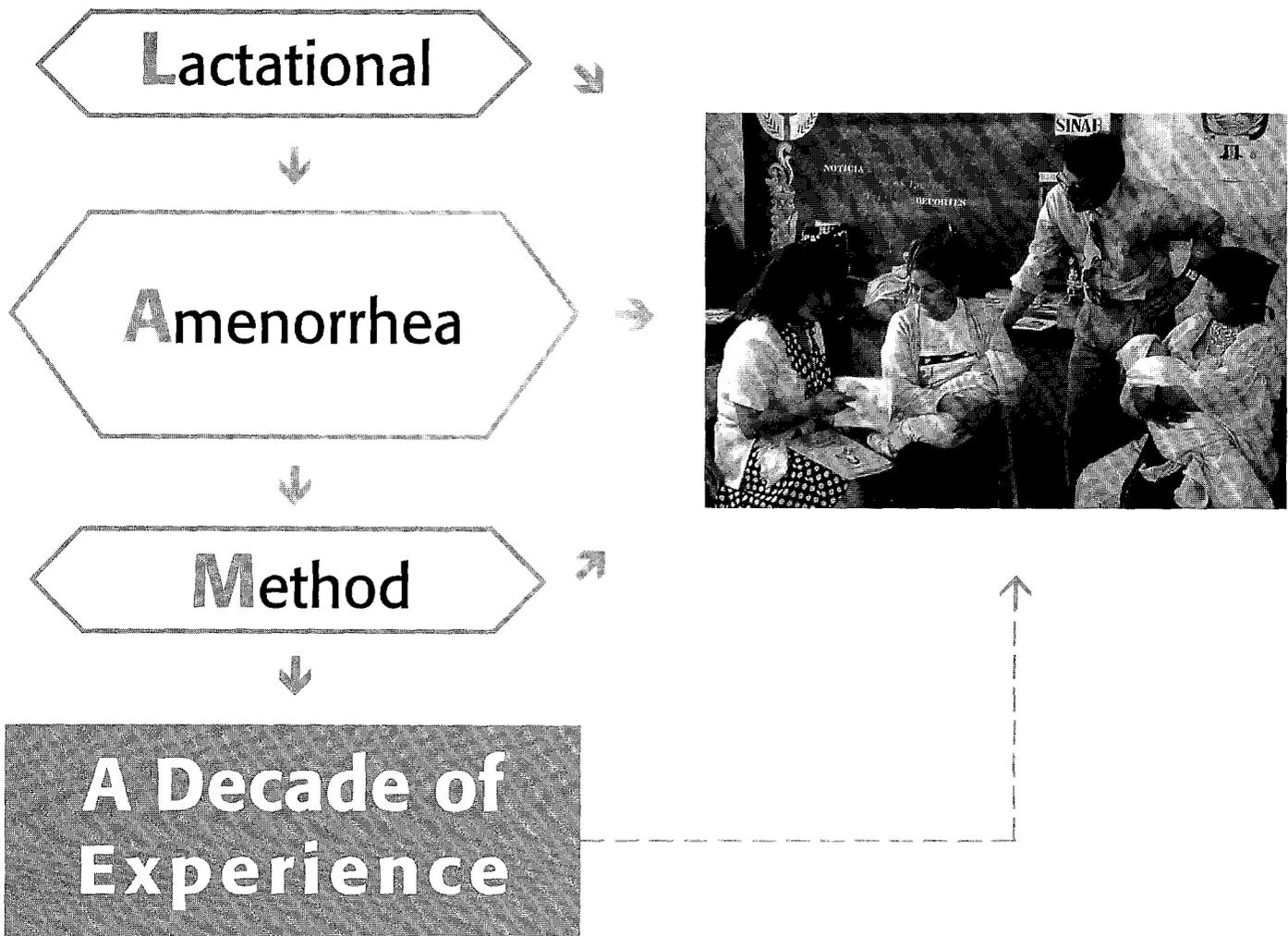


Taking the First Steps:



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Foreword

Maintaining the health of our women and their children is vital to our future. If every child could achieve his or her full potential, and every mother be empowered to help that child to do so, then the human race will truly have attained the right to inhabit this marvelous planet Earth.

The concept of health maintenance has many different definitions. From a public health perspective, the definition must encompass the prospect of coverage for the entire population. What, then, can be proposed to protect the health of the world's nearly 3 billion women and the approximately 150 million infants born this year when, today, there is a maternal death every minute, and nearly 6 million infants die annually?

In my opinion, we must start by recognizing that we do not have the resources on hand to provide western-style health care to the world, even if we wanted to (unless there were a major revolution in the priorities of the world's leaders!). However, perhaps the most reliable and fastest growing resource we have is our human population. In today's economic climate, maternal and child health maintenance will depend to a great extent on every woman's knowledge and ability to create healthy behaviors within the means available in her particular environment. What steps might we take to empower each individual to provide the best self-care within the fiscal resources available?

Taking the First Steps considers the Lactational Amenorrhea Method, or LAM. This is a human-powered social marketing tool that has been developed to support and sustain breastfeeding and child spacing--two of the most important maternal and child health interventions. Breastfeeding currently saves 5-6 million infants annually, and could save an additional 1-2 million. Child spacing leads to increased infant survival as well, and allows for maternal nutritional status to be bolstered between pregnancies. As a result, infants' lives are saved, and women have more energy for themselves, their families, and ultimately to contribute to worldwide productivity.

This is a beginning. Creating the interventions that help women with limited resources to help themselves and their families must become a higher priority. Those of us involved in public health, maternal/child care, and family planning must challenge ourselves to consider the issues that most affect our future, and to create the social marketing tools that create synergy across sectors with little or no additional cost to the mother. Further, if we can develop the skills to empower women to most successfully help themselves, then, indeed, we are on our way to a better future.

I am happy to have been so intimately involved in the development of LAM and its implementation. We all hope that your use of this compendium, including the development, the research, and selected case studies on LAM, will empower you to take those first steps to improving the lives of those about you.

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1989-1996

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I. Laying the Foundation

A. Introduction

Women have long understood that breastfeeding has an impact on fertility. Scientists have examined and debated the specific mechanisms by which lactation contributes to postpartum amenorrhea and infertility, but not until fairly recently have the conditions under which women could reliably take advantage of this phenomenon become clear. The question remained, "Can breastfeeding actually be used as a reliable, efficacious method for spacing pregnancies?"

Over the past decade, the Institute for Reproductive Health (IRH), Breastfeeding and MCH Division, has contributed to answering this question through research, interinstitutional support, codification of the Bellagio Consensus Statement, and programmatic launching of the Lactational Amenorrhea Method (LAM). IRH has played a leadership role in many of the first steps taken in the development and dissemination of LAM throughout the world. Today, LAM is widely recognized by policy makers, promoted by family planning providers, encouraged by breastfeeding advocates, and relied upon by breastfeeding women for the spacing of their children. Recent formal and informal evaluations of the status of LAM indicate that, after less than ten years of implementation, knowledge and acceptance of LAM is relatively high.

This document was written not only as a record of IRH contributions to the formulation and dissemination of LAM over the life of the project, but also as a guide for those who will continue promoting LAM. It will also serve as a resource for those who are learning about the method. Given these goals, this booklet examines the historic groundwork and consensus-building process in formulating the LAM guidelines and highlights the key elements of success as well as the obstacles and barriers in the dissemination of LAM as a method. Specific sections illustrate practical steps, examine problems encountered, and offer solutions regarding support for optimal breastfeeding and the incorporation of LAM into a wide variety of programs. Finally, information is provided on human and organizational resources, as well as technical publications and other materials currently available to support LAM, to encourage others to build upon the foundation that has been laid.

The contribution of many prestigious organizations and dedicated individuals deserve recognition for their contributions to LAM. In particular, the multinational, multidisciplinary network of trained and enthusiastic colleagues with experience in LAM represent a wealth of resources and experience. The primary focus of this document, however, is on the specific role of the IRH in:

- supporting clinical and operations research to establish the credibility of LAM in the scientific community;
- encouraging the development of national policies and norms in support of LAM;
- producing prototypic educational, training, and other support materials;
- designing and implementing model LAM components in reproductive health, family planning, maternal and child health, and breastfeeding programs in every region of the world; and
- providing technical assistance to other organizations in their efforts to promote and implement LAM.

LAM is considered by its proponents as a "modern" method of family planning, given its hormonal mechanism of action and degree of effectiveness, which parallels or surpasses many other available methods. LAM is recognized universally as an information-based and client-controlled method rather than a commodity-based and distribution-dependent method. As such, there are a variety of programmatic issues which are unique to LAM, requiring, in some cases, shifts

While women are suckling children, menstruation does not occur according to nature, nor do they conceive.

-Aristotle

in service provider philosophy and client/commodity orientation. On the other hand, LAM offers a wide range of opportunities for service providers to promote child spacing by creating effective partnerships among complementary family planning and maternal and child health-oriented/reproductive health-related programs.

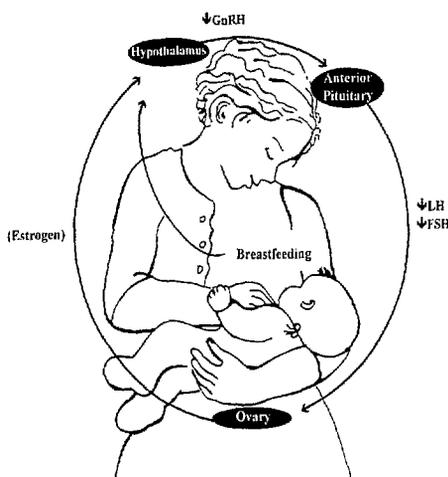
The Breastfeeding and Maternal Child Health Division of IRH was given a clear mandate by the United States Agency for International Development (USAID) to incorporate LAM into education, training, policy, and programs around the world. To date, IRH has sponsored the education and training of some 6,000 people in more than 40 countries in optimal breastfeeding practices, postpartum reproductive health, and LAM. The total number of people that have been trained through cascade programs and “spin-off” trainings has not been calculated, but is estimated to be at least ten times that number. The language, the symbols, the support materials, and the programs are customized for each location, country, and region of the world, but the message and dynamic impact of linking the benefits of optimal breastfeeding to the benefits of child spacing are universal.

B. What is the Basis for LAM?

The mechanism of action for LAM is based on the normal physiology of breastfeeding and the hormonal response of a woman’s body to her infant’s suckling at her breast. Physiologists believe that they have identified the hormonal pathway (known as the hypothalamic-pituitary-ovarian axis) and its direct responses to the stimulation of a suckling infant. This natural response between a mother and her infant is ultimately responsible both for the production and let-down of breastmilk and the “mysterious” and long misunderstood phenomenon of postpartum infertility experienced by breastfeeding women.

At each feeding, suckling at the breast sends neural signals to the hypothalamus of the mother. This influences the level and rhythm of gonadotrophin releasing hormone (GnRH) secretion. Changes in GnRH and in the mother’s pituitary responsiveness affect the release of follicle stimulating hormone (FSH) and luteinizing hormone (LH), the two hormones responsible for follicle development and ovulation. It now has been observed and documented in the scientific literature that regular and frequent breastfeeding results in a “disorganization” of follicular development, which disrupts a woman’s ovaries’ ability to develop and/or release an egg (see figure at left). (Labbok, Cooney and Coly, 1994)

From an evolutionary perspective, this hormonal relationship makes perfect sense in that it helps to ensure the survival of an infant during some period of time postpartum. Suckling at the breast influences both the production of an adequate supply of life-maintaining milk and simultaneously decreases the chances that the infant will be prematurely displaced from the breast because of a subsequent pregnancy. Observation of other mammalian mother/infant relationships unaffected by technology substantiates the argument that in many ways, breastfeeding and lactational amenorrhea have long served as the basis for infant survival.



C. Setting the Stage: LAM as a Family Planning Method

1. Historical Groundwork: Early Research and Strategic Thinking

During the late 1970s and early 1980s, a concerted effort began to outline the conditions under which breastfeeding could be relied upon as a family planning method. This initiative was initially driven by a handful of demographers and biomedical scientists. Research in this area was supported predominantly by the United States Agency for International Development (USAID), the National Institutes for Health (NIH), the Medical Research Council of Great Britain, the

Population Council, and the Mellon Foundation through The Johns Hopkins University and Family Health International.

In 1980, "contraception and the lactating woman" was a major focus of an international meeting on *Research Frontiers in Fertility Regulation*. A variety of findings were included from studies conducted in the 1970s that explored the relationship of feeding patterns to prolactin levels and postpartum fertility (McNeilly, Howie, and Houston, 1980); contraception and the lactating woman (Potts and Whitehorne, 1980), and the impact of oral and injectable contraceptives on breastmilk and child growth (Huber et al., 1980). The subsequent discussion focused on defining future contraceptive research issues related to family planning program needs (Martinez-Manautou and Labbok, 1980).

An international meeting supported by USAID in 1983 focused entirely on "Breastfeeding and Fertility." The conference proceedings, published as a supplement to the *Journal of Biosocial Science*, described the total contraceptive impact of breastfeeding in a traditional, pre-literate society, affluent westernized communities, and in less affluent societies in distinct regions of the world. Participants also discussed the reasons underlying a woman's decision to breastfeed and for how long, together with the role of the health professional in encouraging the practice and the factors in present-day society that tend to discourage it. (Potts, Thapa, and Herbertson, 1985)

Both meetings proved important in terms of broadening the discussion around postpartum contraception and the special circumstances of the breastfeeding woman. They also served to greatly stimulate strategic thinking, define a variety of research issues, and encourage additional research in this area. Also, based on these early findings, an initial attempt was made to organize what was known at the time into an algorithm, outlining the conditions that seemed to be required to avert subsequent pregnancies while breastfeeding (Labbok, 1985).

