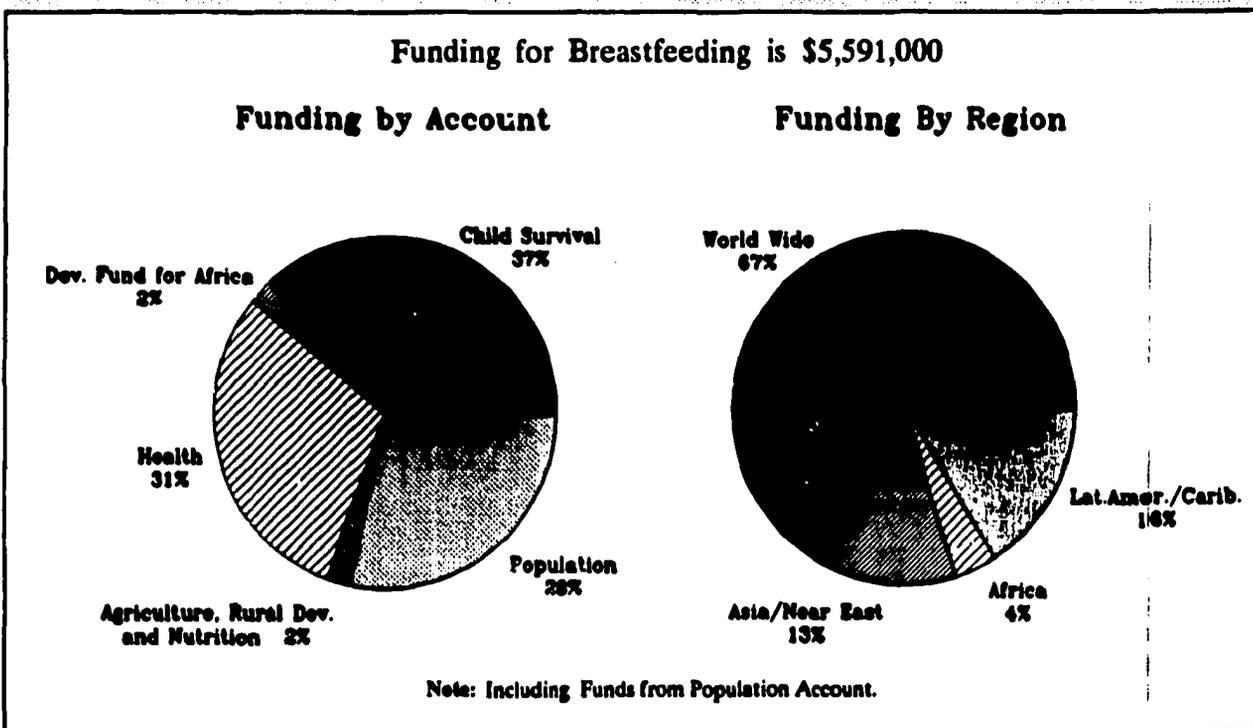
<sup>1</sup> See Senate Committee on Appropriations, 101st Congress, 1st Session, Report on the Foreign Operations, Export Financing, and Related Programs Appropriations Bill, 1990: "The committee is concerned that less than 1 percent of child survival programs are being used specifically to promote breastfeeding, and...wishes to receive a report from AID...on activities it is undertaking to promote breastfeeding in developing countries."

**Figure 1: A.I.D. Funding for Child Survival by Intervention (Fiscal Year 1989)**



Source: A.I.D. Health Information System, CIHI, March, 1990

**Figure 2: A.I.D. Funding for Breastfeeding (Fiscal Year 1989)**



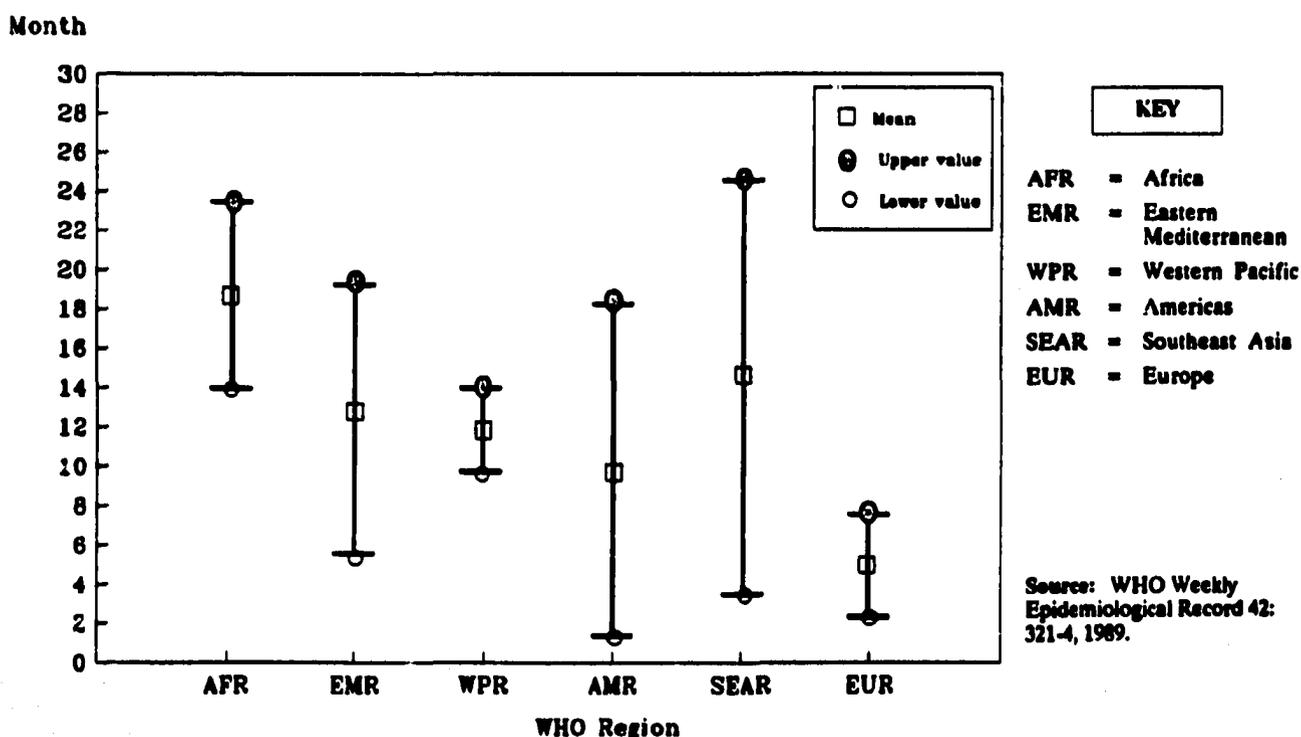
# Chapter 2

## *Breastfeeding — An Underused and Undervalued Resource*

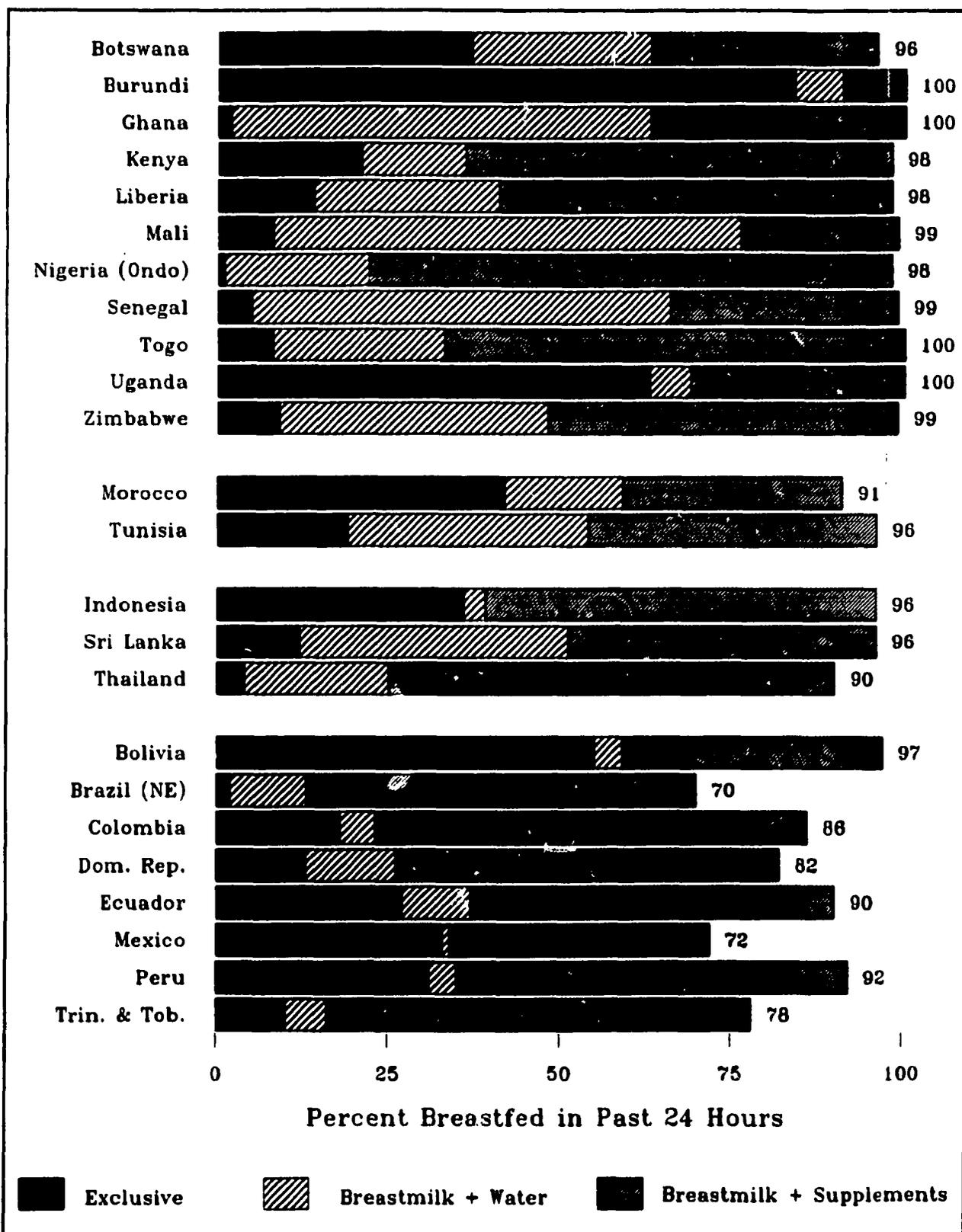
The benefits of breastfeeding are so great — and the act itself is so natural and well-accepted — that one might expect all mothers to breastfeed their babies as a matter of course. But circumstances often seem to conspire against the practice. Ideally, breastfeeding should begin within an hour after birth. But the first milk, colostrum, is often discarded by both mothers and hospitals. Ideally, all babies should have only breastmilk for the first 4-6 months of their lives. But mothers who need to work and

care for many other children often feel it is easier and more “modern” to use breastmilk substitutes. Ideally, breastfeeding should be “on demand.” But this can mean breastfeeding 12 to 14 times a day or more in the early months, making it hard for a mother to leave her infant long enough to fulfill other household responsibilities. Ideally, breastfeeding should continue for a year or longer. But many women perceive their milk as “insufficient” much sooner than that.