2. Breastfeeding Definitions Meeting, 1988

In 1988, IRH, as Technical Secretariat for several donor agencies, then known unofficially as the ad hoc Interagency Group for Action on Breastfeeding (IGAB), brought together a group of experts to develop a set of definitions that could be used as standardized terminology for the collection and description of cross-sectional information on breastfeeding behavior. Recognizing the full range of potential individual and cultural diversity, all available terms used to describe breastfeeding and related infant feeding behaviors were reviewed and discussed in detail as a basis for the development of a single comprehensive approach. (Labbok and Krasovec, 1990) A thorough review of the background research and an invitation to all major breastfeeding groups to contribute to the discussion led to the development of a widely accepted definitional schema for breastfeeding. The schema suggested at the meeting was reviewed extensively by breastfeeding researchers and program personnel, revised at subsequent meetings by a variety of organizations, and compared against published research on patterns of breastfeeding and their effects on infant nutrition, health, and fertility.

The resulting schema acknowledges that the term *breastfeeding* alone is insufficient to describe the numerous types of breastfeeding behaviors, and distinguishes *full* from *partial* breastfeeding. The recommended definitions subdivide *full breastfeeding* into categories of *exclusive* and *almost exclusive breastfeeding*, differentiate among levels of *partial breastfeeding*, and recognize that there can be *token breastfeeding* with little to no nutritional impact.

Although some debate still continues concerning the terminology, the schema has proven very useful in defining breastfeeding behaviors. The preciseness of the distinctions between *full* and *nearly full* breastfeeding, for example, although sometimes difficult to measure, has assisted researchers and agencies in their efforts to accurately describe and interpret breastfeeding practices and the ability to compare findings between studies and over time. These definitions also have

proven useful in analyzing behaviors of individuals or within groups. Finally, they have also been used in the development of guidelines for describing ideal behaviors at different ages of the infant, in particular, the guidelines for use of LAM, and have served as the basis for several doctoral theses analyses. Peer-reviewed journals such as the *Journal of Human Lactation* have adopted the schema for editorial review of submissions, and others, such as *Contraception* and the *American Journal of Public Health*, have published calls for consistency in definitions in an effort to improve breastfeeding research.

3. Bellagio Consensus Meeting, 1988

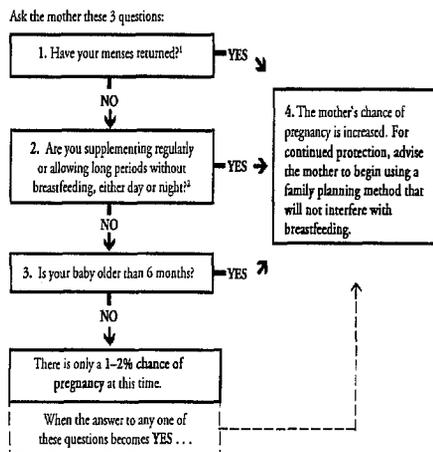
In August 1988, Family Health International (FHI) cosponsored a meeting of scientists at the Rockefeller Foundation Center in Bellagio, Italy. The purpose of this meeting was to review, analyze, and discuss the available data from 13 studies conducted in eight countries related to the impact of breastfeeding on postpartum infertility. The group hoped to identify common criteria within the pooled data, and to propose, based on sound scientific judgment, a framework for advising postpartum women on the safe and efficacious use of lactational amenorrhea for child spacing. From the research reviewed at that meeting, it was concluded that women who are not using family planning, but who are fully or nearly fully breastfeeding and amenorrheic are likely to experience a risk of pregnancy of less than two percent in the first six months after delivery.¹ This conclusion was published and came to be known as the Bellagio Consensus Statement. (Family Health International, 1988; Kennedy, Rivera, and McNeilly, 1989)

4. Georgetown Meeting, 1989

Following the Bellagio meeting, it was acknowledged that a programmatic approach was needed to successfully promote lactational amenorrhea as a method for family planning. In February 1989, IRH sponsored a meeting of scientists, program and policy makers, and family planning service providers from around the world to consider the appropriateness of and next steps required to turn the research findings into a family planning method that women could use. After much discussion, this group agreed on the need to establish guidelines and participated in translating the Bellagio Consensus Statement into the Lactational Amenorrhea Method, more popularly known as LAM. With slight modification over the years, less than a decade later, these guidelines are being followed in more than 40 countries around the world. (Labbok et al., 1994)

The basis for the use and teaching of LAM, a counseling algorithm (shown at left), was created, outlining three conditions that determine if a woman may safely avoid pregnancy while breastfeeding, and includes the important fourth step of introducing another family planning method when any of the criteria are not met. Programs were encouraged to include this guidance so that all LAM users begin the new method in a manner that ensures continuity of protection from an unplanned pregnancy.

Lactational Amenorrhea Method (LAM)



¹ Spotting or bleeding during the first 56 days postpartum is not considered a menstrual bleed.
² Intervals between breastfeeds should not exceed 4 hours during the day, or 6 hours at night. Supplemental foods and liquids should not replace a breastfeed.

¹By comparison, non-breastfeeding, postpartum women typically have a 25 - 30 percent risk of pregnancy during the first six months after birth, following a short, two- to six-week period of postpartum infertility. As these hormonal levels return to normal in a non-breastfeeding woman, her chances of ovulating and becoming pregnant increase rapidly. (Gray et al., 1987)

5. Innocenti Declaration

Throughout the late 1980s, IRH acted as the Technical Secretariat for the unofficial but highly effective IGAB. With the regular participation of the Swedish International Development Authority (Sida), UNICEF, USAID, WHO, and the World Bank, IGAB organized and executed a series of technical preparatory meetings on a variety of relevant breastfeeding issues, in preparation for a high-level WHO/UNICEF policy meeting held in Florence, Italy, in 1990, at the Spedale degli Innocenti Conference Center. The entire effort was fostered by a unique collaboration and coordination of the various participating agencies and their commitment to putting breastfeeding back on the international agenda after almost ten years of declining interest. The series of technical preparatory meetings included the breastfeeding definitions discussed earlier, as well as working women, direct-to-mother support, health care practices, and lactation management. The reports of these meetings were organized by WHO/UNICEF as a background document for the policy makers' meeting. (Saadeh et al., 1994) IRH was invited to participate in a technical capacity at the meeting, and also was given the mandate by USAID to disseminate a wide range of resource materials and to prepare a multi-image slide show, *Breastfeeding: Protecting a Natural Resource*, for premiere at Innocenti as part of the opening ceremony and general orientation of participants.

The meeting was attended by high-level representatives from 30 countries and 11 United Nations organizations and bilateral donor agencies. The major projected outcome of the policy makers' meeting, entitled, "Breastfeeding in the 1990s: A Global Initiative," was preparing and adopting a consensus statement known as the *Innocenti Declaration*. This statement had a long-term strategic impact on focusing economic and technical resources of the United Nations, donor agencies, and governments worldwide on "the protection, promotion and support of breastfeeding." The declaration states 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.* Although the declaration does not make specific reference to LAM, it highlights among the various benefits of breastfeeding its impact on birth spacing.

The Innocenti Declaration established four operational targets for all governments by the year 1995, including: (1) appointing national breastfeeding coordinators, (2) implementing the *Ten Steps to Successful Breastfeeding* at maternity facilities, (3) activating the *International Code of Marketing of Breast-milk Substitutes*, and (4) enacting imaginative legislation protecting the breastfeeding rights of working women. All four targets ultimately have supported, both directly and indirectly, the establishment and success of LAM by creating an international policy atmosphere supportive of optimal breastfeeding practices. Clearly, the Innocenti goals and IRH's approach to the promotion of optimal breastfeeding and LAM have proven to be mutually beneficial.

II. Launching LAM

A. Developing and Distributing Key Promotional and Instructional Materials

The timely development and wide distribution of multilingual promotional and instructional materials was strategic to the dissemination of LAM, and IRH's mandate from USAID dedicated resources to this effort during the early stages of the project.

1. Guidelines: Breastfeeding, Family Planning, and the Lactational Amenorrhea Method (LAM)

This booklet, now in its second edition, was initially developed immediately following the 1989 Georgetown Meeting, in an effort to standardize the method and provide detailed information on the basic elements to be included in LAM counseling. The original publication included the LAM algorithm and a description of eight optimal breastfeeding behaviors that not only support infant growth and development but improve the use of LAM, as well as a section discussing family planning options for the breastfeeding woman. The methods are divided in first (nonhormonal), second (progestin-only), and third choice (combined progestin-estrogen) options, based on their potential impact on breastfeeding.

By 1994, information about LAM was in high demand from various sectors and audiences. A second edition of the booklet was issued. This version, like the original, targeted program planners and service providers. In response to requests from the field, the second edition included more information on the physiology of LAM, breastfeeding issues for mother-infant separation, and steps for implementing a LAM program.

To date, the LAM guidelines have been translated by IRH into four languages—Arabic, French, Spanish, and Russian. Additional translations have been made at the local level, and numerous photocopies and adaptations have been made of sections of the guidelines for training and advocacy purposes. The guidelines have provided a technical basis for further dissemination of LAM at the community level and are reflected in a variety of materials around the world, including brochures, flipcharts, posters, slide shows, videotapes, and other materials designed to be culturally appropriate and effective.

In the last year of the project, a prototypic client version of the guidelines was produced as a brochure. Using black and white photographs, the brochure covers the LAM criteria, the optimal breastfeeding behaviors, and complementary family planning. The brochure is being adapted in several countries.

2. Breastfeeding: Protecting a Natural Resource

IRH produced a breastfeeding promotion booklet and companion video which were important materials in building the foundation to launch LAM because of their contribution to a supportive policy and decision-making environment. The booklet, *Protecting a Natural Resource*, produced with the IMPACT Project of PRB in early 1990, and the video of the same name, produced in preparation for the Innocenti Meeting, targeted decision and policy makers with a strong message about the numerous benefits of breastfeeding and the dangers of the decline in breastfeeding. Presented originally in four regional variations, the booklet was printed in a full-color, glossy format. This publication discusses not only the many health benefits of breastfeeding, but also its important impact on fertility. The concept of LAM is introduced in the discussion of breastfeeding's many benefits.

The document was distributed widely and used as part of many breastfeeding promotion campaigns. Among its many accolades, UNICEF credited it as being

one of the most influential documents in the marketing of the Baby Friendly Hospital Initiative to medical professional and policy makers. In 1995, IRH published an updated version of the booklet to respond to continued high demand.

The 15-minute companion video was created from the slide presentation premiered at Innocenti. Produced in three languages and dubbed in another, this IRH audiovisual uses powerful images of women and infants, families, and communities, to highlight the many benefits of breastfeeding and call viewers to action. The video, although developed with policy makers as the target audience, has been used for advocacy, training, and even as a motivational tool with women in prenatal and postpartum settings.

3. Audiovisuals

With the basic supportive documentation in place, IRH was able to move into creating the necessary audiovisual materials that would place breastfeeding and LAM more firmly into family planning policy and strategy and on the cafeteria of family planning options available to couples worldwide. Based on input from service providers in the field and the advice of communication experts at the IRH Technical Advisory Group Meeting, videotapes and slide presentations were selected as the best media to transmit messages effectively and efficiently. Over the life of the project, four major videotape presentations were created in addition to *Breastfeeding: Protecting a Natural Resource*, as well as numerous slide presentations tailored to specific events. Used in a variety of fora worldwide, IRH's videotapes and slide presentations have played a key role in policy, programmatic, and educational efforts for a wide range of audiences.

- **Breastfeeding and Family Planning:
Mutual Goals, Vital Decisions**

This eight-minute videotape initially was developed in conjunction with activities related to policy change at the International Conference on Population and Development (ICPD). Based on lessons learned from the beginning of the first IRH Cooperative Agreement in 1985 through 1993, it was clear that the population community still needed clear, scientific information about the relationship between breastfeeding and child spacing. The draft Programme of Action for the ICPD brought this issue to a head with its total omission of breastfeeding as one of the known determinants of fertility.

The videotape explored the scientific basis for the impact of breastfeeding on fertility and introduced LAM as a tool for promoting the full potential of this physiological phenomenon. The credibility of this issue was highlighted through interviews with world renowned experts such as Dr. Fred Sai, Mr. James Grant, Dr. John Bongaarts, Dr. Miriam Lobbok, and Dr. Juan Flavier. Premiered at the third Preparatory Meeting for the ICPD and screened at the ICPD in Cairo in English, French, and Spanish, the videotape targeted policy and decision makers and contributed to the inclusion of breastfeeding for its fertility impact in the final version of the ICPD Programme of Action. It has been used since with decision makers in many countries, as well as with multinational donors and USAID Cooperating Agencies, to assist them in their strategy and policy development. An accompanying pamphlet, also available in the three target languages, highlights the issues and suggests potential actions for key stakeholders.

B. Conducting Research and Convincing the Scientific Community

As a research organization with an IEC component, IRH was in a unique position to conduct the research necessary to convince the scientific community about breastfeeding and LAM, as well as to translate the findings into action in programming and policy. Although the impact of breastfeeding on amenorrhea and fertility had been studied for several decades prior to the development of LAM, after the 1989 Georgetown Meeting, various aspects of LAM as a method needed clinical and field testing in order to convince the scientific community that women could use it efficaciously. Several LAM studies have been carried out during the two IRH Cooperative Agreements with USAID, and under other Cooperative Agreements and programs, that confirm the method's acceptability and efficacy. Summaries of the key studies are provided below.

1. Chile Prospective Clinical Trial

The Pontificia Universidad Católica de Chile (PUCC) conducted the first prospective study of the use of LAM. The study, designed to assess the effect of a clinical-based breastfeeding promotion program on the duration of postpartum amenorrhea among urban women in Santiago, Chile, used the three criteria that later were codified as LAM. A second phase of the research studied the feasibility of maintaining exclusive breastfeeding and the use of LAM among urban working women.