**Figure 3: Estimated Duration of Breastfeeding by WHO Region, 1989**



**Figure 4: Percent Breastfed by Type of Feeding Pattern, Infants 0-4 Months**



Source: Demographic and Health Surveys, 1986-1989



At 10 a.m., this mother in the Dominican Republic breastfeeds her child....But at 1 p.m. she switches to bottlefeeding.

Photos by Molly Mort

The fact is that optimal breastfeeding is relatively rare. Growing numbers of women in developing countries do not breastfeed at all, or breastfeed in ways that lose some of its potential benefits. These trends are associated with urbanization, higher family incomes, women's education and work outside the home, use of the formal medical system (which is often not supportive of breastfeeding) and other aspects of modernization. Younger mothers and women having their first children also tend to breastfeed less due in part to a lack of confidence in their ability to breastfeed successfully and lack of support and role models at home. If these trends continue, they could lead to increased infant mortality and also have a pronounced effect on world fertility patterns (see Box 1). These changes are masked in conventional surveys,

which simply ask whether a child was ever breastfed. Such surveys show that the great majority of babies in developing countries are still breastfed for some part of their lives. But they do not show how long or how effectively breastfeeding continues. Thus, it was particularly important that a research project funded by A.I.D.'s Office of Nutrition in the early 1980s, which resulted in the publication *Feeding Infants in Four Societies*, was one of the first to distinguish between full and partial breastfeeding and to identify different patterns of infant feeding. This study was carried out by the Population Council and a consortium of other research institutions, and involved field research in Bangkok, Thailand; Bogota, Colombia; Nairobi, Kenya; and Semarang, Indonesia.

### **Box 1: Breastfeeding and Fertility**

The natural contraception that breastfeeding provides has been recognized for millennia. One A.I.D.-funded study suggests that if current median durations of breastfeeding were to be halved, fertility would increase by 27 percent in Ghana and Senegal, 17 percent in Haiti, 37 percent in Indonesia, and 33 percent in Nepal. In Pakistan, if breastfeeding declined enough to reduce average postpartum infertility by two-thirds, other contraceptive use would have to increase from the present 11.8 percent to 60 percent *just to maintain the current fertility rate* (which is already one of the highest in the world.)

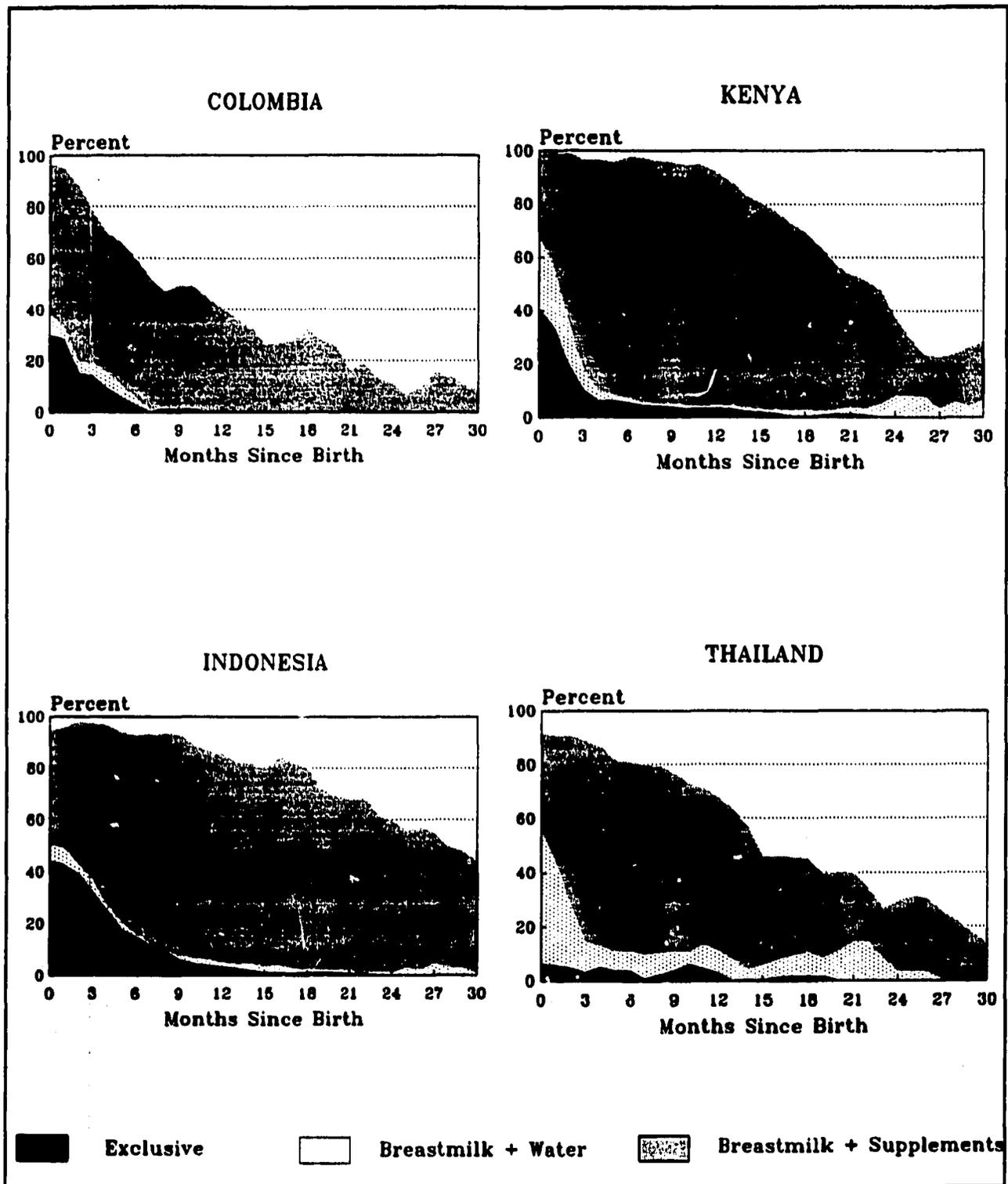
As the four-country study found, and other research has confirmed, current breastfeeding practices are far from optimal. The percentage of women who choose not to breastfeed, while small, is growing, especially in urban areas. The problem is more pronounced in the Latin America/Caribbean region and in some of the more economically advanced countries of Asia, but the trend is away from breastfeeding almost everywhere. In the Philippines, for example, data from 1983 indicate that 10 percent of rural infants and 27 percent of urban infants (34 percent of those in Manila) were never breastfed. Furthermore, many women stop breastfeeding after a month or so. Thus, while the average duration of breastfeeding in Southeast Asia is 14 months, many mothers stop before then, some as early as 3 months (see Figure 3). In general, urban infants are breastfed for shorter periods than rural infants, but the dropoff in the first three months is pronounced for both groups in all societies. In El Salvador, for example, *rural* women

under the age of 30 are breastfeeding for only three months, on average.

Among those who do breastfeed, the norm is for partial, not exclusive, breastfeeding. Siblings give babies bottles while mothers are busy with other responsibilities. Relatives give babies "tastes" of food out of affection. Mothers often add infant formula to their baby's diet in the mistaken belief that it is a "tonic." Thus, A.I.D.-assisted surveys found that more than 50 percent of breastfed infants under 4 months of age in many African countries were receiving plain water (possibly contaminated) as well as breastmilk, while similar percentages in Latin America and Southeast Asia were receiving other supplements (see Figure 4). In Kenya and Indonesia exclusive breastfeeding at birth is practiced by about 40 percent, but it declines rapidly thereafter (see Figure 5).

Failure to use colostrum, the first milk, is a particularly serious problem. In country after country, colostrum is discarded and replaced by sugared water or other prelacteal feeds. In Cameroon, for example, virtually all mothers think colostrum is "heavy and yellow" and "bad" for the child. In Pakistan, large percentages of both mothers and traditional birth attendants say colostrum is "dirty" or "bad." In Jordan, even though most mothers breastfeed, 75 percent of infants are given breastmilk substitutes in their first day or two of life. Even after being exposed to educational messages at Indonesian integrated health posts (*posyandus*), only 19 percent of Balinese village women agreed that colostrum should be given to a newborn. These beliefs are reinforced when doctors and nurses, trained in outmoded Western theories, offer prelacteal feeds, which inhibit initiation of breastfeeding.

**Figure 5: Country Profiles of Breastfeeding Patterns**



Source: Demographic and Health Surveys, 1986-89



**Lack of potable water and poor sanitation make diarrhea a constant threat, but breastfeeding provides protection.**

Photo by John Chudy

# Chapter 3

## *Health Consequences, or Why "Breast is Best"*

---

Current trends toward delayed, curtailed, and partial breastfeeding have consequences for the health of both mother and child. The evidence is compelling. Recent research, prompted by renewed interest in breastfeeding over the past decade or so, has deepened our understanding of its value, particularly in the context of the developing world. In addition to being the best food for babies, breastmilk has other benefits not obtainable from substitutes. Indeed, UNICEF estimates that well over a million infant deaths a year could be avoided if all children were breastfed appropriately, and many more would escape vitality-sapping illnesses.