For the initial study, 313 mother-infant pairs of urban, middle-class, non-working mothers were recruited at the university hospital in the postpartum period and were followed for six months. They received the usual care offered to mothers and infants at the PUCC and constituted the control group for the study. A group of 422 mother-infant pairs of the same characteristics were recruited as the project intervention group and participated in the Breastfeeding Promotion Program (BFPP).

The BFPP included the following basic interventions:

- lactation management training for the health team,
- educational activities at the prenatal clinic,
- hospital interventions including reduction of mother-infant separation,
- encouragement of exclusive breastfeeding on demand, and general breastfeeding support,
- creation of an outpatient lactation clinic for follow up of newborn infants and their mothers as prevention and support for breastfeeding problems, and
- offering the LAM criteria for family planning.

A total of 66.8 percent of the women in the intervention group completed 180 days of exclusive breastfeeding, as opposed to 31.6 percent in the control group. At the end of the six months, 54 percent of the women in the intervention group still were using LAM. Only 9 percent of the group exclusively breastfeeding resumed menses within 90 days and 19 percent within 180 days. The researchers concluded that the increased intensity of breastfeeding support (prenatal, in-hospital, and postnatal), as well as the women's motivation to use LAM for family planning, contributed to the increased suppression of fertility. The study confirmed that LAM is an effective introductory family planning method for breastfeeding women, demonstrating a high degree of acceptance and an efficacy of 99.5 percent.

Since the initial study included only women who did not work outside their homes, and considering that an increasing number of women return to work after delivery, a second study was conducted assessing LAM use among working mothers separated from their infants. For this purpose, 170 mothers who intended to return to work after delivery were recruited at the maternity for the study. Women were counseled on how to continue breastfeeding after returning to work. All women were taught hand breastmilk expression. Mothers and infants were cared for together at monthly follow-up visits by a pediatrician and a nurse-midwife for six months and were interviewed by telephone at 12 months. The follow up covered infant growth and health as well as the mother's health and fertility. The study showed an efficacy among working women separated from their infants to be slightly lower, but relatively comparable to that experienced by nonworking mothers. (Unpublished presentation at Georgetown University, Valdés, 1997)

The results of the first prospective study on the efficacy of the method were published in the *Lancet* in 1992, translated into French, Russian, and Spanish by IRH, and widely disseminated, providing a timely and strategic advocacy tool. (Pérez, Labbok, and Queenan, 1992) The *Journal of Human Lactation* also published two articles that looked at the impact of the lactation training for health professionals which was done in conjunction with the project. (Valdés et al., 1995; Pugin et al., 1995)

2. Ecuador Operations Research

Recognizing the need for programmatic operations research related to the implementation of LAM in an ongoing family planning service delivery system, IRH jointly developed a study in Ecuador with the Centro Médico de Orientación y Planificación (CEMOPLAF) to test a model for the timely acceptance of contraceptive methods to lactating mothers by providing breastfeeding and family planning counseling, including counseling and support for LAM. The three-phase project included: Phase I—the pilot project during which the model was developed; Phase II—the operations research phase when LAM was introduced in nearly all CEMOPLAF clinics; and Phase III—the introduction of LAM into the institution's community based distribution system.

Start-up activities included initial and continuing training of all medical center staff members, and development of a counseling guide and educational materials to support the counselors. Counseling services were subsequently instituted as a preliminary step, prior to consultation with the physician who would actually provide the contraceptive method. Through the use of the educational materials, the information provided to the user was standardized throughout the institution. Once the program was established in the medical centers, it was extended to the community.

During the OR phase, 2,178 mothers with children less than six months old were counseled on the importance of child spacing and the methods available for postpartum women. More than half of these women had never used a modern contraceptive method. Counseling increased the demand for contraceptives from 69 percent prior to counseling to 96 percent following counseling. Of the 2,178 women who were screened, 886 met the three LAM criteria and were offered the method. Of these, 330, or 37 percent, accepted LAM and continued in the study. Eighty percent of the LAM acceptors switched to another method in a timely manner, while 15 percent switched to another method with delay and 5 percent did not begin another method. The final results showed LAM efficacy of 99.9 percent.

The CEMOPLAF study was an important contribution to the collective knowledge about the feasibility of introducing LAM into service delivery programs, and also helped confirm its efficacy. The study concluded that breastfeeding and family planning counseling:

- meets unsatisfied needs of breastfeeding women;
- improves postpartum contraceptive accessibility, timely use, and effectiveness;
- increases the number of postpartum contraceptive users;
- reduces postpartum contraceptive failure;
- achieves a high degree of effectiveness of LAM;
- accomplishes a high degree of continuity from LAM to another contraceptive;
- increases the length of time that LAM can be used safely;
- captures new users of contraceptive methods;
- helps mothers overcome barriers to applying LAM and practicing optimal breastfeeding;
- convinces professionals and institutions to accept LAM;
- promotes and enhances optimal breastfeeding practices;
- improves institutional goals and policies in the areas of total quality, social coverage, and economic self-sustainability at the institutional level; and
- links family planning programs to reproductive health, child survival, health and maternal nutrition programs.

These findings are further described in an article published in *Studies in Family Planning* (Wade, Sevilla, and Labbok, 1994).

In the community-based distribution phase of the operations research project, 552 mothers with infants less than six months old were identified, a total of 390 received counseling, and 368 accepted a method, with 149 (or 40.5 percent) opting for LAM. (Sevilla, Vargas and Pinto, 1996)

3. Other Supportive Research

Family Health International (FHI), with support from USAID, also studied the contraceptive efficacy of the LAM during the early 1990s. Pakistan and the Philippines were chosen as the sites where two non-comparative prospective trials were conducted to determine the effectiveness of LAM as a family planning option. Both studies involved women who had previously breastfed a child and chose LAM to prevent a subsequent pregnancy, but varied in that the majority of women in Pakistan were delivered at home by a midwife, while those in the Philippines were delivered in a hospital setting. Participating women in both countries were taught the method and followed for 12 months to determine the risk of pregnancy during correct and also during incorrect use of the method. The studies were unique in that they were large enough to use newly available analytic procedures that allowed cases to enter and exit life tables according to whether the women were sexually active and whether they were depending solely on LAM as their contraceptive method. Women kept daily records and cases were censored monthly. If for some reason a woman had abstained from sexual activity or had used another (barrier) contraceptive method during that period of time, the case was temporarily excluded from analysis. The effectiveness of the method demonstrated by both studies, therefore, could not be attributed to postpartum or lactational abstinence nor use of another contraceptive. Life-table pregnancy rates were the main outcome measure.

In Pakistan, a total of 391 newly delivered mothers from Karachi and Multan were included in the study. Women choosing LAM were taught before or shortly after delivery how to use the method and were subsequently interviewed in their homes each month by a Lady Health Visitor. Results showed that during full or nearly full breastfeeding, while the women were amenorrheic and not otherwise contracepting, the rate of pregnancy was 0.6 percent. The pregnancy rate during lactational amenorrhea alone was 1.1 percent at one year postpartum. Researchers concluded that LAM was highly effective for six months and that a high degree of contraceptive protection endures following LAM use for a full year during lactational amenorrhea, but not after menses return. (Kazi et al., 1995)

The Philippine study was conducted in the Dr. Jose Fabella Memorial Hospital in urban Manila. A total of 485 lower income, educated women with extensive breastfeeding experience were recruited. Women delivering in the hospital were offered all available contraceptives for postpartum use. This study found LAM to be 99 percent effective when used correctly (that is, during lactational amenorrhea and full or nearly full breastfeeding for up to six months). Although LAM is promoted for a maximum of six months, this study also looked at pregnancy rates at 12 months among those women who were still amenorrheic following LAM. The effectiveness dropped to 97 percent when lactational amenorrhea was the only criteria met. (Ramos, Kennedy, and Visness, 1996)

The results of both studies suggest that the method is tolerant of incorrect use. FHI researchers concluded that the method might potentially be simplified by relaxing the supplementation criterion when women have been educated about the breastfeeding practices that maximize both milk production and the duration of lactational infertility. Given the high rates of efficacy, these studies demonstrated that LAM provides as much protection from pregnancy as non-breastfeeding women experience with non-medicated intrauterine devices and barrier methods. The results of these two important studies can be generalized, however, only to women with previous breastfeeding experience who choose to use LAM over an array of other available contraceptive methods and who receive frequent monitoring visits. Women who do not intend to breastfeed for a sustained period, who do not receive follow up, who do not initially use LAM, and/or who experience lactation failure may or may not see the same degree of contraceptive efficacy during lactational amenorrhea as the women in these studies.

4. Extended LAM: MAMA-9 in Rwanda

The issue of whether or not the duration of LAM can be extended (and/or whether or not any of the three LAM criteria can be relaxed) has been of interest to researchers and program planners since the guidelines for LAM first were developed. The use of Extended LAM has been of greatest interest in those countries where women typically experience long periods of lactational amenorrhea. In 1990, IRH provided information and training to a representative of a program in Rwanda, Action Familiale Rwandaise, that resulted in immediate incorporation of LAM into their countrywide programs. However, given the average duration of more than 12 months of lactational amenorrhea in the country, the program revised the LAM guidelines to allow for a nine-month method that became known as MAMA-9 (the French acronym for LAM). In 1993, IRH assessed the outcome of this program and provided technical assistance for its improvement and continuation. This assessment has been published subsequently (Cooney et al., 1996) and serves as the only peer-reviewed documentation of Extended LAM in the literature. The results of the assessment revealed a high efficacy (100 percent) and acceptability of MAMA-9 among the couples using it.

FHI's work in Pakistan and the Philippines, described above, and the LAM Multicenter Study, described on page 26, provide important documentation and raise issues concerning the potential for relying on lactational amenorrhea after six months postpartum. The Rwanda example, however, is the only program that actively incorporated counseling for Extended LAM in its client services and altered the LAM algorithm to include revised advice on adding complementary foods at about six months postpartum while continuing to breastfeed intensively.

The implications of the MAMA-9 program in Rwanda are important to any continued work in breastfeeding and Extended LAM. Additional areas for field research suggested in the discussion of the findings include:

•Male involvement: MAMA-9 counseling was provided effectively to couples, as opposed to only one partner. Male involvement programs may wish to consider this type of joint counseling model.

•Efficacy under relaxed criteria: MAMA-9 counseling focused intensively on optimal breastfeeding behaviors and appropriate weaning behaviors. It is possible that the very high efficacy of MAMA-9 was due to the fact that its practitioners breastfed **exclusively** during the first six months, then began adding complementary foods **after** the child's hunger was satisfied with breastmilk. Some researchers have suggested a relaxation in the infant feeding criterion of LAM, as discussed elsewhere in this document; however, the Rwanda program suggests that, at least with Extended LAM, such a relaxation may result in a lower efficacy of the method.

C. Training: International, Regional, and National Level

IRH has advocated that multilevel, integrated approaches to training are essential to securing a place for LAM in family planning, maternal and child health, and other service delivery systems. Identifying and adequately training selected program managers and field level personnel, both at the preservice and inservice levels, has helped to foster the institutionalization of breastfeeding and LAM in many settings. Ideally, personnel trained in LAM should receive follow up, supervision, and other support soon after their initial training. IRH has provided training at all levels, relying heavily on the prevalent and systematic cascade approach used in many programs and in many countries to further expand LAM through service systems.

1. International Training in Breastfeeding, LAM, and Postpartum Reproductive Health

As a fundamental component of a multifaceted training approach, IRH has developed and led three Washington-based international training courses in breastfeeding, LAM, and postpartum reproductive health. Primarily geared towards health care professionals with decision-making responsibilities or in lead training roles, the course was designed to create and enlarge the base of in-country expertise in LAM, without increasing the reliance on outside technical assistance. The course was advertised to Missions and to representatives of USAID-funded Cooperating Agencies, particularly those working in family planning, child survival, and maternal and child health.

Incorporating the expertise and experience of the participants, the training was designed as a highly participatory course. Topics covered in the two-week curriculum included: breastmilk composition, physiological basis for lactational infertility and the development of LAM, issues in postpartum family planning, developing an IEC strategy for breastfeeding and LAM promotion, breastfeeding and women's health, counseling issues, involving fathers in breastfeeding, and infant growth and weaning. Perhaps most importantly, participants in all of these training sessions developed action plans for incorporating what they had learned into training in their existing family planning, breastfeeding, and/or MCH service delivery programs, and in some cases, into their policy-level work. As an indication of the validity of the approach and the impact of the trainings, with little exception, all of the plans developed by participants have been enacted—some with continued IRH support, some with the support of other cooperating agencies such as John Snow, Inc., and some through integration into ongoing activities.

The first training, held in 1993, was planned in conjunction with activities in a Memorandum of Understanding (MOU) between IRH and the Service Delivery Expansion and Technical Support Project (SEATS) of John Snow, Inc. (JSI).

* Trainees also included other IRH project representatives from the field. At this
* first training, Georgetown University's National Capital Lactation Center provided
* a one-week training in Lactation Management. IRH and SEATS staff, along with
* other Cooperating Agency representatives, provided expertise for the other training
* components.

* A second training in 1995 included representatives from a wide variety of field
* support programs, including Bolivia, Haiti, Malawi, Peru, and Ukraine. Other
* participants included hospital-based medical personnel (doctors and nurse-
* midwives) from Egypt, India, Philippines, and Zambia. Facilitators included
* members of IRH staff, doctors and nurses from Georgetown University Hospital
* and The Johns Hopkins University, as well as representatives from several USAID
* Cooperating Agencies.

* Participants in the final training, held in 1997, were selected based on their
* ability to influence LAM policy and programs in their respective countries.
* Colleagues from Bangladesh, Ecuador, Ghana, Jordan, Uganda, and Zambia
* attended. Action plans were developed by participants with the understanding that
* IRH would not be in a position, given the termination of the project, to support
* future country-level activities, and that other resources would need to be identified.