---

### **The Best Nutrition**

---

Breastmilk is uniquely suited to the human infant's immature digestive system. No breastmilk substitute is the nutritional or immunological equivalent of human milk, which alone provides all the nutrients a child needs through 4-6 months of age. It has over 100 known components and a singular ability to adapt over time to match the infant's changing nutritional and immunological needs. It is an extremely valuable food, even for premature, low-birth-weight infants, because of its easy digestibility and the growth-enhancing proteins it contains. Although many hospitals are reluctant to use human milk for low-birth-weight babies, a 10-year experiment at Kenyatta Hospital, in Nairobi, Kenya, has shown that, with help from a well-trained staff and manual expression of breastmilk to main-

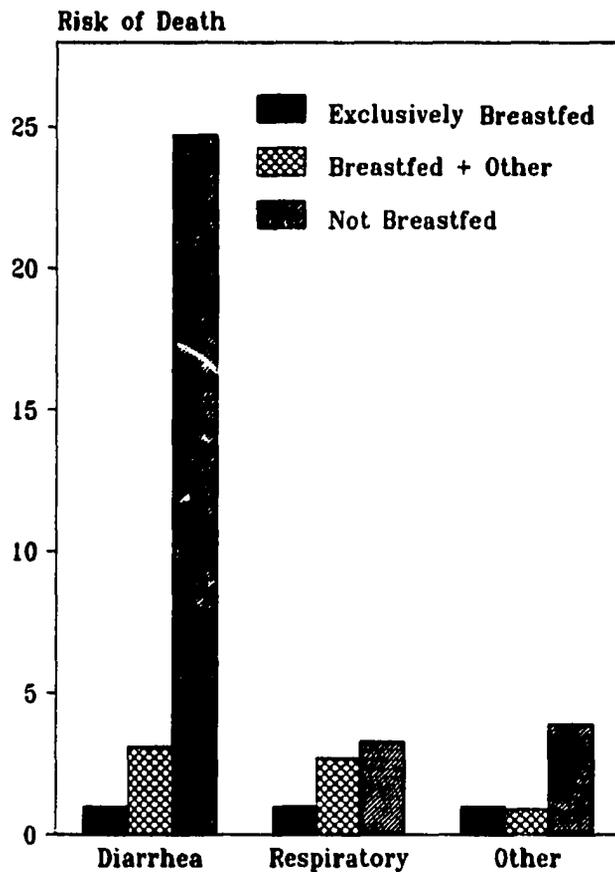


**Breastmilk substitutes, if overdiluted with unclean water in unsterile bottles, can endanger children's lives.**

Photo by Peter Williams/UNICEF

## Diarrheal Disease Prevention

**Figure 6: Relative Risk of Mortality from Infectious Diseases, by Feeding Pattern, Infants <2 Months, Brazil**



Source: Victora, C. et al., *Lancet*, ii: 319-22, 1987.

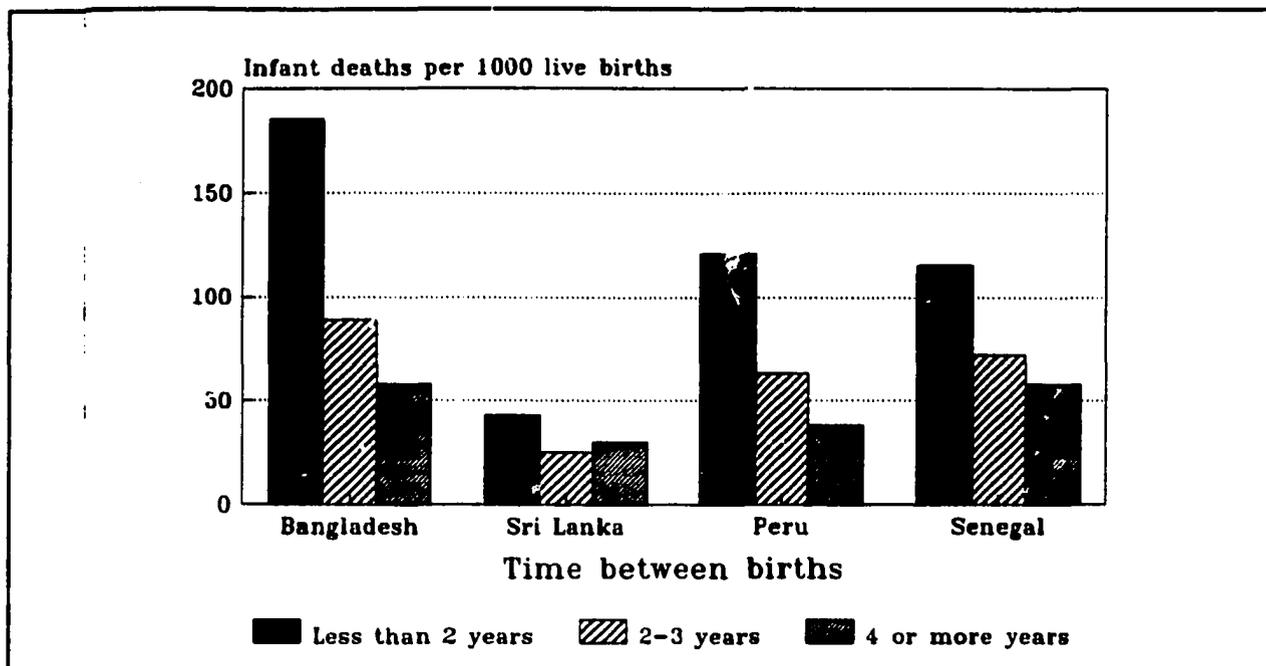
tain lactation, it is possible to feed these infants exclusively on milk from their own mothers, thus retaining breastmilk's many benefits. Even after weaning foods are introduced,<sup>2</sup> breastmilk continues to be a critical source of calories, high-quality protein and micronutrients well into a child's second year of life.

With exclusive breastfeeding, diarrheal disease would drop dramatically. Breastmilk has unique anti-infective properties, which are particularly important while the child's immune system is maturing. For children exposed to infection from contaminated water, unhygienic food preparation, and poor household sanitation, breastfeeding can be crucial to survival, although it cannot fully compensate for environmental deficiencies. Even if the child gets diarrhea, continued breastfeeding, in combination with oral rehydration, reduces the risk of dehydration, the severity and duration of the diarrhea, and the negative nutritional consequences of the disease.

Figure 6, based on data from Brazil, shows that children fed wholly on breastmilk substitutes are up to 25 times more likely than others to die from diarrhea in the first two months of life and twice as likely to fall ill; animal milk and infant formula are equally hazardous. Likewise, diarrheal disease doubled among slum children in Lima when "aguaitas" (herbal teas) and water were added to the diet during their first six months. A study of data from Malaysia concluded that, without breastfeeding, twice as many babies would have died after the first week of life, and five times more if they lived in households without piped water and sanitation. Much of the benefit in the early weeks is attributable to ingestion of colostrum, which is particularly rich in anti-infective properties.

2 Good weaning practices are extremely important to child health. Over the years, A.I.D. has supported many activities designed to encourage introduction of weaning foods, monitoring to ensure that children are growing adequately, and so on. Child survival projects run by A.I.D.-assisted private voluntary organizations have been particularly active in this area. Some centrally supported projects also promote better weaning practices, and the Food for Peace program (P.L. 480, Title II) has been active in supporting the development and distribution of specifically adapted weaning foods which make use of U.S. foodstuffs. Since these projects focus mainly on weaning practices (as distinct from breastfeeding), they are outside the purview of this report.

**Figure 7: The Relationship Between Birth Spacing and Infant Mortality**



Sources: World Fertility Survey, Bangladesh, 1979 (Voorburg, Netherlands: International Statistical Institute). Demographic Health Surveys, Peru, 1986; Senegal, 1986; Sri Lanka, 1987 (Columbia, Maryland: IRD/Macro Systems).

### Immunization

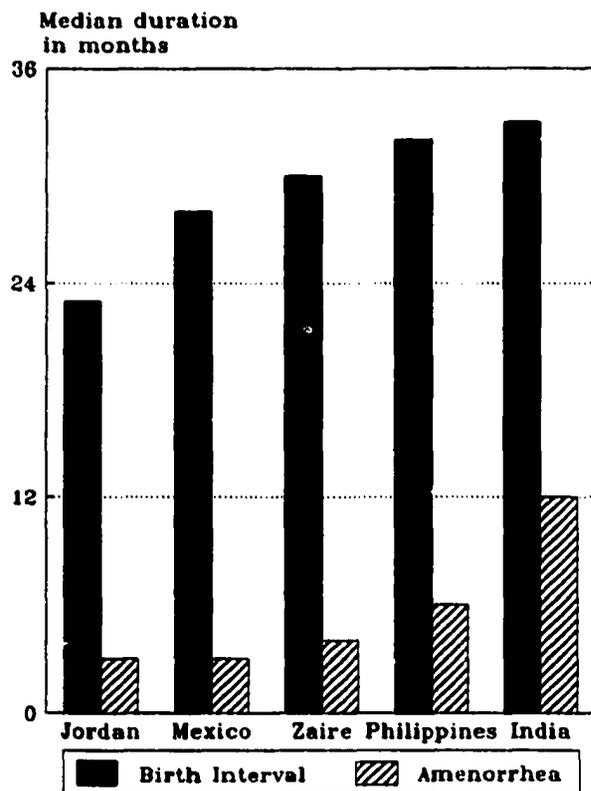
Breastmilk is, in effect, the infant's first immunization. It is rich in the immunoglobulins and antibodies produced and transmitted by the mother. Although the data are less clear-cut than for diarrhea, both protein-rich colostrum and regular breastmilk contain substances that protect infants against measles and a variety of other ailments. One study in Brazil, for example, found that children who were not breastfed had more than three times the risk of dying from respiratory infections before their first birthday than children who were fed only breastmilk. A study in Peru found that infants who continued to breastfeed had fewer skin infections than those who did not. One in Indonesia and others in the United States documented lower rates of middle ear infection. Recent research also shows that colostrum enhances an infant's immune response to the BCG tuberculosis vaccine given at birth. Indeed, the benefits of breastfeeding are so great that WHO recommends its continuation even for

infants of HIV-positive mothers, despite some indications that the AIDS-producing HIV virus can, in rare instances, be transmitted through breastmilk.

### Child Spacing

The contraceptive effect of breastfeeding (lactational amenorrhea), which comes from frequent suckling, is a health measure of far-reaching importance. Research suggests that if all births were at least two years apart, infant mortality rates would drop by 10 percent. (See Figure 7 for data on four developing countries.) Surviving children would also benefit. An older sibling is one-and-a-half times more likely to die if another child is born within two years of his or her birth. Children born in quick succession tend to be smaller and weigh less than children of sufficiently spaced births. Figure 8 illustrates the important relationship between lactational amenorrhea and birth interval.

**Figure 8: Relationship Between Lactational Amenorrhea and Birth Interval**



Source: Saadeh, R. and Benbouzid, D., Bulletin of the WHO, July, 1990 (forthcoming).

Without breastfeeding, ovulation resumes, on average, about two months after delivery, increasing the chances that another child will be born within two years, with attendant health risks to mother and child. With exclusive breastfeeding on demand, however, women have 98 percent protection from pregnancy in the first six months, if menstruation has not returned. Even partial breastfeeding can have some contraceptive effect for up to two years after childbirth. In 1988, in Bellagio, Italy, a meeting of international scientists which was organized by Family Health International (a North Carolina-based research institution) with support from WHO and the Rockefeller Foundation, concluded that lactational amenorrhea is "an appropriate method of fertility regulation for

many women.... particularly when other family planning methods are not readily available or desired."