* Upon successfully completing the training course, participants received a
* certificate of completion from Georgetown University and were invited to become
* Institute Fellows. This distinction was awarded to encourage trainees to remain
* active in LAM promotion and to foster ongoing communication with IRH and
* other Fellows. In 1995, IRH began publishing a semiannual news bulletin as a
* medium for updating Fellows on the progress of ongoing LAM projects, including
* new materials and resources, and to share Fellows' accomplishments.

* The principal outcome of these International Trainings has been the creation of
* a cadre of trained experts in breastfeeding, LAM, and postpartum reproductive
* health who have been, and will continue to be, called upon to act as advocates for
* LAM and as technical resources in their countries and regions, as well as in various
* international fora. Additional outcomes included the development and implemen-
* tation of several new projects integrating breastfeeding and LAM into family
* planning services, with the expectation that these activities would lead to increased
* family planning acceptance, enhanced CYP, and improved quality of family
* planning services.

2. Regional and National Training

IRH also has supported a wide variety of country and regional trainings, following a standard, but highly adaptable, cascade approach. The first level of training often involves a "mini-training," or sensitization meeting of key decision makers and program managers to the major issues surrounding optimal breastfeeding and LAM. This sensitization often focuses on the scientific basis for lactational infertility, the history of LAM, and key policy statements. Whenever possible, LAM studies or other data from the country or region are highlighted. The objective has been to secure strategic support for the introduction of LAM into institutional, and in some cases, national programs. Second-level training (popularly known as training of trainers) generally focuses on key program- and training-level personnel to ensure the transfer of recommended skills to those ultimately responsible for organizing and conducting trainings for field-level workers (paid staff and/or volunteers) and/or other service providers (such as those working in hospitals and clinics). A third-level training of field-level workers and other service providers generally covers a variety of skills, depending on the level of previous experience of participants. In addition to LAM-specific information, trainees may be instructed in lactation management and breastfeeding support, as well as on family planning options for postpartum breastfeeding women, counseling and interpersonal communication, support and monitoring of LAM clients,

information management, and other related areas. Course content is modified or adapted depending on the roles and responsibilities of the participants.

Many of the national-level training of trainers courses that took place under the IRH project included representatives from all regions of a given country. In some cases, representatives from neighboring countries were invited to participate as well, particularly in the case of the Latin America and Caribbean region, where distances are not great and opportunities are limited. A number of national-level trainings carried out in coordination with the International Federation for Family Life Promotion (IFFLP) also involved other country personnel. Focusing to a large extent on the breastfeeding/LAM/natural family planning interface, several trainings were carried out in the Philippines, Sénégal, and Zambia. All included representatives from approximately five additional countries in the region. Follow up was provided, however, only to the three IFFLP focus countries.

A somewhat different training model developed under a follow-on IRH sub-agreement with La Leche League/Guatemala (LLL/G), was a regional technical assistance approach. LLL/G, who had been working with LAM for about four years, organized a training of trainers in Guatemala for key League leaders from five countries throughout Latin America. La Leche League International, the oldest international breastfeeding support organization, was seen as a viable and appropriate group to promote and disseminate LAM. The core group of leaders that were trained by LLL/G have gone on to train other leaders and to incorporate LAM into their national-level, mother-to-mother support activities.

Another example of the IRH training approach was used in Jordan, where the introduction of LAM focused on creating links among existing health and family planning programs. At the beginning of the project, a sensitization workshop was held for Ministry of Health representatives, the private health sector, and nongovernmental organizations involved with MCH and family planning. A three-day training of trainers followed for 21 health professionals from the Ministry of Health, nongovernmental organizations, and the private sector. This core of trainers was prepared to conduct additional LAM training for the IRH project and as part of their own activities. One-day training courses were then held at each of the three project demonstration sites. Trainees at this level were selected from the antenatal, postpartum, nutrition, and family planning clinics. The local project coordinator and IRH adapted and developed new materials in support of these training efforts at all levels. As a result of these activities, 655 MOH health care providers representing five governorates were trained, and in the second phase of the project, LAM was integrated into the service delivery systems in 42 MCH centers and one hospital. Close involvement of the original 21 master trainers and ensuring their active participation in implementing the project resulted in quality training and counseling.

As part of the USAID/Kyiv Reproductive Health Initiative (RHI) in Ukraine, IRH, AVSC, JHPIEGO, PCS, The Futures Group, and MotherCare/JSI, as well as the World Bank, CDC, and the American International Health Alliance (AIHA), formed a working group to update reproductive health knowledge at three selected sites throughout Ukraine: Donetsk, Odessa, and L'viv. IRH provided lectures on LAM, breastfeeding, and reproductive health as part of an AVSC-led reproductive health seminar at each site. In addition, IRH conducted a three-day seminar at each of the selected sites to promote LAM and optimal breastfeeding practices. Policy and curricula change at the oblast (state) level resulting from these efforts included the following:

- (1) In Donetsk, a regional family planning policy now includes LAM and further policy changes are being considered by local authorities. Several clinical changes have been made in targeted health care facilities to allow more optimal lactation and to promote LAM. Several initiatives have been taken to transfer the information presented by IRH to clients, providers, and policy makers. LAM now is being taught in model centers.

(2) In Odessa, rooming-in is fully implemented at Odessa Regional Maternity, the model hospital for USAID/L'viv activities, and other health care facilities in the city have partially implemented rooming-in. Programs have been planned and implemented for improved breastfeeding, LAM, and reproductive health counseling for clients and a permanent postgraduate training process is in place for hospital staff.

(3) The information and example provided by IRH activities in Ukraine have helped create national-level awareness of lactation management issues in Ukraine. The Ukrainian Ministry of Health issued a new Ministerial order that will widely introduce rooming-in and improve breastfeeding practices throughout the country. The new order encourages further efforts across Ukraine by removing previously existing administrative regulations that were obstacles to optimal lactation management.

D. Curricula and Training Materials

IRH has developed or adapted breastfeeding and LAM training curricula for health professionals at all levels, in the context of a program or project action plan designed to result in immediate application of activities, including training of trainers, training of educators of field promoters, program leadership, hospital-based breastfeeding support, family planning and MCH care providers, and others. As mentioned previously, IRH regularly reviewed the curricula of other organizations to ensure that breastfeeding and LAM were included when appropriate.

A key basic document in all IRH training efforts has been the *Guidelines* document described earlier in this document. Since 1994, the companion videotape has served as an important training material as well. A variety of other materials reinforce the curricula developed by IRH, as well as those developed by other organizations that have requested IRH materials to include in their training packets.

A selection of IRH-supported curricula and their accompanying supportive materials are described below, and a more detailed description of these and other curricula is located in Appendix D.

• **Curriculum for International Training in Breastfeeding, LAM, and Postpartum Reproductive Health:** The topics included in this training session have been described on page 13. An impressive number of materials were gathered to support this training, including peer-reviewed articles, breastfeeding and family planning textbooks and handbooks, samples of prototypic materials, slides, videotapes, and other materials. These materials are provided in the appropriate languages where possible, although the curriculum itself is only in English. The curriculum lends itself to adaptation: certain subject areas can be expanded or condensed depending on the audiences' previous knowledge and skills.

• **Lactation Education for Health Professionals:** This book, published with support from PAHO, has served as a resource for training in all regions, although initially tested only in the Latin America/Caribbean region. The book was developed with PAHO in coordination with a meeting of Latin American nursing educators. It includes a training module, teaching guidelines, and supporting articles that cover breastfeeding and LAM concepts and educational concepts important to the implementing the curriculum. The entire curriculum recently was annotated under IRH's project with the American College of Nurse-Midwives (ACNM) and is being distributed as a packet with the reference materials.

• **ACNM Trainer and Self-study Modules:** Under a subagreement with IRH, ACNM worked to incorporate LAM into current nurse-midwifery programming, by developing a LAM-based curriculum, annotating a breastfeeding/LAM curriculum outline, and conducting a pilot study that assessed the impact of LAM self-study materials versus trainer-led study of the method (project summaries appear in the appendices). These curricula have been distributed through the ACNM network, both domestically and internationally, and public and private midwives in Ghana and Uganda have been trained in LAM service provision.

• **Indian Medical Association (IMA) Lactation Management Course:** IRH reviewed course materials and provided the IMA with support publications for its comprehensive Lactation Management Course. LAM is one of the modules in this 14-module course which has been endorsed officially by the Breastfeeding and MCH Division of IRH as well as Georgetown University's National Capital Lactation Center. This home-study course is increasing the number of physicians that are trained not only in breastfeeding support but also LAM provision.

• **Institute for Development Training (IDT) Self-study Module:** IRH supported the development of a module aimed at mid-level health care workers, midwives, and family planning counselors in Arabic, English, French, Russian, and Spanish. The self-study module was pretested both in Africa and Central America and is part of IDT's popular series on women's health. The Spanish version was used successfully by CEMOPLAF's CBDs to prepare them for LAM provision. The module is sold by PACT publications.

• **Curriculum Library:** IRH compiled many of the relevant curricula developed under its Cooperative Agreements with USAID, as well as other appropriate breastfeeding-related curricula. The collection contains more than 30 curricula: items described above and curricula developed at the local level, including Ecuador, Guatemala, Malawi/SEATS, Mexico, Uganda/SEATS, Ukraine, and many others. After June 30, 1997, this collection will be housed at the Linkages Project of the Academy for Educational Development.

E. Pilot Projects and Country-level Program Activities

Once clinical and operational research had established LAM's efficacy, IRH proceeded to promote the method as a viable family planning option worthy of the time and other resources required for its inclusion in ongoing field projects and national-level programs. Issues of advocacy, training, monitoring, supervision, record keeping, and logistics needed to be addressed, and programmatic experiences from a variety of sources needed to be documented. Lessons learned needed to be shared. Recognizing the value and richness of having a wide variety of experience to share, IRH provided financial and technical support to several country-level programs, and offered technical assistance and/or collaborated with numerous Cooperating Agencies, NGOs, national-level programs, universities, and professional associations over the life of the project.

Although the LAM programs that have been initiated worldwide vary tremendously in size and scope, IRH-sponsored programs generally follow a six-step process:

1. Conduct a needs assessment to gather information on existing practices, programs, and resources as the basis for all planning. Understanding common beliefs, traditions, and practices regarding breastfeeding, child spacing, and family planning is crucial for developing LAM messages and materials that will be accepted and appropriate.

6 Steps for Implementing a LAM Project

1 Conduct a needs assessment

2 Train key personnel

3 Establish measurable objectives

4 Develop a written workplan

5 Implement the project

6 Evaluate, monitor, and incorporate feedback

2. Identify and train key personnel and implement or strengthen a supervisory system. The training needs of key individuals should be addressed so they might be considered LAM experts. Generally, a LAM expert is well versed in breastfeeding support, postpartum family planning, and of course, all aspects of LAM.
3. Establish objectives to help define the scope of the project, the target audience(s), the resources required (both technical and financial), as well as potential obstacles and barriers. Objectives should be measurable and address the needs of the organization and target audience.
4. Develop a written workplan that includes all of the objectives, specific activities, responsibilities of all personnel involved, a detailed timeline, and realistic budget. This will serve as the roadmap for everyone involved. (By including this step in training sessions, IRH has ensured that participants leave the training not only knowledgeable about LAM but prepared to apply their new skills in an actionable way.)
5. Implement the program, making sure that all personnel have sufficient training and that all materials are appropriate for the intended audience. Keeping local policy makers apprised of the project's progress is an easy way to ensure their support and involvement in future policy change efforts.
6. Evaluate and monitor the program on multiple levels. Feedback is needed from supervisors, counselors, and clients. Findings from this phase should be used to revise and improve the program.

Projects that follow these steps have found them to be a logical and useful process, leading to a successful, stable LAM program. Field program highlights are contained throughout this document and brief summaries of 20 IRH-supported programs appear as Appendix A. These programmatic "snapshots" provide an overview of the major objectives, accomplishments, and products.

F. Policy Change

IRH has participated actively in many international, regional, and national fora to ensure the inclusion of optimal breastfeeding and breastfeeding for its fertility impact in policy statements, strategies, and other outcomes of such fora, including programs carried out at the local level. In addition to formal conferences and meetings, IRH has been able to effect policy change through its programs in several countries.

A combination of tools and strategies have been used to accomplish IRH goals in this area. They include IEC, advocacy and networking, sensitization, training, research, integration into services, and active dissemination. Creative combinations of these tools are necessary to target different groups of policy and decision makers.

The ultimate test of changing or developing new policy comes in how that policy is implemented and whether it produces real change. With LAM, the end result will be true integration of LAM into reproductive health service delivery, which means having LAM offered as a family planning option for postpartum, breastfeeding women, and having LAM clients who are followed up within that system. This outcome suggests change at many levels, of which the policy level is only one step. Other steps are necessary, including but not limited to: providing information in the scientific and programmatic literature and documentation; program development that is actionable and collaborative; disseminating appropri-

ate information at all levels; involving collaborating organizations, both governmental and nongovernmental, who will be affected by the changes; and revising and updating medical, nursing, and midwifery curricula to include discussion of optimal breastfeeding behaviors, the criteria for and physiological basis of LAM, and other appropriate postpartum contraception.

Given these issues, IRH has been successful in its policy efforts for many reasons, which include the following: (1) IRH has acted in concert with other key players in the field, building consensus to achieve consistent messages and to reach the widest number of people; (2) IRH has concentrated a great deal of effort on producing advocacy materials appropriate for the audience and in multiple, appropriate languages; (3) Advocacy has been supported with strong, scientific information presented in a concise, attractive format; (4) Many local field programs have contributed to the development of appropriate policy at the national level, ensuring ownership and implementation of policies down to the grassroots level; and (5) IRH has enabled dialogue among key stakeholders to ensure their active participation in these processes at all levels. A summary of breastfeeding and LAM-related policy change is located at Appendix C.