### Maternal Health

Because suckling hastens contraction of the uterus, women who breastfeed their babies at birth are less likely to hemorrhage or retain the placenta--life-saving considerations where sophisticated health services are not immediately available. Breastfeeding may also lower the lifetime risk of breast and ovarian cancer. By inhibiting the return of menstruation, breastfeeding also allows women to build up their stores of iron and alleviate anemia.

However, adequate food intake and child spacing are essential to maintaining women's health and nutritional status. Although almost all women can breastfeed successfully, severely malnourished women lose important nutrients and fat in the process, particularly if another pregnancy occurs while breastfeeding continues.

Some of these relationships have been elucidated by research undertaken through a competitive grants program managed by the International Center for Research on Women with support from A.I.D.'s Offices of Nutrition and Health. Researchers in Bangladesh and the Philippines, for example, studied the relationships between lactation, dietary intake, and mothers' nutritional status. A study in Guatemala documented maternal (but not fetal) depletion when breastfeeding took place concurrent with pregnancy, as it had for 50 percent of the 509 women studied. The study concluded that women need a recuperative interval when they are neither pregnant nor lactating, and this is best achieved through family planning.

*Other health benefits conferred by breastfeeding range from mother/infant bonding to fewer dental caries, reduced tooth malocclusion, and protection against hypothermia and allergies in children.*

# Chapter 4

## *Promoting Breastfeeding — A Decade of A.I.D. Experience*

---

---

Until relatively recently, breastfeeding was declining in industrial countries even faster than in developing ones. Today, however, the trend is toward increased breastfeeding among women in industrialized countries; the more women know about the advantages of breastfeeding, the more likely they are to breastfeed. A.I.D.'s experience indicates that, given a supportive environment, many more women in developing countries will also breastfeed more effectively.

Beginning in 1979, A.I.D.'s Office of Nutrition undertook a series of activities under its 10-year, \$20-million Nutrition: Improvement of the Maternal and Infant Diet project (commonly known as the Maternal and Infant Nutrition project) to identify ways to enhance the environment for breastfeeding. Several key interventions were successfully tested under that project, among them applied research, hospital reform, training of health care professionals, and outreach to women through social marketing as well as community support. Other projects administered by the offices of Health, Nutrition, and Population explored these and other approaches. The underlying premises of all these projects were that (1) appropriate breastfeeding is a skill which needs to be taught, (2) early initiation is critical to obtaining the maximum benefits from breastfeeding, and (3) the techniques used to promote other child survival interventions are applicable to breastfeeding as well.

---

### **Applied Research**

---

Almost all A.I.D. projects begin with research of some sort, to clarify local determinants of infant feeding, develop and adapt technologies, determine baseline status, and so on. The four-country study described earlier, for example, found that a "surprising" number of deliveries had taken place in health institutions, even in provincial Semarang. This finding pointed directly to the importance of hospital reform (see below) as an intervention to protect and promote breastfeeding.

The Manoff Group, Inc. and the Academy for Educational Development, which participate in several A.I.D. projects, have been particularly active in undertaking research on knowledge, attitudes and practices (often called KAP studies) among target groups. To date, KAP studies relating to breastfeeding and weaning practices have been carried out in Indonesia, Ecuador, Cameroon, Swaziland, Ghana, Zaire, Mali, Niger, Sudan, Jordan, Paraguay, India and the Dominican Republic. These studies revealed, among other things, a strong resistance to giving colostrum to newborns in country after country, numerous folk beliefs that inhibit or enhance effective breastfeeding, and a tendency of mothers to stop breastfeeding relatively soon after giving birth because they perceive their milk to be drying up and their babies dissatisfied. The

**Box 2: Breastfeeding Guidelines for Optimal Child Survival and Child Spacing**

- Begin breastfeeding as soon as possible, preferably within the first hour after the child is born.
- Breastfeed whenever the infant is hungry, both day and night.
- Breastfeed exclusively through 4-6 months.
- Begin appropriate complementary, semi-solid foods after 4-6 months of age, but continue to offer the breast first.
- Continue to breastfeed, even if mother or baby becomes ill.
- Position the infant so that its mouth covers both nipple and areola and latches on properly.
- Avoid using bottles, pacifiers (dummies), or other nipples.
- Eat and drink enough to satisfy mother's hunger.

*Adapted from Guidelines for Breastfeeding in Family Planning and Child Survival Programs, Institute for International Studies in Natural Family Planning.*

projects' research protocol — which calls for a literature review, household interviews and observation, focus-group discussions, and intervention trials — can be adapted to any country setting. The results provide a basis for selecting specific project priorities and determining what behavioral changes are needed and feasible.

Early A.I.D.-assisted investigations were funded by the Office of Nutrition to study the nutritional and behavioral aspects of breastfeeding. The bulk of recent A.I.D.-assisted breastfeeding research has been undertaken in the context of its family-planning effect, with funding from the Office of Population. Thus, Family Health International is conducting biomedical research to clarify the relationship between breastfeeding and lactational infertility, as well as long-term clinical trials to accurately measure the effectiveness of lactational amenorrhea as a family planning method. The Population

Council has investigated the effects of breastfeeding promotion on breastfeeding rates and incidence of diarrheal disease in Peru, and the Georgetown Institute (see below) undertook a study in Mexico which will follow mothers for six months after discharge from hospitals whose staffs have been trained in modern lactation management. Other research-oriented activities are still in the planning stage.

The Institute for International Studies in Natural Family Planning, located at Georgetown University, is likely to have a major impact on breastfeeding research. Under its newly reorganized and strengthened Breastfeeding Division, the Institute is orchestrating international agreement on a common vocabulary for researchers and programmers, along with guidelines for breastfeeding promotion in various types of programs, including family planning services (see Box 2). For example, its definitional framework distinguishes among high (over 80% of infant feeds from breastmilk), medium, and low partial breastfeeding and between exclusive and almost exclusive breastfeeding. Until now, the comparability and consistency of breastfeeding research has been greatly curtailed by a lack of definitional consistency, thus complicating the task of those who want to draw policy and programmatic inferences from research results.

### Data Collection and Information Exchange

A.I.D. has been supporting the Demographic and Health Surveys project, successor to the World Fertility Surveys, since 1984. Over the years, this project has evolved as a major source of information on national child health and nutrition patterns, in addition to its wealth of demographic data. Representative surveys in 29 countries to date have produced basic fertility and breastfeeding data confirming the prevalence of partial breastfeeding in most areas. Phase II of the project began in 1989 and will include up to 25 new country surveys, depending on support from A.I.D. field missions. These surveys will document breastfeeding patterns in far greater detail. A dozen new questions have

been added to the standard survey in order to measure breastfeeding trends over time.

In order to make the results of A.I.D.-funded and other activities widely available, the Office of Nutrition has supported a Global Clearinghouse on Infant Feeding and Maternal Nutrition since 1979. This clearinghouse, housed at the American Public Health Association, is one of the largest repositories of breastfeeding and related information in the world. It has over 9,000 documents and is fully automated. By 1988, the Clearinghouse was answering more than 1,300 requests a year for searches of its database, photocopies of articles, bibliographies, referrals and workshop/conference information packets. The Clearinghouse also publishes a newsletter, *Mothers and Children*, three times a year in French, Spanish and English, with a circulation of 29,000, largely in the developing world.

Various other A.I.D. projects have organized or participated in conferences, workshops, and seminars to hasten the exchange of up-to-date information. For example, last November consultants from PRITECH, a project of the Office of Health, participated in a series of six Child Survival Seminars designed to sensitize and provide scientific information on breastfeeding to health professionals in Pakistan, preparatory to formulation of a national plan of action to promote breastfeeding. A.I.D.'s Asia/Near East Bureau supported a Wellstart-managed (see below) Asian Regional Lactation Management Workshop and related activities on Bali, Indonesia, in 1988. At the international level, Georgetown's Institute is the acting Secretariat for the informal Inter-agency Group for Action on Breastfeeding (IGAB), which includes staff members from A.I.D., WHO, UNICEF, and other donors. This group has been drafting an international plan of action for "breastfeeding in the 1990s," for consideration by senior policymakers at a forthcoming meeting in Italy.

---

### Hospital Reform

---

One of the first and best places to begin changing breastfeeding practices is in the

hospitals that deliver a growing percentage of babies in developing societies. Unfortunately, the prevailing culture in these hospitals often inhibits breastfeeding. Babies are separated from their mothers at birth and placed in nurseries, their first food is often glucose water given by a nurse, infant formulas are commonly available, feeding schedules are rigid, and mothers are ignored by busy hospital personnel. Few doctors, nurses and administrators have been trained in lactation management, and many believe that their established routines represent the best in modern technology. As the most visible and well-respected members of the health professions, their views tend to be reflected throughout the health care system and even in the traditional sector.

The Wellstart Program, one element of the Nutrition: Improvement of the Maternal and Infant Diet Project, has developed a very effective system for turning this situation around. Since 1983, it has offered a four-week, classroom-cum-practical lactation management course at its headquarters in San Diego to teams of doctors, nurses, and nutritionists from teaching hospitals in developing countries. The program is a continuation and expansion of one already proven effective among U.S. health professionals. By 1990, over 220 individuals working in 55 hospitals accounting for almost 300,000 births a year in 21 developing countries had completed the San Diego course, which is given in both English and Spanish. A French-language course, for teams from Africa and other francophonic countries, is being developed.

As part of the course, participating teams develop plans for promoting modern lactation management in their home institutions. Most have organized courses and seminars for health providers at various levels. Some have set up education centers or demonstration clinics. In Egypt, alumni established four urban lactation clinics and started a "flying lactation management team" to service hard-to-reach areas. In Uganda, alumni started the first lactation clinic in Africa. In Bolivia, the 18 Wellstart graduates have started a breastfeeding resource center at the National Children's Hospital in La Paz and are conducting a breastfeeding survey in addition to

training other professionals. Some alumni have helped write breastfeeding protocols and infant feeding codes. And all have encouraged their hospitals to try new practices.

The results are nothing short of remarkable. In a preliminary review of 34 early responses to a survey sent to 180 Wellstart participants in February 1989, 80 percent of the 24 hospitals represented in the response had established full rooming-in (which keeps mother and infant together to encourage bonding and establishment of breastfeeding), and two-thirds had developed lactation clinics for service and teaching. A survey of 15 hospitals in Southeast Asia where health personnel implemented Wellstart principles showed that routine bottle feeding had declined from 79 percent to 14 percent and the average time between delivery and first breastfeeding had dropped from almost 8 hours to 1.2 hours. Exclusive breastfeeding

at discharge had gone from 63 percent to 91 percent. Table 1 illustrates the change.

Rooming-in and intensified breastfeeding programs can significantly decrease morbidity and mortality, even in the short time the babies remain in the hospital after delivery. For example, participating hospitals in Southeast Asia, which account for close to 100,000 births a year, report that infant mortality from infectious diseases declined 63 percent and infant morbidity dropped 87 percent within six months after improved lactation management practices were implemented. In Sanglah Hospital in Bali, diarrhea in newborns had decreased from 4.2% to 0.6%; neonatal sepsis from 3.3% to 0.9%, meningitis from 1.3% to 0.2%, and acute ear infection from 11.1% to 0.9%. Figure 9 illustrates the dramatic decline in the incidence of diarrhea in hospitals. Furthermore, hospital stays for normal deliveries had been cut in half, and those of C-section mothers from seven days to five.

The hospitals benefit as much as the women and children. The need for IV fluids, bottle feeds and bassinets goes down. Nursery staffs are freed up for other, more urgent tasks. Nursery space can be reallocated. Dr. Ricardo Gonzales, Medical Director at Dr. Jose Fabella Memorial Hospital in Manila, has calculated that it would take a full 8 percent of his hospital's budget — 6.5 million pesos, or \$310,000, a year — if the hospital were to revert to a full-scale nursery.

One measure of the program's success is that Wellstart principles have been adopted for public hospitals nationwide by ministries of health in Thailand, the Philippines, Indonesia, Bolivia, Honduras, and for most maternity hospitals in Egypt. Colombia has sent teams to Wellstart from every province, preparatory to implementing hospital reforms nationwide. In Thailand, the training program is now supported primarily from local government funds, with facilities donated by the Mahidol University Medical School. Another measure of the program's success is that Wellstart cannot handle all the requests it receives for training and technical assistance under its A.I.D. contract.



Wellstart has been working to end routine bottle feeding of newborns by hospital nurses.

Photo by Wellstart

**Table 1: Effects of Hospital Changes as a Result of Wellstart Training: Southeast Asian Experience, May-June, 1988**

Number of Hospitals: 15  
 Total Annual Deliveries: 94,948

	Prior to Participation in Wellstart Program	After Participation in Wellstart Program
Average Age in Hours at First Breastfeeding*	7.9	1.2
Percentage of Deliveries Exclusively Breastfeeding at Discharge*		
- Vaginal	63%	91%
- C-section	51%	85%
Percentage of Hospitals with a Breastfeeding Committee	40%	100%
Percentage of Hospitals with a Special Breastfeeding Counselor/Consultant	0%	93%
Percentage of Hospitals in which Breastfed Infants Routinely Receive Additional Supplements	79%	14%
Percentage of Hospitals in which Infants Receive a Bottle Feeding Before the First Breastfeeding	70%	0%

\*Weighted by average number of annual deliveries.

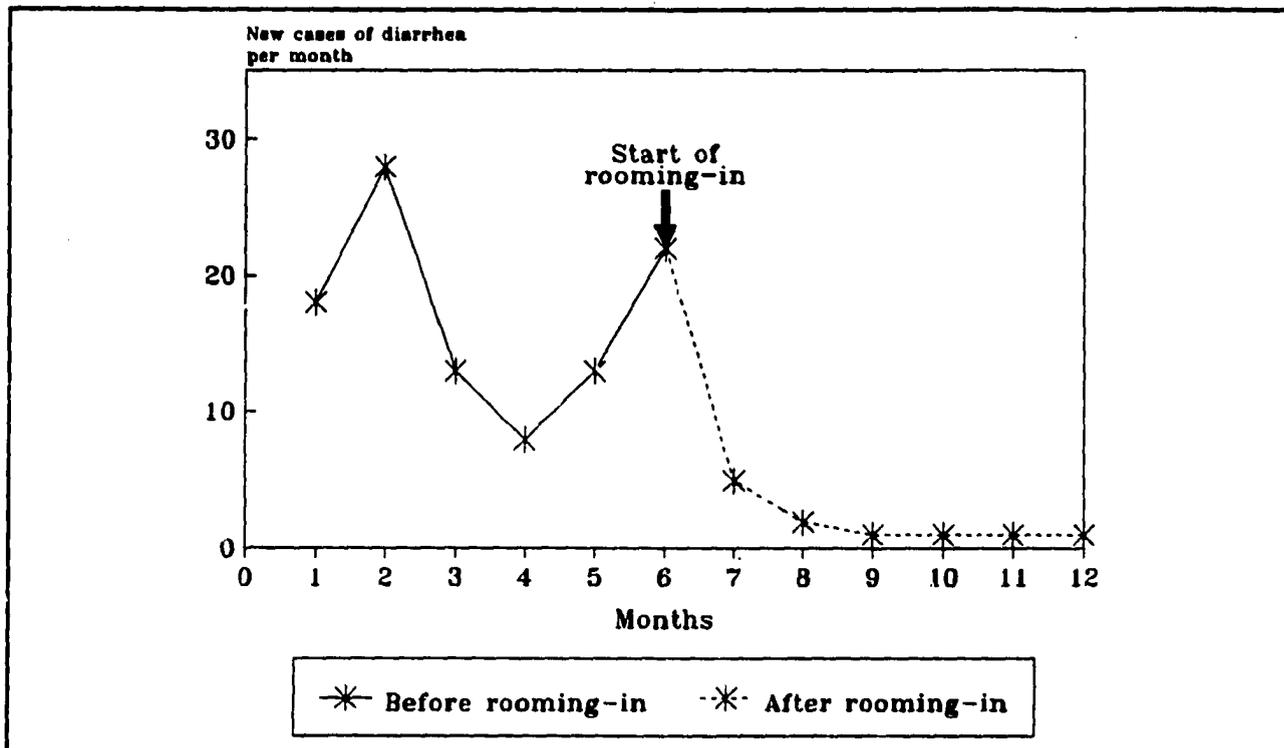
Source: Wellstart, 1989

Perhaps the best-documented evidence of Wellstart-inspired change is from the PROALMA project in Honduras. This project ran for six years, from December 1982 to December 1988. Like those discussed earlier, it began with team training at San Diego and concentrated on changing the hospital environment. Starting with three hospitals and one health center in 1982-84, the PROALMA-II program spread nationwide. Between 1981 and 1987, breastfeeding incidence and duration increased significantly in Honduras, particularly in urban areas, and major improvements in knowledge and attitude of health care professionals were registered. For example, the proportion of those who recommended breastfeeding at birth increased from about 27 percent to 87 percent, and those who stated that bottles should never be recommended for infants from low-income families increased from less than 20 percent among

all health professionals to 63 percent of doctors and 80 percent of nurses. Various A.I.D. evaluations have given PROALMA much of the credit for these changes. In addition, longer duration of postpartum amenorrhea and increased use of family planning among women who received coordinated education and services were documented in a separate PROALMA-II project conducted by the Population Council in cooperation with the Social Security hospital in San Pedro Sula.

Estimated savings at the first three PROALMA hospitals, just from decreased use of glucose solutions, infant formulas, baby bottles, and the like, amounted to almost \$200,000 over the first two and a half years of the project — or more than half of the total project costs. These estimates do not include savings on staff or overhead. Nor do they take into account the savings to families,

**Figure 9: Incidence of Diarrhea in Relation to the Introduction of Rooming-in at an Indonesian Hospital following Wellstart Training**



Source: Soetjijingsih and Suraatmaja, *Paediatrica Indonesiana* 26: 229-35, 1986.

the improvements in nutritional status of infants, or the reductions in illness also observed in the project.

As successful as these hospital-reform projects are, however, they cannot, by themselves, accomplish the goal of promoting exclusive breastfeeding throughout developing societies. Even within the health care sector, private hospitals, particularly those catering to higher-income groups, are slower to change than public ones. Rural women in many countries deliver their babies at home, without contact with the modern health care system. Furthermore, it is not known how long women continue exclusive breastfeeding after discharge from Wellstart-type hospital facilities; several studies suggest that the dropoff may be quite dramatic after a few weeks, especially in urban and peri-urban areas where women work in the formal sector and traditional family support networks have broken down. Significantly, only 6 percent of Honduran infants are still being fed *solely* with breastmilk by the time they are 3-4 months

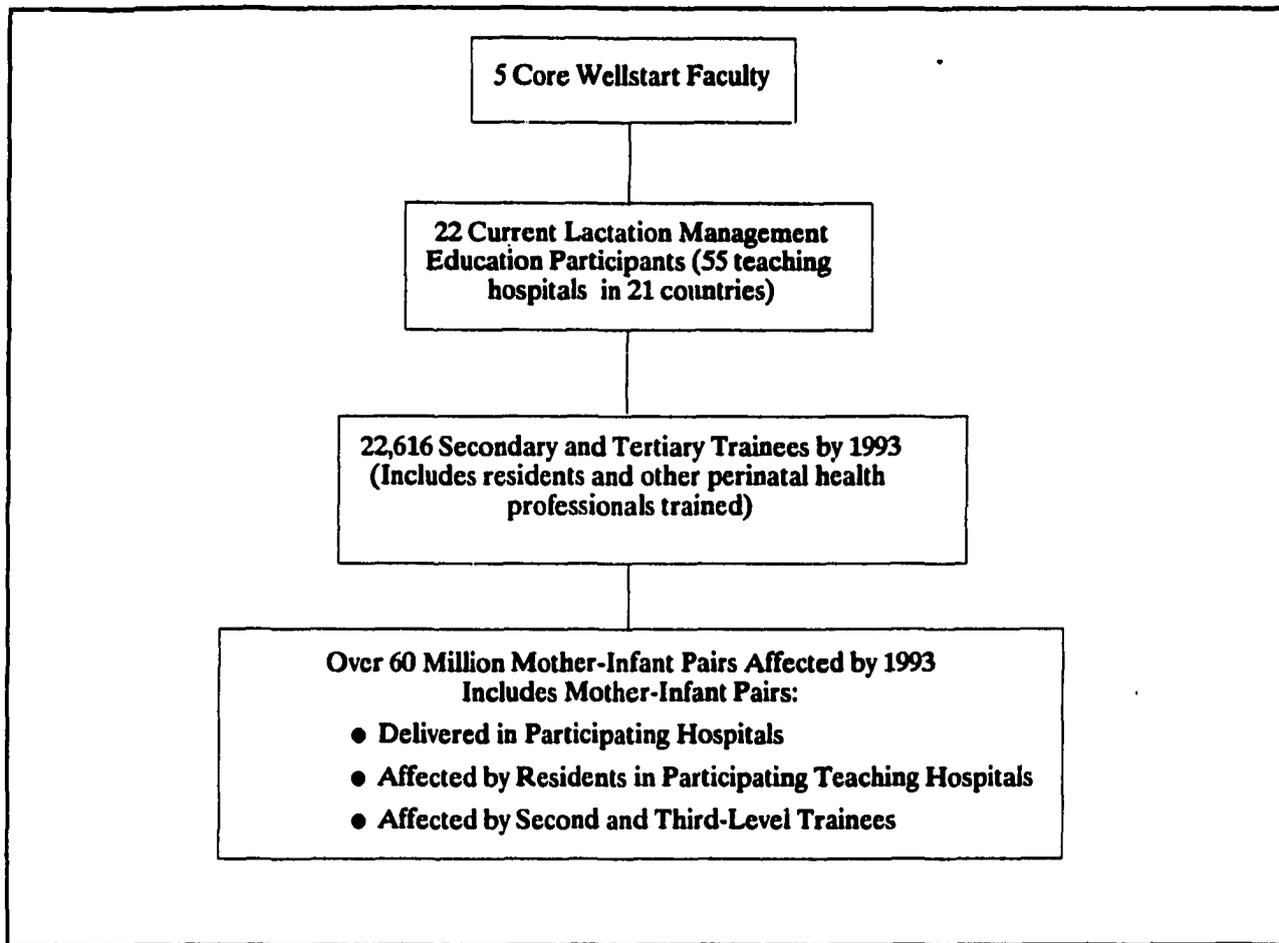
old, even though the overall incidence of breastfeeding in Honduras has increased.