1. International Fora and Activities

At the international level, in addition to the 1990 Innocenti Policy Makers Meeting described earlier, IRH was involved in two International Pediatric conferences (1992 in Brazil and 1995 in Egypt); two Society for the Advancement of Contraception conferences (in Spain and Guatemala); and the International Union of Nutrition Science in Australia in 1994. IRH also was involved in five major fora which resulted in positive impacts on breastfeeding and LAM dissemination through final policy statements.

- **International Conference on Nutrition (ICN):**

The International Conference on Nutrition was held in Rome in 1992. IRH and other United States-based nongovernmental organizations lobbied to have breastfeeding included in the final document. IRH gave a presentation on breastfeeding and fertility during a Wellstart-sponsored program. The outcome of these collaborative activities was the inclusion of breastfeeding in the document, although no specific reference was made to its impact on fertility.

- **Summit on the Natural Regulation of Fertility**

In 1992, IRH participated in the Summit Meeting on Natural Fertility Regulation of the Pontifical Council on the Family in Rome and the Vatican City. Of interest to the breastfeeding and family planning community is that the resulting Vatican Statement offered a clear endorsement of breastfeeding for child spacing benefits. The Rome Declaration on NFP, *The Natural Regulation of Fertility: The Authentic Alternative*, as stated by the representatives attending the meeting, includes the statement, *We support breastfeeding for the good of the family, mother, and child, and as a way of spacing childbirths, and we encourage policies that will enable mothers to breastfeed their children.* (Pontifical Council, 1992) IRH was able to disseminate this policy statement to key groups through technical assistance and project efforts worldwide.

*We support
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childbirths, and
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policies that will
enable mothers
to breastfeed
their children.*

-Vatican Statement

• **International Conference on Population and Development (ICPD)**

For the ICPD, held in Cairo in September 1994, IRH undertook several projects in an attempt to influence the development of policy as it would be contained in the final Programme of Action. The long-term impact of these activities would be the inclusion of breastfeeding on the population agenda for the next decade. The steps were as follows:

- Review existing family planning and MCH policy at the national and organizational levels and produce a document;
- Formulate and circulate a public policy statement for signature by major population-related organizations for use in lobbying;
- Create a listing of sample inserts on the subject of breastfeeding and indicate potential locations for these inserts in the draft Programme of Action;
- Lobby delegates one-on-one and in country and regional groupings both at the Preparatory Meetings and at the ICPD in Cairo;
- Develop a short videotape (see *Audiovisuals*) on the contribution of breastfeeding and child spacing to family planning and population;
- Distribute the initial draft of the document *Breastfeeding and Child Spacing Country Profiles* to official delegates at the ICPD;
- Create fact sheets on breastfeeding and child spacing for delegates at the Preparatory Meetings in New York and at the ICPD in Cairo.

As a result of these steps, the ICPD Final Programme of Action (United Nations, Oct. 1994) contained 11 references to breastfeeding (where previously there had been only one reference to breastfeeding's impact on child survival). Two statements specifically address the impact of breastfeeding on fertility, as follows:

p. 47, 7.14(f) *To promote breast-feeding to enhance birth spacing*

p. 49, 7.23(h) *Family-planning and Reproductive health programmes should emphasize breast-feeding education and support services, which can simultaneously contribute to birth spacing, better maternal and child health and higher child survival.*

• **World Conference on Women**

For the World Conference on Women, held in Beijing in 1995, IRH followed most of the same steps that it had for the ICPD, using many of the same products to influence the delegates to this forum. A new policy statement was circulated among major organizations and many signatures were obtained including numerous major feminist groups both in the United States and abroad. In collaboration with Wellstart International, targeted advocacy materials were created and distributed including the IRH publication, *Breastfeeding As a Women's Issue: A dialogue on health, family planning, work, and feminism*.

Carried out in conjunction with the actions of many other breastfeeding groups, these activities resulted in eight references to breastfeeding included in the final document. No specific references were made to the impact of breastfeeding on fertility, and only one reference contained positive information on the impact of breastfeeding on women's health.

• **Administrative Coordinating Committee/Subcommittee on Nutrition (ACC/SCN)**

IRH was involved with the ACC/SCN Subcommittee as part of its role as the first WHO Collaborating Center on Breastfeeding. In this capacity, IRH served as

the Technical Secretariat of the Working Group on Breastfeeding and Complementary Feeding. The annual meeting of this body served as a forum to ensure breastfeeding and LAM messages were included in the strategy of an important group of representatives from multinational donors worldwide. These fora have also served as excellent networking opportunities, resulting in consideration of future activities related to LAM in other international meetings.

2. Regional Fora and Activities

Regional meetings and conferences have led to the inclusion of breastfeeding and LAM in various policy statements, strategies, and eventual programming. IRH actively participated in several key fora, including the 1991 Francophone Africa Infant Feeding Conference held in Lomé, Togo, where, in the final statement, breastfeeding was recognized for its important contribution to fertility suppression. A similar meeting was held for the Latin America Region, and IRH again played an important role and provided hands-on workshops for participants.

IRH involvement in the Francophone Africa Maximizing Access and Quality (MAQ) Meeting, held in Burkina Faso in 1995, resulted in breastfeeding and LAM being incorporated into the final statement from the conference, as well as into several countries' individual action plans.

3. National Fora and Activities

IRH has learned through activities at all levels that policy change and development never takes place in a vacuum: programmatic and environmental issues at the national and local level have a strong impact on what can be accomplished. Sometimes the push for change in policy is more effective from the bottom up. Involving personnel who will incorporate breastfeeding and LAM at the programmatic level in the process results in stronger ownership of the final product as well as a more actionable policy. Many IRH programs have acted as the catalyst that enables the change in policy, strategy, or norms. Examples of these programs include IRH work in Chile, Haiti, Jordan, the Philippines, and Zambia.

- **Chile:** In Chile, the first prospective LAM clinical trial led to additional activities promoting breastfeeding and LAM. LAM was added to the family planning norms for the country.

- **Haiti:** The IRH-sponsored program in Haiti, which focused on training, education for health professionals, service delivery, and development of a Management Information System, provided an impetus for changing the national breastfeeding policy to recommend six months of exclusive breastfeeding, and had an impact on the National Breastfeeding Campaign and the BFHI.

- **Jordan:** Policy change was considered to be of primary importance to the accomplishment of IRH's goals with the Center for Consultation, Technical Services and Studies in Jordan. The project wanted to ensure that LAM would be mainstreamed into family planning services and thus continue to be provided after the end of the subcontract. Project personnel involved policy makers in each phase of integrating LAM into the service delivery system and continuously networked and collaborated with other projects and with decision makers in the Ministry of Health. The steps of sensitization, research, training, networking, end of project meetings, and development of LAM materials and resources resulted in (1) the incorporation of LAM into all guidelines and standards developed by the Comprehensive Postpartum Project (CPP) and into the Management Information System; (2) the inclusion of LAM in the national IEC strategy for family planning; (3) the adoption by the CPP of a breastfeeding policy which encourages exclusive

* breastfeeding for six months; and (4) the assurance that LAM and breastfeeding
* will be included in the final National Population Strategy.

*
* • **Philippines:** In the Philippines, IRH staff worked with a local natural family
* planning program to train its service delivery providers in the breastfeeding/LAM/
* natural family planning interface. As a result of the training, recommendations
* were developed for national-level policy. IRH staff then took those recommenda-
* tions into the workshops that subsequently were organized for the Department of
* Health. Based on the results of these workshops, a policy was drafted and pre-
* sented to the National Policy Committee. Shortly thereafter the Secretary of
* Health signed into effect a national family planning policy on LAM.

*
* • **Zambia:** The coordinated efforts of the IRH-sponsored program with the Family
* Life Movement of Zambia, in conjunction with five representatives from both
* governmental and nongovernmental organizations, resulted in changes to the
* national breastfeeding policy to include LAM and six months exclusive breastfeed-
* ing, as well as inclusion of LAM in the national family planning policy.

G. Linking LAM to Other Programs

* Perhaps the most important social marketing aspect of LAM is its inherent
* emphasis on integration. As resources continue to shrink in international health,
* the importance of appropriately integrating interventions grows. IRH positioned
* LAM as the cornerstone of other health interventions, while simultaneously
* building relationships among the various organizations and groups concerned
* about the health of the mother, child, and family.

1. Positioning LAM: Integrating Technical and Thematic Areas

* There are three basic areas of LAM benefits. LAM: (1) supports optimal
* breastfeeding and its associated benefits; (2) supports and incorporates family
* planning/reproductive health counseling as part of the method; and (3) contributes
* to increased child spacing and its associated benefits. Taken together, breastfeed-
* ing and LAM and their associated benefits have more impact on global health than
* any other single intervention, while simultaneously contributing to the integration
* of interventions.

* • **Supports optimal breastfeeding:** LAM counseling focuses on eight optimal
* breastfeeding behaviors which have a positive impact on the health of the mother
* and child, as well as on the mother's fertility. Women who use LAM are more
* conscious of their breastfeeding habits, and improvements in those practices are
* the norm where LAM is implemented. LAM is not just for use where breastfeed-
* ing practices are good: it is also effective as a tool to improve practices that are
* suboptimal. Decision makers in many countries have recognized this value and
* chosen to add LAM to their family planning method mix or reproductive health
* programs to improve breastfeeding and child survival practices, in addition to
* offering couples another family planning choice.

* • **Supports and incorporates counseling for the introduction of complementary
* family planning:** As described earlier, participants at the 1995 Bellagio Meeting
* decided that the fourth step of LAM, starting family planning in a timely manner,
* is part and parcel of the method. Increased family planning use is of concern to all
* policy and program decision makers. While LAM itself is of short duration, IRH
* programs in diverse settings have found high levels of acceptance of other family
* planning methods among LAM users who had never used or even considered
* another family planning method previously. Reproductive health and family
* planning programs are particularly interested in this aspect of LAM.

• **Contributes to improved child spacing:** The demographic impact of breastfeeding on child spacing is well known. In addition, in many countries, there is marked overlap between family planning use and lactational amenorrhea. Incorporating LAM in such settings ensures the introduction of family planning methods at the biologically appropriate time. This may help minimize the misdirection of scarce resources. LAM also helps personalize family planning counseling to avoid the use of inappropriate postpartum family planning methods for breastfeeding women. Data shows that in many countries family planning method use decreases in months 6-12 postpartum. By incorporating LAM in such settings, increases may occur in the length of time couples use family planning methods. A couple may be able to use LAM up to a full six months, then introduce the complementary method, which they now may use the same length of time as they were before, but further out in the postpartum period. The time they use family planning in total, therefore, could be 12-18 months rather than 6-12. Again, this has serious implications in terms of resources used for family planning and in terms of more appropriate child spacing in the population. (Labbok et al., 1997a)

2. Building Collaboration among Organizations

As a small organization with a broad mandate from USAID, IRH has used the integration message to leverage an impressive number of governmental and nongovernmental, USAID-supported, multinational donor-supported, and other organizations and programs to include optimal breastfeeding and LAM in their strategies, programs, and supportive materials. Examples of this collaboration appear throughout this booklet, particularly in the policy and program discussions. Illustrative examples are provided below.

Of prime importance in the integration of LAM has been IRH's approach to collaboration with USAID Cooperating Agencies, USAID Missions, international donors, and other programs. The relationship of IRH with the Cooperating Agencies was formalized by the leadership of USAID in letters describing IRH's unique expertise in this field. In this area, IRH developed presentations and workshops focusing on LAM and optimal breastfeeding for its fertility impact. When more formal approaches to collaboration were appropriate, IRH developed a Memorandum of Understanding (MOU) with the targeted organization. The purpose of the MOU was to commit the involved organizations to collaborate on a number of activities without committing specific funds. MOUs were developed with CEDPA, The Futures Group, JHPIEGO, JSI/SEATS, and Save the Children. Other presentations and various forms of technical assistance were provided to Alan Guttmacher Institute, AVSC, BASICS, CARE, Catholic Relief Services, Development Associates, IPPF International and Western Hemisphere, La Leche League International, Management Sciences for Health, Pan American Health Organization, Pathfinder, Population Communication Services, Population Reference Bureau, Poptech, Rotary International, UNFPA, Wellstart International, World Alliance for Breastfeeding Action, WHO, and several others.

As part of its technical assistance, IRH reviewed materials developed by many of the above organizations, often collaborating on materials development at the country level. In Bolivia and Ecuador, for example, IRH collaborated with PCS to develop breastfeeding and LAM support materials, including flipcharts and pamphlets. Technical review of other organizations' materials frequently resulted in wider dissemination of correct and appropriate optimal breastfeeding and LAM messages than IRH could accomplish using its own programs and networks.

Also at the local level, IRH was effective in bringing together the various Cooperating Agencies working in a country to involve them in the support of breastfeeding and LAM. In Bolivia, Peru, and El Salvador, for example, IRH programs actively organized the work of these organizations and ensured that they met regularly to coordinate their efforts. These activities resulted in a broader

* expansion of breastfeeding and LAM activities. In Zambia, IRH ensured the
* coordination of organizations that had sent representatives to the IRH International
* Training, ensuring consistency of messages and reporting systems among such
* diverse groups as CARE, Family Life Movement of Zambia, La Leche League,
* Lusaka City Council, the Ministry of Health, and Planned Parenthood of Zambia.
* These governmental and nongovernmental organizations collaborated on training,
* service delivery, and policy change that incorporates LAM both in breastfeeding
* and family planning.

* In addition, at the headquarters level, IRH was actively involved in working
* groups with Cooperating Agencies and others, focusing on such diverse topics as
* perinatal family planning education and counseling, training, reproductive health
* materials, training evaluation, medical barriers to family planning, and maximizing
* access and quality (MAQ), among others. The issues of breastfeeding and LAM
* were given attention by these groups that they had previously not received,
* resulting in additional changes to education, training, materials development, and
* program messages across organizations.

* One of the most important relationships in which IRH was involved during its
* Cooperative Agreements was with WHO/UNICEF, both at the headquarters and
* the local level. This involvement led to IRH's designation as a WHO Collaborat-
* ing Center on Breastfeeding. In several countries, as part of its work with this
* organization, IRH was able to support the incorporation of LAM into the Baby
* Friendly Hospital Initiative training curricula, which in turn had an impressive
* impact on disseminating LAM messages to appropriate personnel. For example, in
* Mexico, IRH staff contributed to the development of the BFHI training curriculum
* which later was used throughout Latin America. In Haiti, the IRH-supported
* project collaborated closely with UNICEF, incorporating LAM into the BFHI
* training and into the messages developed for the National Breastfeeding Cam-
* paign. In Jordan as well, IRH's collaboration with UNICEF has resulted in
* changes to the BFHI training.

* Work with WHO/PAHO resulted in the publication and dissemination of
* numerous documents in Spanish to an important network of organizations in the
* Latin America and Caribbean region. PAHO supported the Spanish translation of
* several IRH publications and used these documents to further their regional
* breastfeeding strategy.

III. Reconfirming the Efficacy of LAM

A. The Second Bellagio Meeting

By 1995 LAM was well on its way to being accepted and used in a variety of settings around the world. To support this progress, a second meeting in Bellagio, Italy, was planned to reconsider the original consensus statement, review data gathered since 1988, and confirm the parameters for the use of breastfeeding as a means of child spacing. Twenty-four researchers and clinicians from around the world, many of the same who had attended the first meeting, gathered again in December 1995. The World Health Organization, Family Health International, and IRH cosponsored the meeting with additional support from the Rockefeller Foundation.

This second international group represented the fields of biomedical and social research, family planning service provision and policy, medical education, women's health, and communications, and together they examined the research results from surveys of several thousand women in more than 15 countries.

In the seven years since the first Bellagio consensus meeting, several studies designed expressly to test this consensus were conducted, supported by IRH, FHI, and/or WHO. After reviewing and discussing this available data, the group endorsed LAM as safe and highly effective. Participants confirmed the original Bellagio Consensus Statement and suggested that, with further study, LAM might be extendable beyond six months postpartum (Finger, 1995; Kennedy, Lobbok, and van Look, 1996).

The second consensus statement, published by the *International Journal of Gynecology and Obstetrics*, states that

The studies conducted to assess the Bellagio consensus [1988] have shown that women who are fully or nearly fully breastfeeding are at very low risk of becoming pregnant in the first 6 months postpartum as long as they remain amenorrheic. Indeed, the observed life-table pregnancy rates were less than 2%. In addition, in the studies that included the promotion of appropriate breastfeeding practices, the percentages of women still amenorrheic and still fully breastfeeding at 6 months postpartum were higher than in control groups not receiving such support.

Discussion about the importance and flexibility of the three LAM criteria brought the group to the following conclusions:

1. It is not possible to eliminate the amenorrhea criteria. The end of amenorrhea is the clearest marker indicating increased risk of pregnancy. The participants agreed that for the use of LAM a reasonable definition of the end of amenorrhea is the occurrence, after day 56 postpartum, of two consecutive days of bleeding/spotting or the woman's perception that her menses have returned, whichever of the two comes first.
2. It may be possible to relax the requirement of full or nearly full breastfeeding. Full or nearly full breastfeeding is recommended in the first six months postpartum to maintain lactational amenorrhea as well as for the child's health. In many of the studies reviewed, even in those studies in which many women did not continue fully or nearly fully breastfeeding, pregnancy rates during lactational amenorrhea were very low in the first six months. Before the decision is made to relax the full or nearly full breastfeeding requirement, the provider and the user should be aware that it is the breastfeeding stimulus that causes amenorrhea and the associated protection from pregnancy. Hence, adding supplements to the infant's diet or

***The 1995
Bellagio Meeting
reached
consensus on the
following points:***

***1. It is not
possible to
eliminate the
amenorrhea
criteria.***

***2. It may be
possible to relax
the requirement
of full or nearly
full breastfeeding.***

***3. It may be
possible to extend
LAM beyond six
months
postpartum.***

**...The
Lactational
Amenorrhea
Method should
receive the
programmatic
and policy
support
necessary to
become
available
worldwide.**

-Bellagio Consensus
Statement, 1995

* decreasing the breastfeeding stimulus may hasten the return of fertility prior to the first menses and therefore shorten the use of LAM. Whether the risk of pregnancy increases under these circumstances needs further research.

3. It may be possible to extend LAM beyond six months postpartum. At about six months, an infant's nutritional needs begin to change and complementary foods should be introduced. Supplementation with other foods typically decreases breastfeeding. However, in many, but not all, of the studies reviewed, among those women who continue to breastfeed beyond six months despite supplementation, the rate of pregnancy during lactational amenorrhea, albeit higher than up to six months, remains low, possibly allowing the extended use of LAM. Additional research is needed to establish the conditions under which such extended use would be possible.

Participants agreed that research is needed in both the programmatic and biomedical areas in addition to the above-suggested research on LAM criteria.

The group concluded that:

The efficacy of LAM has now been well established in prospective studies, and programs should regard LAM as an additional method that increases the family planning choices for postpartum women. The Lactational Amenorrhea Method should receive the programmatic and policy support necessary to become available worldwide.

B. Continuing to Document Efficacy: LAM Multicenter Study

As part of IRH's research strategy to reconfirm LAM's efficacy in a variety of settings and to refine the guidance on the use of LAM for the individual woman, a Multicenter LAM study was carried out in ten sites around the world. Cosponsors of the study included the World Health Organization and the South to South Cooperation for Reproductive Health. (Labbok et al., 1997b; and Hight-Laukaran et al., 1997)

Results of the LAM Multicenter study show first that LAM is an effective and acceptable family planning method for women from a variety of ethnic, religious, and cultural groups. The high efficacy is due, in part, to the fact that few women, contracepting or not, will become pregnant during the first 6-12 weeks postpartum. However, the strength of LAM is its proven efficacy after two months postpartum and its concomitant support for optimal breastfeeding.

The second important aspect of LAM is the continuation of family planning use after LAM. The study showed that the rate of continuation may depend on:

1. prior use of family planning,
2. the strength of the family planning referral system for LAM users, and
3. the level of confidence that women have in the contraceptive efficacy of lactational amenorrhea after six months.

In several sites, especially in less developed countries, acceptance of family planning was high even among women who had never used family planning before LAM. However, in developed countries, a surprising finding was the high level of choice to continue relying on lactational amenorrhea beyond the LAM parameters.

The choice of a family planning method after LAM will vary, as it does in any population, with some women choosing less effective methods of family planning. Women who favor a method that is natural and non-invasive may self select for LAM use, leading to continued reliance on lactational amenorrhea beyond six months, while in those areas where acceptance was rapid and self selection less of a factor, methods accepted reflect those in use by the general population.

Satisfaction with LAM generally was high. The answers given to the open-ended questions on best and worst features of LAM were interesting, and raise important counseling issues. It is not surprising that women saw child health benefits as a major advantage of LAM. Additionally, their recognition of the economic benefits suggests that this may be a selling point for the method.

Another issue sometimes raised by family planning experts in industrialized countries is that LAM may impose a burden on women. Evidence suggests that while this is the experience of some women in industrialized countries, it is inappropriate to generalize their experience to women in other countries. This is shown most clearly in the data on convenience and ease of use. These factors were spontaneously mentioned as an advantage of LAM by a high proportion of women in Egypt, the Philippines, Sweden, the United Kingdom, and the United States. Many women noted that LAM was easier to accept and use than an IUD, taking a pill daily, or using condoms. Further, delaying supplementary feeding is seen as saving effort and money among LAM acceptors. It should be noted that these responses were from women who had already accepted LAM and were planning to breastfeed for six months. Thus, women who planned to return to work, and to be separated from their babies, were the exception in this study.

Many women in developing countries also pointed to the value of LAM in promoting closeness of mother and baby as an advantage. This response was given in Germany/Italy; Jos, Nigeria; and Sagamu, Nigeria. This benefit—closeness of mother and child—suggests another important counseling and, possibly, social marketing feature of the method for some cultural groups.

The results of this study provide a solid basis for worldwide acceptance of LAM. This method is an important addition to family planning options for postpartum women: it confers simultaneous benefits for both mother and child; it is very flexible while maintaining high efficacy; and it is acceptable and well used in a wide variety of settings. LAM also benefits family planning programs by providing a means of integrating reproductive health into family planning, and vice versa. Summaries from each of the ten countries that participated in the study are included in Appendix E.

C. Exploring the Acceptability of LAM: Qualitative Research

To further explore the acceptability of LAM among method users, their partners, health providers, as well as among nonusers, IRH added a qualitative component to the Multicenter Study described above. The qualitative research plan was designed to complement quantitative data and included study participants from five sites—Nigeria, the Philippines, Sweden, the United Kingdom, and the United States.

Using focus groups and key-informant and in-depth interviews, the study explored the values of LAM users and their partners in selecting any family planning method and how LAM differed from other methods. The study also looked at how involved the male partner is in selecting a method, as well as in the decision to breastfeed, and the advantages and disadvantages of LAM as perceived both by users and nonusers. Major influences on a woman's contraceptive choice also were explored, particularly:

- reasons for accepting LAM among women with previous family planning experience,
- reasons for accepting LAM among women with no previous family planning experience,
- reasons for not accepting LAM among women who met the three criteria,
- attitudes of the male partner towards LAM,
- barriers to LAM use, including societal/peer pressure, health professionals, returning to work, etc., and
- health providers' attitudes towards LAM.

“LAM gave all the advantages of the pill without the side effects. It was reliable and convenient and did not interfere with sex—although the children did!”

-Partner of LAM User

Data from all sites were collected and analyzed for common themes and attitudes. Due to budgetary and time constraints, this study was conducted using small samples. Thus, findings should be considered exploratory, and subject to later verification. Nonetheless, the study does identify some themes and values common to all sites. These include:

- Users, partners, and non-acceptors valued convenience, efficacy, and naturalness when selecting any family planning method. LAM fulfilled these values for most users and their partners.
- Advantages of LAM noted by users and partners were that it is totally natural and safe, improves breastfeeding practices, and does not require any preparation at time of intercourse. As one partner said, “LAM gave all the advantages of the pill without the side effects. It was reliable and convenient and did not interfere with sex, although the children did!”
- Disadvantages of the method included the requisite night feeds and not exceeding four-hour intervals between feeds during the day.
- Health professionals (doctors, midwives, and nurses) were the biggest barrier to LAM because of their lack of support and lack of knowledge about the method.
- Although men are not the primary decision makers in the choice of a family planning method, their support and involvement is important.
- Men generally preferred LAM over the other methods that were considered for the postpartum period.
- Men stated that they would encourage their partner to use LAM with the next child.

This study reconfirmed the acceptability of LAM for a variety of ethnic and cultural groups. Both women and their partners found the method met their needs: it was convenient, effective, and natural. Beyond its acceptability as a family planning method, LAM also was credited with bringing the couple closer together and improving breastfeeding behaviors.

Study findings also seem to bear out two important steps that must happen for LAM to be promoted and accepted by a larger audience.

1. Informed, trained health professionals are key to the successful promotion of LAM. Based on what women said, this influential group is generally misinformed, skeptical, and unsupportive of LAM. Even in Nigeria and the Philippines, where the health professionals who participated in the study had been trained in LAM counseling and provision, women were given misinformation about the method. Lessons learned in training are discussed in Section VI.
2. Educational materials on LAM and breastfeeding need to be developed for all audiences, including partners of women who rely on the method. Partners in several sites mentioned that they would have liked more information on the method. Additionally, training and counseling materials for health professionals would improve the quality of LAM provision. Findings from each study site could certainly serve as the basis for such materials.

IV. Lessons Learned

The introduction of breastfeeding and LAM programs around the world has provided many lessons—both expected and unexpected—which are important to the continuation of such programs in the future. In this section, lessons learned that underscore the various benefits of LAM are discussed with illustrations from field sites. In addition, lessons related to obstacles, both attitudinal and operational/programmatic, are addressed. Recognizing that no two project sites are the same, there are some general lessons learned that provide important insights and guidance for continuing work.

A. Benefits of LAM

Clinical and field experience worldwide has confirmed the many benefits of LAM for programs, for providers, and, perhaps most importantly, for the user and her family. Many benefits have been documented and reported in other publications, and are woven throughout other sections of this booklet. The following, however, are examples of specific benefits that have been reported by IRH-supported field programs.

- **LAM improves interpersonal relationships between providers and clients.**

Because LAM is an education-based method, counseling is key. In several programs, such as Burkina Faso and Zambia, service providers who offered LAM said the method improved their counseling skills. They spent more time with their clients, and they personalized their counseling toward the breastfeeding status of the woman. Most programs take advantage of numerous opportunities during both pre and postnatal care to introduce a woman to LAM and advise them on optimal breastfeeding practices: for example, the expectant mother coming for her prenatal visits can be counseled about LAM; lactation consultants or nurses can counsel women who have delivered in the labor ward about LAM; and doctors and family planning service providers can counsel a woman who is coming for her postnatal checkup about LAM. A health care provider for CARE Zambia reported that, because of the frequent opportunities for contact with clients, and the fact that all health care providers were sensitized about LAM, “we don’t ‘miss out’ on our clients anymore.”

Some health care providers have expressed concern that the method may be difficult for women, or that it takes too much time to teach her, or that she may misunderstand and use it incorrectly. The results of the programs illustrated in this document clearly demonstrate that women can learn the method and practice it correctly, and that they do return for other methods in a timely manner. With growing international interest concerning gender issues, this aspect of provider-client trust and respect may become central in the discussion of the provision of all family planning methods and services.