### Training and Curriculum Development

Much of A.I.D.'s effort in relation to breastfeeding, as in other areas, goes to support training at all levels of the health care system. Such training is essential if project impact is to spread beyond the relatively small numbers affected to date.

The Wellstart program has a built-in multiplier effect. Each team leaves the course with an adaptable resource kit of videos, slides, books, reprints, teaching materials, and even demonstration dolls. This mini-resource center permits the team to function effectively as a training unit almost immediately after returning home. Further support comes in the form of an alumni newsletter and reprints of important articles. Where re-

**Figure 10: Multiplier Effect of Wellstart Program over a 10-Year Period**



Source: Wellstart, 1989

quested, Wellstart staff visit to provide continuing education and technical assistance.

Starting with training of professionals in their own hospitals, Wellstart-trained teams generally branch out to health providers in other hospitals and teaching centers. In Egypt, by the end of 1989, alumni had developed an ongoing teaching program for 2,500 newly graduated physicians, 5,000 nurses and midwives, and 600 social workers. The Indonesian Ministry of Health used Wellstart alumni to train teams from ten district hospitals. In Kenya, graduates organized a series of one- and two-week workshops/seminars that reached health workers from all parts of the country. In several countries, they helped re-write nursing and medical curricula. In some cases, training has gone beyond the for-

mal health system. Thus, Wellstart graduates have trained traditional birth attendants (in Indonesia) and mothers (in Thailand) as community lactation counselors/promoters.

Recently, the Wellstart staff estimated that, by 1993, more than 22,000 health care providers would have received "echo" training from returned participants. In turn, well over 60 million mother-infant pairs would have benefitted from improved care (see Figure 10). From A.I.D.'s point of view, this built-in multiplier effect renders the \$3.3 million spent on the Wellstart program to date highly cost-effective. In the Philippines, for example, Wellstart-induced changes will have affected an estimated 7.4 million mother/baby pairs by 1993 — at a cost of \$.06 per pair.



Health workers help new mother establish good breastfeeding practices in Philippines hospital.

Photo by Mary Ann Maglipon/UNICEF

Wellstart is the major, but not the only, source of A.I.D.-assisted training and curriculum reform. In 1989, for example, the Georgetown Institute hosted a Pan American Breastfeeding Seminar for Nursing Faculty, which brought together 25 deans of nursing schools and other participants from 11 countries. By the end of one very intense week, the group had delineated the unit content, objectives, and evaluation criteria for a breastfeeding teaching module that can be integrated into nursing-school curricula throughout Latin America. The A.I.D.-funded MEDEX program, which sent two Costa Rican nurses to the Seminar, has already decided to use part of the curriculum in the nurses' training that it is undertaking through the Ministry of Social Services in Costa Rica. Also, through the Peru Breastfeeding Project, the Asociacion Peru-Mujer developed a breastfeeding guide for health workers, 2000 copies of which were distributed through A.I.D. missions in Peru, Bolivia, Ecuador and Colombia.

---

### Communication and Social Marketing

---

A.I.D. took an early lead in exploring the use of mass media and other means of communication to promote oral rehydration therapy (ORT), family planning, nutrition, and other elements of the child survival program. Some of these programs, especially those for ORT and child nutrition, incorporated promotional messages on breastfeeding. But, except for the International Nutrition Communication Service (a 1979-86 component of the Improvement of the Maternal and Infant Diet Project, managed by the Education Development Center (1979-1986)), many fewer focused specifically on giving mothers the knowledge and skills they need to breastfeed effectively or on making health-care, home, and work environments more conducive to breastfeeding.

The Weaning Project (Manoff Group) has effectively used social marketing to promote breastfeeding in the context of improved child feeding. It utilized a social marketing ap-

proach, which emphasized problem identification (see earlier section on applied research) and carefully tailored messages that reflect an understanding of the societies to which they are directed. For example, the Indonesian nutrition/weaning promotion campaign was built around Ibu Gizi (Mrs. Nutrition), a wise, mature, modern mother figure whose picture appeared on all printed material and voice on all radio spots. The Weaning Project has developed an adaptable set of counseling cards to act as audiovisual aids for health workers in training sub-sets of mothers (mothers of newborns, of sick or convalescing children, etc.). To ensure efficacy, social marketing messages were generally developed with the collaboration of local nutritionists, private voluntary organizations, private-sector advertising agencies, and the like. In Indonesia, under a pilot project run by PATH, an A.I.D. contractor, key breastmilk and supplementary feeding messages were actually piggybacked onto selected health and consumer product ads and promotional material, with sponsoring firms (e.g., Merck) assuming the costs of production, printing, and distribution through local commercial channels.

The Nutrition Education and Social Marketing Field Support Project (commonly called the Nutrition Communication Project), administered by the Academy for Educational Development (AED), has recently completed a major review entitled *Media Promotion of Breastfeeding: A Decade's Experience*. This report concludes that "general messages proclaiming the benefits of breastfeeding are not effective, since they do not address the major impediments to optimal breastfeeding practice." It urges support for sustained and carefully targeted promotion campaigns which include a strong element of personal contact. The project has also produced a sampling of breastfeeding promotion material for distribution throughout the Latin America/Caribbean region. In Africa (Mali and Niger), it is testing several communication interventions, including motivating men to be supportive of their wives.

The Academy for Educational Development also manages HEALTHCOM, a project of the Office of Health which has worked in Paraguay and Jordan to help launch

breastfeeding promotion programs. In Paraguay, it helped the Ministry of Health and a private advertising agency to produce the country's first radio and TV campaign to encourage breastfeeding; the program is now concentrating on promoting change in hospital practices. In Jordan, with support from the Ministry of Health and the Noor Al Hussein Foundation, the HEALTHCOM project has also helped to mount a national campaign which features TV and radio spots along with print and audiovisual material. The campaign stresses three messages: initiation of breastfeeding immediately after birth; delay of all supplements until after 4-6 months; and frequent and intensive suckling.

The Jordanian messages aired for three months in 1989, with a second round projected for 1990. An early test indicated that 80 percent of mothers of childbearing age recalled a majority of the messages correctly. It is too soon to tell whether the campaign will actually change breastfeeding practices, however. Early successes are easily eroded. Thus, the AED review reports that breastfeeding prevalence in Brazil — after having risen by 20 percent in the early 1980s following an intensive media campaign, establishment of support groups, and other activities — dropped back almost to pre-campaign levels after the program was suspended in 1985.

---

### Mother-to-Mother Support

---

The various A.I.D.-assisted communication projects have all emphasized the importance of face-to-face communication in the promotion and protection of breastfeeding — contact between nurse or community health worker and mother, between midwife and mother, between friends and family, and, above all, between mother and mother.

In the U.S., mutual self-help groups, which often substitute for traditional support systems, were important factors in reversing attitudes toward breastfeeding. The oldest and most prominent of these is La Leche League, which was started by a group of suburban women near Chicago in 1956, and has since spread to many countries around the globe.

The League operates primarily through small group meetings of pregnant women and new mothers; these meetings are led by trained volunteers and complemented by newsletters, referrals, a telephone "hot-line," and hospital visits to new mothers by League volunteers. The enthusiastic volunteers tout the benefits of breastfeeding, teach women to cope with common breastfeeding problems such as engorgement or sore nipples, and encourage working mothers to express and store their milk rather than use breastmilk substitutes.

Now, with support from A.I.D.'s Bureau of Food for Peace and Voluntary Assistance, La Leche League is applying its mother-to-mother techniques in Guatemala and Honduras. Whereas the group has attracted primarily middle-income women in the past, it is now reaching out to disadvantaged women in less well-organized communities. Whereas it has operated mainly in urban and institutional settings, it is now adapting its approach to semi-urban and rural community settings. Whereas it has focused exclusively on

breastfeeding promotion, it is now equipping its volunteers to be able to answer mothers' questions on other child survival interventions, such as ORT. Seven Breastfeeding Mother Support Groups are already operating in Honduras (out of a projected 30 by mid-1991); each is conducted by a League-trained and -certified Breastfeeding Advocate who encourages effective breastfeeding, instills confidence, and corrects misconceptions. The project in Guatemala will be similar. Under the Natural Family Planning Project, the League will also work to link breastfeeding promotion programs with family planning services in Honduras. League leaders believe they could play a key role in educating community workers from other PVOs on the values and practicalities of breastfeeding in order to ensure that mothers receive consistent messages.

An earlier project in El Salvador — the Center for Maternal Lactation, known as CALMA — was also started by League volunteers, some of them expatriates who had par-



Mother-to-mother support group in Brazil  
Photo by Alagoas State Health Department, Brazil



Contrasting infant feeding styles in a health center waiting room in Togo

Photo by Bernard Wolff/UNICEF

ticipated in League activities in the U.S. Since its beginning in 1979, CALMA has undertaken an ambitious program, first as a branch of La Leche League, later as a wholly indigenous and autonomous private voluntary organization. Two A.I.D. grants between 1979 and 1986, totalling \$762,000, have accounted for most of CALMA's support, but the second grant was awarded with the understanding that CALMA become self-sustaining within three years.

By 1988, CALMA had trained about 8,400 community leaders, nurses, promoters, and others. They in turn had trained about 6,400 "multiplier trainees." Some of these led "satisfied user" breastfeeding support groups

in maternity hospitals. Others taught working mothers how to continue breastfeeding by expressing and storing their milk in advance. (CALMA was also instrumental in starting milk banks at three hospitals, with fifteen more in the planning stage.) A recent A.I.D. evaluation estimated that, by 1989, some 700,000 mothers, fathers and children, or nearly one-sixth of El Salvador's population, had benefitted from CALMA's work. In addition, numerous changes in hospital practice had been registered. CALMA continues in operation, although its future is threatened by the difficulty of fundraising in El Salvador's unsettled conditions.



**This poster from Indonesia urges husbands to be supportive of their wife's breastfeeding.**

**Photo by A.I.D./Indonesian Epidemiology Network**

# Chapter 5

## *Looking Ahead-- The A.I.D. Breastfeeding Strategy*

---

For the most part, due to limited funding, the projects discussed in the previous section were small, and many were demonstrations or experimental in nature. Nonetheless, their results confirm not only that breastfeeding is an important key to child survival, but also that there are proven and cost-effective interventions for its promotion and support.

Over the past year, A.I.D. has developed a *Breastfeeding for Child Survival Strategy* to guide intensification of the Agency's breastfeeding activities. Its action agenda is as follows:

- Assess breastfeeding situation in assisted countries;
- Develop country-specific substrategies;
- Implement appropriate activities, especially within ongoing related programs;
- Continue and expand centrally funded field support;
- Disseminate information on the problem and solutions;
- Support research on breastfeeding.

This strategy seeks to foster breastfeeding by creating an environment of awareness and support so that those women who choose to breastfeed are able to do so. More specifically, the goal of this strategy is to increase the percentage of infants who are: (1) breastfed within one hour of delivery; (2) exclusively breastfed from birth through 4-6 months of age; (3) fed appropriate complementary foods in addition to breastmilk by the end of their sixth month; and (4) breastfed

for one year or longer. This will necessitate a range of activities addressing each stage of the continuum from pregnancy through weaning.

It is envisioned that this effort will be carried out through existing programs, including those for child survival. There will be a significant strengthening of breastfeeding promotion and support within these programs, as well as within centrally funded projects that disseminate information and provide technical assistance and training on breastfeeding practices. A.I.D. will increase activities focused specifically on breastfeeding promotion. To this end, missions are being encouraged to develop country-specific strategies and programs. In El Salvador, for example, the A.I.D. mission provides funding for the Center for Maternal Lactation and a variety of training through other projects, including the new PVO Maternal Health and Child Survival Project. In Bolivia, the mission is particularly interested in studying rural breastfeeding practices and in funding a variety of interventions through existing projects. In Africa, the Nutrition Communication Project will assist A.I.D. missions to assess the local infant feeding situation and to formulate strategies, especially the use of communication activities to improve practices.

The following are some of the approaches expected to receive priority attention. They are based on an examination of A.I.D.'s experience over the past decade as well as an analysis of potentially fruitful new directions.

---

## Policy Dialogue

---

The president of Wellstart, in reflecting on one of the country programs, once wrote:

*"In retrospect, progress might have been more rapid, and troublesome logistical obstacles avoided...if, from the beginning, the support of the highest level policymakers in government and non-government agencies had been enlisted and their understanding of the program assured."*

This is an excellent summation of the reasons why A.I.D. missions and project specialists carry on policy dialogue with cooperating governments. Such dialogues are no less necessary with regard to breastfeeding than for other child survival interventions.

In a few countries, national leaders are already aware and involved in promoting breastfeeding. In Jordan, for example, Queen Noor is sponsoring the A.I.D.-assisted breastfeeding campaign, which was kicked off by a National Seminar on Breastfeeding in October 1988. This significant event brought together more than 100 influential representatives of all segments of the Jordanian community and has been termed "a milestone" in Jordan's programming for breastfeeding. The A.I.D.-assisted Panama National Breastfeeding Program also featured advocacy among policymakers at the national level, as does one element of the Georgetown Institute's program. A.I.D. will intensify its search for more such opportunities in the future.

---

## International Collaboration

---

The year 1990 promises to be a watershed for action on breastfeeding. Not only has A.I.D. embarked on an intensification of its own activities in this sector, but UNICEF, WHO and others are also reassessing the breastfeeding components of their programs and formulating strategies for the 1990s. WHO and UNICEF have already issued guidelines on the *...Special Role of Maternity Services* in supporting breastfeeding, and they are continuing to monitor the promotion and

distribution of breastmilk substitutes in developing countries. Both agencies will strengthen their breastfeeding programming, much of which complements that of A.I.D. All the donors are aware of the need to coordinate their programs for maximum impact.

The directors of WHO and UNICEF have now called a small, high-level meeting on breastfeeding of government and international representatives, to be held in Florence, Italy in 1990. A.I.D. is co-sponsoring the meeting and is actively involved in preparation and setting the agenda. The meeting is being organized by the Interagency Group for Action on Breastfeeding (see page 15), which is serving as secretariat and coordinator. The goal of the meeting will be to finalize and ratify an international call for action for nations and donors to improve breastfeeding practices. As the sponsors have noted in their letter of invitation to donor agency heads, "breastfeeding is important enough to deserve its own focus and identity."

---

## Quantifying the Economic Benefits of Breastfeeding

---

Breastfeeding clearly saves scarce economic resources at the national, institutional, and household levels. But the specifics of these savings have never been collected and organized so as to be useful to decisionmakers. In an attempt to remedy this gap, A.I.D.'s Bureau for Program and Policy Coordination has contracted with the Center to Prevent Childhood Malnutrition to prepare a comprehensive review of current research on the costs and savings of breastfeeding in the developing world. The review will include a "workbook" for estimating the economic value of breastfeeding in any given setting.

Within specific institutions, the Wellstart program has already demonstrated the direct and indirect savings that accrue to the formal health care sector when good breastfeeding practices are promoted (see e.g., page 17). For families, too, there are savings. Bottles and breastmilk substitutes, plus preparation



Photo by the Academy for Educational Development

and storage costs, not only cost as much as several hundred dollars per infant per year — more than many poor families earn — but they also lead to higher expenditures of time and money on maternal and infant health care.

But hospital-based and family savings are not the only items that should be counted to arrive at a full assessment of breastfeeding's economic value. Benefits also accrue at the national level. For example, it should be possible to quantify the value of the tons of milk that mothers produce each year, which, unlike other foods, do not figure in national accounts. Insofar as breastmilk substitutes do not need to be imported, governments can save scarce foreign exchange. Honduras, for example, imported an annual average of 4.6% fewer breastmilk substitutes (powdered milk and infant formula, neither of which is manufactured domestically) in 1982-87 than it had, on average, over the two years pre-

vious, despite the fact that population growth and increased urbanization would have suggested an increase in imports. The PROALMA Project (see page 17) was given credit for at least some of the resulting savings in foreign exchange. Insofar as the government does not have to clean up discarded packaging, there are further savings and environmental benefits to be had. In addition, one must consider the avoided costs of importing contraceptives, which would be needed to maintain existing fertility rates if breastfeeding were to decline.

---

### Training of Health Care Professionals

---

Training of health providers, and associated reform of hospital procedures, remains one of the most tested and cost-effective ways to encourage appropriate breastfeeding practices throughout the health care system. Thus, A.I.D. expects to continue and expand its support for the highly successful Wellstart program under the Office of Nutrition's new, ten-year, \$25 million-plus Women's and Infants' Nutrition: A Family Focus (WIN) project, which began in fiscal year 1989. Additional training will be available through such projects as the Office of Health's NurseCare (run by the MEDEX Group of Hawaii University), which supports curriculum reform and provides pre- and in-service training for nurses, and through Georgetown's Natural Family Planning Project. Starting in the summer of 1990, the Family Health Services Project in El Salvador will train 1,000 rural workers, 50 doctors and 100 nurses in the benefits of breastfeeding. UNICEF also expects to undertake a major expansion of its programs for training health professionals.

---

### Community-Based Activities

---

The greatest disadvantage of hospital-based programs is that they fail to reach out to the many women, especially in Africa, who do not have regular contact with a formal health care system. For this reason, A.I.D. expects to greatly strengthen its support for breastfeeding activities in community-based

programs that emphasize primary health care, training of traditional health providers, and community self-help. Private voluntary organizations (PVOs) like Save the Children, CARE, World Vision International, and Foster Parents Plan, as well as the U.S. Peace Corps, have been particularly active in this area, often with support from A.I.D. They have tended, however, to focus on the weaning end of the breastfeeding continuum. Now they will be urged to incorporate promotion of optimum breastfeeding into their activities. In addition, A.I.D. will continue its links to U.S.-based and indigenous PVOs devoted to breastfeeding promotion and support. One component of the Office of Nutrition's WIN Project will provide field support and technical assistance to missions and countries to ensure sound breastfeeding practices.

A.I.D. also supports many government-sponsored primary health care and family planning programs with networks of community workers, promoters, and midwives in rural villages and towns. Under its new contract, Wellstart will help to start centers in developing countries to train these workers, as well as traditional birth attendants. The new five-year, \$13.5 million MotherCare (Maternal and Neonatal Health and Nutrition) Project, of the Office of Health, managed by John Snow, Inc., is also expected to include substantial promotion of breastfeeding through community-based systems for prenatal and delivery care. Sub-contractors for the MotherCare Project include many experienced professionals in the field of breastfeeding promotion and support, and they will be available to help A.I.D. missions as well as governments to assess breastfeeding trends and formulate breastfeeding strategies.

---

### Maternal Nutrition

---

The realities of life in most developing countries are that women work hard and long, even through multiple pregnancies. It is thus important that A.I.D. support maternal health and nutrition as part of its effort to promote breastfeeding. Ideally, successful lactation depends on fat reserves built up by

the mother during pregnancy. If these are inadequate, breastfeeding may lead to excessive maternal weight loss and draw down other nutrient reserves needed by the mother. If another pregnancy occurs while breastfeeding continues, the burden on a woman's body is greater still. Her new baby, too, may well be underweight at birth.