- **LAM improves breastfeeding practices.**

This is perhaps one of the most common benefits reported by and about LAM users. When women understand the relationship between the baby’s suckling and their fertility, they are much more likely to avoid long intervals between breastfeeds or to give supplements at an early age. Even women who have breastfed other babies say their breastfeeding patterns improved when using LAM. In Chile, among the control and study groups involved in the LAM efficacy study, breastfeeding practices related to supplementation were roughly the same; yet, women who actively chose to use LAM experienced longer periods of amenorrhea, suggesting that their breastfeeding practices were somehow different even from those of other fully breastfeeding women.

- **LAM attracts new family planning users.**

For many women, LAM is their first experience with a family planning method. Often this is because of myths and rumors they have heard about the side effects of commodity-based methods. However, a woman who is correctly counseled to use LAM learns when she is no longer protected and about the different methods available to her while she is breastfeeding. Numerous programs have noted that many women who never used a family planning method before LAM go on to use another method once LAM is no longer effective. For example, in the LAM Multicenter Study, in one of the Nigeria sites, 100 percent of the LAM users with no previous family planning experience started using another family planning method after LAM. In another Multicenter site, Egypt, 71 percent of the LAM users had never used family planning previously, and of those, 88 percent were using a family planning method at month 12. In Rwanda, 77 percent of LAM-9 users were new to family planning, and 85 percent of these users went on to use another family planning method (and, at the time of the assessment, not all of the study population had finished using LAM-9 so this figure was likely higher).

- **LAM promotion translates into potential cost savings for family planning programs and for users.**

Financial savings are becoming an important programmatic consideration as donor agencies increasingly stress sustainability and self-reliance in family planning and related programming. The savings can accrue from the breastfeeding support activities and from reduced need for double coverage contraceptive use. This results in a direct cost savings since the alternative method need not be purchased for those months when a woman is using LAM. Governments recognize these cost savings as being important: Dr. Juan Flavier, former Secretary of Health for the Philippines, stated his belief that the cost savings recognized as a result of LAM would be enormous for his country. (*Breastfeeding and Family Planning: Mutual Goals, Vital Decisions*, 1994) Savings also result for the LAM user. Women relying on LAM have a few months when they do not need to buy another method. In addition, the breastfeeding habits promoted by LAM can result in savings on expensive supplements and doctor visits for the infant, since exclusively breastfed infants have a lower morbidity rate. There are initial costs associated with training personnel to counsel women, but once a woman knows the method, she can use it during subsequent postpartum periods as well.

- **LAM helps women choose an appropriate postpartum method.**

The new postpartum approach in the donor community emphasizes the need to consider every postpartum woman as a breastfeeding mother. (Mensch and Winikoff, 1992) Such an approach is logical, since about 95 percent of babies worldwide are breastfed for some time, and massive programming efforts and campaigns are underway to increase not just the overall percentage but the exclusivity of breastfeeding in the first six months postpartum. (UNICEF, 1991) This not only challenges the assumption that women need immediate postpartum protection, but suggests improvements in the quality of counseling to ensure that appropriate methods are considered and are available for the breastfeeding women. For example, a woman who exclusively breastfeeds in the first six months postpartum, given correct information about appropriate methods for use during breastfeeding, probably would not choose to use a combined oral contraceptive.

Another assumption is that women will not return for family planning services if they are not provided in the maternity, immediately postpartum. Family planning service providers have struggled with this issue for many years, especially in areas where distances are great and the cost of returning to a clinic site is high, both monetarily and timewise. The use of LAM, however, can provide an adequate window of opportunity when service providers can encourage women return for and initiate a complementary method in a timely fashion. LAM counseling emphasizes the need to begin using another method when any of the three

criteria change. This approach fits well into postpartum programs that offer comprehensive care for both mother and child. In the Philippines, for example, LAM and breastfeeding counseling are being offered in Under Five Clinics, where women routinely bring their children for health screening and immunizations. In Burkina Faso, LAM was offered in combined prenatal, postnatal, and MCH delivery service sites, as well as in other sites. The integrated care approach tended to have more LAM clients, with up to 50 percent of the women delivering in these sites accepting LAM and being followed up by the center.

- **LAM is empowering.**

The possibility that women can use their own body, and can trust themselves for a period of time in terms of regulating their own fertility, is a very empowering notion. Improved counseling to the woman provides her with better information about the family planning options available to her, and gives her control in choosing the most appropriate method for her and knowing when to initiate that method. Again, once learned, LAM can be used after subsequent pregnancies with little or no additional guidance.

- **LAM is appropriate for a variety of cultures.**

LAM has been used by women in developed and developing countries; women with several children as well as new mothers; women who have never used a family planning method and those who want a break from commodity-based methods; by Catholics and Muslims. Wherever women breastfeed, LAM is an appropriate option.

- **LAM improves communication between couples.**

In several field programs, LAM was introduced to the couple. This was very popular among male partners who, once informed, were more supportive of their wife's breastfeeding and use of LAM. In Rwanda, following LAM counseling, men indicated that they were more aware of their wives' needs while they were breastfeeding than they had been when their previous children were infants. The couples counseled described improvements in personal communication and changes in how household money was spent. (Cooney et al., 1996) In Nigeria, traditional beliefs dictate that a couple abstain from intercourse while the woman is breastfeeding because sperm can pass through breastmilk to the baby. Couples who used LAM were counseled that it was safe to resume sexual relations. Men and women alike praised the method for improving marital communication and bringing them closer together in the postpartum period. Even in sites where women and men were not counseled together, differences were noted: in Burkina Faso, service providers reported that there was greater involvement of husbands in the choice of LAM and of future contraceptives.

- **LAM has a synergistic effect.**

As mentioned above, LAM brings people to breastfeeding through family planning, and brings people to family planning through breastfeeding, resulting in a profound impact on the health of women and their children. In many of the countries in which LAM has been introduced, it is promoted as a strategic introductory postpartum family planning method that not only improves breastfeeding practices, but also attracts users to other family planning methods and reproductive health services. Women who have used LAM report that, once they knew about LAM, they chose it not only to space births but also to improve the chances of survival for their infants. Many LAM users breastfeed exclusively, although the method does not specifically require it. Numerous sites incorporating LAM chose to link their efforts with those of UNICEF and other breastfeeding programs to promote a consistent message of exclusive breastfeeding for up to six months.

LAM research, programs, policy, and/or training have been incorporated in the following countries:

Australia
Bangladesh
Bolivia
Brazil
Burkina Faso
Cameroon
Canada
Chile
Cote d'Ivoire
Dominican Republic
Ecuador
Egypt
El Salvador
Germany
Ghana
Guatemala
Haiti
Honduras
India
Indonesia
Italy
Jordan
Madagascar
Malawi
Mexico
Nepal
New Zealand
Nigeria
Pakistan
Peru
Philippines
Russia
Rwanda
Sénégal
South Africa
Sweden
Togo
Tunisia
Uganda
Ukraine
United Kingdom
United States
Zambia
Zimbabwe

- **Meeting the LAM criteria eliminates the need to administer a pregnancy test prior to IUD insertion or initiation of hormonal contraceptives.**

Amenorrhea in the postpartum period is physiologically linked with lactation and many women and lay practitioners consider it a sign that ovulation has not yet resumed. Amenorrhea alone, however, does not constitute complete proof of anovulation. Studies have found that ovulation occurred before menstruation in 45 to 57 percent of women who breastfed their infants (Howie et al., 1982; Gray et al., 1993). Such data have led many researchers to believe that lactational amenorrhea is an unreliable indicator of anovulation, but do not take into account how the women were breastfeeding nor the length of time postpartum. However, LAM encourages consideration of three criteria, not just lactational amenorrhea, to assess pregnancy risk. In particular, it is important to note that as time postpartum increases after six months, the more likely it is that ovulation will precede menstruation. A fourth parameter also applies: the woman understands that if any one of the three criteria are not met she is at risk of pregnancy and should discuss birth spacing with her partner and begin using a family planning method that will not interfere with breastfeeding.

Family planning programs often are hesitant to provide amenorrheic women a choice of methods, particularly IUDs and tubal ligation. A beneficial side effect of LAM is increased breastfeeding and confidence that an amenorrheic woman is not pregnant. This decreases the need for pregnancy tests prior to insertion of an IUD or sterilization in an amenorrheic, fully breastfeeding woman at, or before, six months postpartum.

B. Overcoming Obstacles: Changing Attitudes

Programs worldwide have encountered obstacles to the introduction of LAM. While each field site has encountered unique barriers, some of the more common obstacles dealing with changing attitudes are described below with the responses that have been used in the field to address them. The next section (*C. Addressing Operational and Programmatic Issues*) examines issues that expand on programmatic constraints more in depth. In addition, common questions and answers related to many of these issues are included as Appendix B.

1. Policy

Obstacle: *Policy makers and program planners have found it difficult to accept LAM for several reasons: (1) they tend to adhere to current practices and vested interests; (2) messages regarding breastfeeding and LAM have been inconsistent; (3) skepticism is widespread concerning a woman's ability to change breastfeeding behaviors for the desired fertility impact.*

Solutions: Reported studies have made it virtually impossible for scientific analysts to deny the impact of LAM. Much work needs to be done to fully educate policy and decision makers as well as those who doubt a woman's ability to change her practices. To convince this audience, IRH at the headquarters level has concentrated on disseminating the results of such operations research and programmatic work in a manner appealing to the policy maker. IRH has disseminated reanalyses of DHS data that present supportive documentation for LAM. (Labbok et al., 1997a) Strong, consistent messages have been developed among the many LAM programs that have made great headway in overcoming

the doubts expressed by these key stakeholders, and policy worldwide has begun to change, as evidenced in, among other areas, (1) the increased number of national policy statements on breastfeeding, family planning, reproductive health, and other areas, that mention LAM or breastfeeding for its fertility impact; (2) the increased number of international documents containing these key messages; (3) the increased number of changes to national published family planning norms and standards; (4) the increased number of changes in all levels of health education curricula, to cover breastfeeding topics more correctly and completely, and to include LAM; (5) the increased number of Management Information Systems which include LAM; and (6) the number of countries—more than 40—where LAM activities have taken place and/or LAM has been incorporated into service delivery.

2. Provider

Obstacle: *Medical professionals and service providers often find it difficult to accept LAM. Well-educated service providers may have difficulty accepting LAM because it was not part of their training. It also is a user-controlled method and, as such, is not typical of curative medical responses. In some sites, those medical professionals who were offering LAM encountered resistance from other medical professionals who had not been trained. As with other preventive techniques, it has been difficult for practitioners to receive reimbursement for their time and counsel in support of breastfeeding under the current fee for service/fee for commodity model of curative care reimbursement.*

Solutions: As described elsewhere in this document, IRH efforts in health professional education and training have been strong. Medical, nursing, nurse-midwifery, continuing health education, and other curricula have been changed to include stronger breastfeeding components and incorporate LAM. Impressive changes in at least one level of professional education have been realized in Bolivia, Dominican Republic, El Salvador, Ghana, Peru, the Philippines, Uganda, and other sites. Preservice education and training should continue to be a focus of technical assistance in LAM.

In some sites, service providers who were offering LAM sensitized and/or trained other providers in their services about breastfeeding and LAM to decrease resistance. In Haiti, for example, at each of the four pilot sites, LAM trainers provided workshops to all personnel in the clinic or hospital, as well as community-based service providers. In Ecuador, CEMOPLAF staff trained all providers at their clinics on breastfeeding and LAM. In many sites, even if providers were not going to offer LAM services themselves, they were convinced that LAM was worthwhile and would refer potential LAM users to those who were providing the services.

Regarding fees for services, this is an issue that will continue into the future. Providers who work in Jordan have suggested that private sector medical practitioners may see some value in recruiting LAM clients if they have some assurance that by doing so, they may bring in future business for family planning, well baby care (such as immunizations), and other services.

Obstacle: *The method name—LAM, MELA, MAMA—is considered too “jargonny” by some groups. Others have expressed frustration with the highly sophisticated term, Lactational Amenorrhea Method, and prefer calling the method breastfeeding, or the contraceptive effects of breastfeeding.*

Solutions: It is important to continue to differentiate between *LAM* and *breastfeeding*, for many reasons, but especially since every woman and every service delivery provider knows someone who became pregnant while breastfeeding. **Breastfeeding alone is not sufficient to avoid a pregnancy.** There are many patterns of breastfeeding, with varying degrees of impact on women’s return to fertility. LAM provides guidance for optimizing breastfeeding behaviors, but emphasizes two additional conditions—amenorrhea and time postpartum—in order to ensure the effectiveness of the method. While the name Lactational Amenorrhea Method is considered by many critics to be too scientific, the short acronym translates well in most languages. In those languages where it is difficult to translate lactational amenorrhea, or in settings where the term amenorrhea is not understood, programs have often decided to use the English acronym (LAM), or the translated acronym, as the popular name of the method. (This also is the case for intrauterine device, which is almost universally referred to as the IUD.)

Several field programs have found that one easy way to help the mother remember LAM is to link each letter of the acronym with one of the criteria. For example, in English, L=lactation, A=amenorrhea, and M=months. (French: M=mois, AM=allaitement maternel, and A=amenorrhée; Spanish: ME=meses, L=lactancia, and A=amenorrea). As is the case with other methods, it is important to consistently use the same acronym. Imagine the confusion if family planning programs started making up their own acronyms for the IUD!