A.I.D.'s new MotherCare Project is designed in part to confront the problem of malnourishment among pregnant and breastfeeding women by improving pre- and postnatal care, including dietary advice and supplementation. One component of the WIN project will target adolescent girls and reproductive-age women, in order to improve nutrition *before* pregnancy. Potentially, P.L. 480 Title II food aid can also make an important contribution. Most Title II maternal and child health programs have emphasized food supplementation for young children. But attention is beginning to turn to supplementation for underweight pregnant women, to benefit the women themselves as well as their newborns. A study of the A.I.D.-assisted Integrated Child Development Services program in India found that routine supplementary feeding of such women resulted in a half-pound increase in infant weight, a two-thirds reduction in the risk of severe infant malnutrition (compared to infants in a control group), and, it is believed, an increased ability of mothers to exclusively breastfeed adequately through 6 months.

*Other activities* that will continue are operations research, information exchange, social marketing, and investigation of lactational amenorrhea as a family planning method. A special effort will be made to enhance programming in rural areas, especially in Africa, where most mothers deliver their babies at home.

There are still many aspects of breastfeeding that remain to be clarified. One of the most important is when and why women decide to breastfeed. Another is the most effective point for adding other family planning methods to breastfeeding (estrogen-containing oral contraceptive pills are not recommended), in view of the great variation in fertility return among individual women. Clinical problems of breastfeeding mothers in



**Breastfeeding programs must continue to be strengthened so that all mothers who choose to do so can breastfeed successfully.**

Photo by Maggie Murray-Lee/UNICEF

developing countries are not well documented, nor is the "insufficient milk syndrome," which could have multiple biological and psychological causes. Little information exists on breastfeeding patterns in working mothers, especially field workers, petty traders and others who do not work in the formal sector. Several researchers have emphasized the need for a new growth chart (used to measure infants' progress in many child survival projects) geared to breastfed

children. Those commonly in use today are based on data from middle-class, bottle-fed infants in the United States, whose growth patterns are known to differ from those of healthy breastfed infants.

Special strategies are needed for helping working mothers to breastfeed, especially those who work in factory or office settings. Breastfeeding and the workplace do not have to be incompatible, but in practical terms they often are. The one A.I.D.-assisted project that included a working-mothers component, the Panama Breastfeeding Promotion Project, found that none of the mothers interviewed had creches at their work sites and 70 percent had no facilities for expressing their milk at work. Seventy percent agreed that it is difficult for working women to breastfeed. These findings point to the need for working with employers and training mothers, along with health professionals, on methods of maintaining breastmilk output when mothers must be separated from their infants for long periods. There is also a need to assess whether enforcement of laws on maternity leave and creches at the work site would lead to increased rates of breastfeeding among working women or, less positively, negatively impact on women's employment.

Perhaps the most critical need at the moment is for field support to A.I.D. missions for strategy formulation, rapid assessment of breastfeeding practices, and project design. This kind of assistance has proved extremely useful in enhancing programming for ORT, family planning, and other child survival interventions. It will be critical with regard to breastfeeding, if field missions are to step up their breastfeeding activities in response to A.I.D.'s new breastfeeding strategy. While there is still much to be done, A.I.D. has accomplished a good deal over the past decade. Never has the Agency been better prepared to rise to the challenge of making optimal breastfeeding practices widespread.

## Appendix A

### A.I.D. Funding for Breastfeeding Activities (Fiscal Year 1989)\* (in \$1,000s)

COUNTRY	PROJECT	BREASTFEEDING OBLIGATIONS					TOTAL PROJECT (FY1989)	
		CSF	HE	ARDN	DFA	POP	Obligations	% for Breastfeeding
Mali	Integrated Family Health Services				27		900	3%
Mali	PVO Co-Financing				9		300	3%
Senegal	Primary Health Care for Child Survival II				20		2000	1%
Swaziland	Primary Health Care				40		800	5%
Togo	Health Sector for Child Survival				8		400	2%
Uganda	Child Survival Grant to World Vision Relief & Development	90					600	15%
Zaire	Basic Rural Health II				25		2500	1%
Zimbabwe	Child Survival Grant to World Vision Relief & Development	8					130	6%
<b>AFRICA REGION SUBTOTAL</b>		<b>98</b>	<b>0</b>	<b>0</b>	<b>129</b>	<b>0</b>	<b>7630</b>	<b>3%</b>
<b>ASIA NEAR EAST REGION</b>								
Indonesia	Child Survival Grant to Save the Children Federation	22					430	5%
Nepal	Integrated Rural Health/Family Planning		30				1500	2%
Pakistan	Child Survival	350					7000	5%
Philippines	Child Survival Program		256				5121	5%
S. Pacific Reg.	SPC Multi-Project Support		20				200	10%
Yemen	Accelerated Cooperation for Child Survival		50				1000	5%
<b>ASIA/NEAR EAST REGION SUBTOTAL</b>		<b>372</b>	<b>356</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15251</b>	<b>5%</b>
<b>LATIN AMERICA AND THE CARIBBEAN</b>								
Belize	Child Survival Support	76					630	12%
Bolivia	Self-Financing Primary Health Care	20					200	10%
Bolivia	Community & Child Health	104	10				2282	5%
Bolivia	OPG: Water & Health Services	23					464	5%
Bolivia	OPG: Child Survival PVO Network	34					677	5%
Bolivia	Child Survival Grant to Food for the Hungry International	25					500	5%
Dom. Republic	OPG: Child Survival	64					642	10%
Ecuador	Child Survival	142					1778	8%
El Salvador	Health Systems Support		74				7352	1%
El Salvador	OPG: Mother Child Feeding		35				70	50%
Guatemala	Expansion of Family Planning Services					3	3694	0.1%
Haiti	OPG: Urban Health & Community Development II		2				80	3%
Haiti	Voluntary Agencies for Child Survival	64	16				2669	3%
Haiti	Expanded Urban Health Services		59				1175	5%
Haiti	Child Survival Grant to World Vision Relief & Development	6					130	5%
Honduras	Health Sector II	89					4465	2%
Jamaica	Population & Family Planning Services					6	403	1%
Peru	OPG: PRISMA Supplemental Feeding	15					150	10%
Peru	OPG: ADRA/OFASA Nutrition & Food for Work	24					140	17%
Peru	OPG: Food Assisted Integrated Development	6					63	10%
<b>LATIN AMERICA/CARIBBEAN SUBTOTAL</b>		<b>692</b>	<b>196</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>27564</b>	<b>3%</b>

GLOBAL PROJECTS	BREASTFEEDING OBLIGATIONS					TOTAL PROJECT (FY1989)	
	CSF	HE	ARDN	DFA	POP	Obligations	% for Breastfeeding
Women & Infants' Nutrition: A Family Focus	202	453				1309	50%
Maternal/Neonatal Health & Nutrition (MotherCare)	238					1585	15%
Improvement of Maternal & Infant Diet	114	135				541	46%
Nutrition Education, Social Marketing Field Support (Nutrition Communication Project)		420	120			900	60%
Communication for Child Survival (HEALTHCOM)	100					2000	5%
Communication & Marketing for Child Survival II (HEALTHCOM II)	23			2		492	5%
Technical Support/Child Survival	88					1104	8%
Demographic & Health Surveys (DHS)	58				200	5600	5%
MEDEX Support		100				1000	10%
CSAP Support	69	20				2967	3%
Technical Advisors in AIDS & Child Survival (TAACS)		28				275	10%
Natural Family Planning (Georgetown Institute)					898	2500	36%
Strategies for Improving Service Delivery					62	6480	1%
Population Communication Services					40	3535	1%
Population Technical Assistance					3	1336	0.2%
Family Planning Training for PAC IIb					108	4855	2%
Population Council Phase II					10	4400	0.2%
Family Health International					193	8067	2%
Training in Reproductive Health (JHPIEGO)					55	5385	1%
<b>GLOBAL SUBTOTAL</b>	<b>892</b>	<b>1156</b>	<b>120</b>	<b>2</b>	<b>1569</b>	<b>54331</b>	<b>7%</b>
<b>TOTAL BY ACCOUNTS</b>	<b>2054</b>	<b>1708</b>	<b>120</b>	<b>131</b>	<b>1578</b>		
<b>GRAND TOTAL FOR BREASTFEEDING = \$5,591,000</b>							

\*Funds were obligated in Fiscal Year 1989 from various accounts: Child Survival Funds (CSF); Health (HE); Agriculture, Rural Development and Nutrition (ARDN); Development Fund for Africa (DFA); and Population (POP). Amounts listed are estimates that can be attributed to breastfeeding. Data were derived from the following: A.I.D. Health Information System, maintained by the Center for International Health Information (CIHI) of the International Science and Technology Institute, Inc.; Population funds from questionnaires sent out by the A.I.D. Office of Population and from the Users Guide to the Office of Population, 1990. The Congressional Presentation, 1991, was used to resolve any inconsistencies.

## Appendix B

### Breastfeeding and Weaning Patterns in Selected Countries From Demographic and Health Surveys, 1986-89 (For Last-Born Living Children)

COUNTRY	Percent of Children 0-4 Months				Percent of Children 7-11 Months			
	(a)* Breastfed Exclusively	(b) Breastfed + Plain Water	(c) Breastfed + Other Foods	(d) Any Breastfeeding	(e)* Breastfed + Solids No Bottle	(f) Breastfed No Solids	(g) Not Breastfed	(h)* % of Children 12-14 mos still Breastfeeding
Morocco	42	17	32	91	43	26	24	68
Tunisia	19	35	42	96	37	22	30	61
Botswana	37	26	33	96	73	12	7	79
Burundi	84	7	9	100	71	23	1	96
Ghana	2	61	37	100	45	36	1	97
Kenya	21	15	62	98	71	7	4	88
Liberia	14	27	57	98	50	23	17	69
Nigeria (Ondo)	1	21	76	98	24	53	7	79
Mali	8	68	23	99	51	44	1	91
Senegal	5	61	33	99	72	19	2	96
Togo	8	25	67	100	84	10	0	95
Uganda	63	6	31	100	74	19	6	90
Zimbabwe	9	39	51	99	88	3	3	90
Indonesia	36	3	57	96	83**	9	8	82
Sri Lanka	12	39	45	96	30	29	16	73
Thailand	4	21	65	90	48	10	24	63
Bolivia	55	4	38	97	39	24	15	71
Brazil (NE)	3	11	57	71	15	9	60	24
Colombia	18	5	63	86	13	12	52	36
Dom. Rep.	13	13	56	82	11	16	59	26
Ecuador	27	10	53	90	15	42	25	56
Mexico	33	1	38	72	20	13	48	35
Peru	31	4	57	92	24	23	26	66
Trin. & Tob.	10	6	62	78	12	4	62	33

\*Columns (a), (e) and (h) represent the optimum infant feeding behaviors consistent with the goal of the A.I.D. Breastfeeding for Child Survival Strategy and should ideally be 100% for each country.

\*\* Indonesia has no information on bottle feeding.

Source: Demographic and Health Surveys, 1986-89