Obstacle: *Organizations that are skeptical of promoting natural birth spacing methods, and that consider LAM as a natural method, may be reluctant to offer LAM. Associating LAM with natural methods has slowed its acceptance in some settings.*

Solutions: The most important solution offered from the field on this issue is that no service provider can argue with the fact that LAM has an efficacy rate that equals or exceeds that of most commodity-based methods. It should be stressed that “natural” is not synonymous with “reduced efficacy.” Some sites market LAM as a hormonal method because it relies on the naturally occurring hormonal process in the woman. Other sites, such as the Philippines, have chosen to distinguish between traditional natural family planning (NFP) and “modern” NFP, firmly establishing LAM in the category of modern. Based on the WHO definition of natural family planning, however, which requires periodic abstinence, LAM would not necessarily fall under the category of natural methods since it requires no abstinence. Since universal consensus on the definition is not available, each country is encouraged to review this issue carefully and establish national consensus, taking into consideration the cultural setting and corresponding impact on the promotion and acceptance of LAM by both service providers and clients. For example, in countries where natural family planning methods are being discour-

aged, LAM can be promoted as being modern, whereas in those countries or settings where NFP is culturally preferred and/or is finding its place alongside the commodity-based methods, promoting LAM as a natural method may indeed be an appropriate choice.

Obstacle: *LAM does not protect against AIDS.*

Solutions: This problem is not unique to LAM. LAM users are informed that they are not protected against HIV/AIDS or other sexually transmitted diseases (STDs) and precautions for protection should be described. STD/AIDS prevention should be part of counseling for all family planning methods.

Obstacle: *Women do not breastfeed exclusively. In many cultures water, teas, and other liquids are given to the infant as part of birth rituals. The breastfeeding patterns required for LAM are not feasible for most women.*

Solutions: Health care providers need additional education about optimal breastfeeding and the introduction of complementary foods. Many health care providers are not aware of the growing international support for the promotion of exclusive breastfeeding for up to about six months of age. (World Health Assembly, 1994) LAM, however, does not require exclusive breastfeeding, but full or nearly full breastfeeding, which allows for occasional tastes of other foods and liquids. In the majority of countries studied by the Demographic and Health Surveys, more than one-third of women surveyed are practicing LAM-compatible behaviors for at least three months without any LAM intervention (Labbok et al., 1994). Based on analysis of these surveys as well as on traditional beliefs supporting a breastfeeding-based method, it can be concluded that LAM can be used by a large proportion of women from diverse cultures for at least several months.

As noted above, LAM improves breastfeeding practices. LAM users are more likely to approach exclusive breastfeeding than nonusers who are breastfeeding. LAM users in the Multicenter Study listed improved breastfeeding practices as a major advantage of LAM. And, in several sites, service providers do promote exclusive breastfeeding to be consistent with other health interventions taking place in their countries. When they counsel LAM clients, however, providers know to what extent supplemental foods are permitted.

Obstacle: *Many providers believe that LAM is appropriate only in places with extended durations of lactational amenorrhea (as measured by DHS and other data). If national data indicate that women experience only short durations of amenorrhea, policy makers often feel that it is not worth the effort to promote this temporary method.*

Solutions: Service providers have found that the breastfeeding patterns practiced by LAM users generally extend a woman's duration of lactational amenorrhea. Even those women who can not use LAM for the full six months because they want or need to introduce other foods on a regular basis, or because of menses return, often welcome the break, albeit brief, from other methods.

Obstacle: *Some providers argue that LAM will appeal only to couples who practice traditional family planning methods and/or reject modern methods for religious or other reasons. Women who have access to modern methods will not be interested in a short-term natural method like LAM.*

Solutions: LAM is promoted to a wide spectrum of clients and packaged in different countries to appeal to the target audiences. Participants in the LAM Multicenter Study cited numerous reasons for using LAM, with religion being of little or no significance. Research in developed countries showed that LAM users appreciated the break LAM gave them from commodity-based methods. In many cases, LAM provides an opportunity for service providers to counsel women postpartum, and for women to make an informed choice about the use of another method after LAM.

Obstacle: *Many providers feel that LAM does not have a chance in cultures without strong beliefs in the value of breastfeeding and its fertility-suppressing effects. Without this basis, people will be skeptical of the whole LAM concept.*

Solutions: This issue is primarily of concern in developed countries, and like many of the attitudinal obstacles, is overcome through information, education, and experience with the method. In most countries, even developed, there is some recognition of breastfeeding's impact on fertility. LAM users from Germany, Sweden, the United Kingdom, and the United States were willing to try LAM despite the pervasive negative beliefs about breastfeeding for child spacing. Most importantly, LAM corrects the myth that breastfeeding alone prevents pregnancy by providing the user with the guidance she needs to have high family planning method efficacy. Women who consciously choose to use LAM, rely on the three criteria, and switch to another family planning method in a timely fashion, experience very low rates of pregnancy.

Obstacle: *Many providers argue that breastfeeding and LAM put too much added pressure on women. Breastfeeding and LAM deprive women of needed rest, make new demands on an already insufficient diet, and decrease bone minerals.*

Solutions: Programs supporting optimal breastfeeding and LAM place a great deal of importance on counseling women, when possible, about reducing their workload, to whatever extent possible, and improving their diet in simple, inexpensive ways. In all countries, it is easier, safer, and less expensive to supplement the mother's diet than it is to supplement the infant. In Rwanda, LAM counselors met with couples and were able to address these issues with the male partner. In Zambia, counselors noted the same: if they were able to meet with the male partner, it was easy to make him understand the issues and work with him to develop ways to ease his partner's workload and to provide her with better, or even just more, food. Most programs have determined that the real obstacle is lack of information for men as well as lack of attention to involving them in the process.

In many countries, breastfeeding is recognized as a national priority: policy, legislation, and programs are trying to reduce burdens placed on breastfeeding women.

Obstacle: *Some providers are concerned that LAM is being promoted as the major, or even as the only reason to breastfeed. They fear that if too much emphasis is put on LAM, many mothers might stop breastfeeding once they stop meeting all of the LAM criteria.*

Solutions: Women who use LAM are usually counseled on all of the benefits of breastfeeding—nutrition, child survival, family planning, immunization, and so forth. LAM counseling encourages the mother to continue breastfeeding even when she can no longer use LAM. Additionally, the emphasis on appropriate family planning methods for the lactating woman also ensures that breastfeeding is not interrupted prematurely.

3. Client

Obstacle: *Early discontinuation of optimal breastfeeding is prevalent. Although prolonged breastfeeding is still common in many countries of the world, there is a significant and growing population that stops breastfeeding completely or begins mixed feeding early, either due to constraints such as barriers to breastfeeding in the workplace or traditional practices. Below are the most common reasons women mention for discontinuing breastfeeding.*

- **Not enough milk:** This is the most often cited reason for early discontinuation of breastfeeding. Physiologically, it is rare that a mother does not produce enough milk for her infant, but many women fear that they cannot adequately nourish their growing infant with breastmilk alone.
- **Working outside of the home:** Working mothers may stop breastfeeding because of a lack of child care facilities at their place of work or difficulties involved with transporting infants to a worksite. A large number of women in private industry are unable to continue full breastfeeding beyond their entitled maternity leave, while some women are forced to stop feeding because they are not allowed any paid leave.
- **Maternal illness:** Maternal illness, such as fevers and digestive ailments, is also a reason for early cessation. Women fear that the disease will be transferred to the child or that medicines will influence milk composition. Cessation of breastfeeding under such conditions jeopardizes the health of the ailing mother (due to greater likelihood of breast engorgement and infections) as well as the breastmilk-deprived infant.
- **Infant's illness:** Local beliefs about the composition of maternal milk and its association with the health of the infant also influence breastfeeding practices. Studies on infant diarrhea have noted the custom of stopping feeds when a child has diarrhea. This practice, which extends to other illnesses as well, poses a double risk: depriving the sick infant of needed maternal antibodies and nutrition through breastmilk as well as exposing the child to other illnesses if unhygienic methods of supplementary feeding are used.

- **Subsequent pregnancy:** In many cultures, breastfeeding is stopped if the woman becomes pregnant because it is thought to deprive the fetus of nutrition, and not be good for the breastfed child. Thus, bottle feeding in the early postpartum period poses a triple risk: the young infant is often weaned abruptly; the woman is at risk of all problems related with short interval between pregnancies, such as anemia; and an early pregnancy may retard fetal growth.
- **Birth interval:** Women do not as yet have adequate information on the importance of child spacing for their health and for their infants' survival. Therefore, they do not look for interval methods.
- **Cultural norms, practices, and pressure to introduce liquids and other foods:** Prelacteal feeds are common in many cultures as is discarding colostrum. In many African countries, women begin giving their infants water early to quench their thirst. In many cultures, women are encouraged by family members and health professionals to introduce foods well before the recommended six months.

Solutions: The solutions to these issues, again, are based in information, education, and communication (IEC) and counseling. Special groups, such as women who must be separated from their infants, experience changes in breastfeeding patterns and need special attention (counseling, support, encouragement, etc.). IEC efforts have been launched at all levels to address client-based attitudes, since women's decisions are made based on input from a wide range of people: policy makers have been provided information, including data, to promote appropriate maternity legislation conducive to initiating breastfeeding and maintaining it even when a woman must return to work; service providers in many sites were provided with information on the safety of exclusive breastfeeding for the first six months postpartum so that they could educate their clients; and mothers-in-law have been educated along with their daughters-in-law to show that babies can survive quite well on breastmilk alone for the first six months postpartum; and so forth.

Mother-to-mother support groups and peer counseling are effective and popular ways for women to discuss breastfeeding problems and share solutions. In Honduras, a study that set up breastfeeding counselors and support groups in the community found that the strategy proved effective in improving breastfeeding practices. Women who had contact with the counselors, either individually or within a support group, were more likely to exclusively breastfeed longer. For example, the median survival time for exclusive breastfeeding for the contact group was 9.6 weeks as compared to 4.3 weeks for the control group.

Finally, it is important that mothers, especially first time mothers, feel confident in their ability to adequately nourish their infants. As was proved in Chile, proper antenatal skills-based training can help even primiparas achieve breastfeeding success comparable to that of multiparous women.

C. Addressing Operational and Programmatic Issues

Over the years, program planners and implementers have encountered a variety of challenges to incorporating LAM into ongoing service delivery programs, whether clinic, hospital, or community based. Valuable lessons have been learned, however, and experiences have been shared to varying degrees, within and across national, regional, and international boundaries. In addition to clarifying specific constraints and obstacles, experience indicates that certain steps in the design and implementation of programs are critical to success and that developing collaborative relationships with other institutions and effective partnerships with all levels of health personnel are key to achieving program goals. A number of operational and programmatic issues that have surfaced frequently in the implementation of breastfeeding and LAM programs are highlighted below, drawing examples from family planning, maternal and child health, breastfeeding, natural family planning, and other reproductive health-related program settings.

Issue

Discussion

The health community worldwide generally is favorable toward promoting breastfeeding. A variety of groups, including some family planning organizations, promote breastfeeding enthusiastically, but will not actively embrace LAM as a postpartum contraceptive method, maintaining that child spacing is only one of many benefits of breastfeeding.

The arguments are strong, however, for making the distinction between breastfeeding and LAM when counseling a prenatal or postpartum woman. Breastfeeding has an impact on fertility, but LAM gives the breastfeeding woman three criteria to monitor, helping her to understand how to depend reliably on breastfeeding for protection from a subsequent pregnancy, for up to six months. Often, once this distinction is made clear to breastfeeding counselors and family planning service providers, their enthusiasm for LAM increases. Implementers of an IRH and Population Council project in Brazil, for example, noted that service providers, particularly physicians and nurses, held a deeply imbedded belief that lactation does not provide adequate protection against pregnancy. The key message that was relayed to these providers was that LAM is not just breastfeeding, and that the method's high effectiveness was limited to the period of amenorrhea for up to six months postpartum.

Suggested Actions:

- Develop or adapt materials targeting service providers that clearly explain the difference between breastfeeding in general and choosing LAM as a method.
- Ensure that service providers are trained well, and that all people in the service delivery system who come into contact with clients are sensitized about both breastfeeding and LAM.
- Work with service providers to translate the LAM algorithm into a culturally appropriate language and form that can be used easily with their clients.
- Ensure that service providers understand that LAM is a choice among a number of appropriate family planning options for postpartum breastfeeding women. IRH field program personnel report that it is extremely important to emphasize that the woman or couple consciously makes a choice to use LAM and rely on its conditions to space their children. Women who "rely on breastfeeding" generally have no idea how long they can do so, nor how to optimize their breastfeeding practices to better ensure a long period of lactational amenorrhea.

Some service providers prefer promoting the child spacing benefits of breastfeeding as opposed to LAM, per se, as a family planning method.

Overburdened program managers and field personnel sometimes are reluctant to add LAM to their services. They may believe that LAM is difficult and time consuming to implement, and question the wisdom of investing the time and other resources required to promote such a short-term method.

Discussion

In many settings, health professionals, paraprofessionals, and volunteers at all levels are already overwhelmed by the number of responsibilities that they have and may react negatively to the addition of LAM and breastfeeding counseling to their scope of work. Program managers frequently are hesitant to invest in provider training, monitoring, and supervision of a new method, or do not have the resources for developing or purchasing the training and education materials needed to promote LAM.

Program managers who have implemented LAM have found that it is easy to incorporate a LAM module into ongoing training, and that complex educational and training materials are not required. Inexpensive adaptations of IRH materials have been used in almost all field program sites. Program managers feel that frequent monitoring and supervision is necessary in the early stages of LAM implementation in order to assist service providers in educating their coworkers, in managing LAM clients, and in the corresponding data collection, and so frequently they choose to start on a small scale before expanding services. Once providers are more comfortable with the method, LAM follow up should be added into the normal monitoring and supervisory process.

In clinics where LAM has been integrated, many providers find that because LAM counseling introduces other postpartum methods, it shortens the time they have to spend with the woman when she returns for her follow-up method. As stated elsewhere in this document, family planning providers also find that LAM increases the use of those follow-up methods. In the natural family planning setting, LAM takes less time to teach than other natural methods.

Service providers in many settings have noted that LAM may be considered extra work that requires increased resources and attention; however, the breastfeeding patterns promoted through the use of LAM may be an effective tool to improve breastfeeding and weaning patterns in general. The time savings (primarily in dealing with sick infants) potentially realized by these improved patterns could be enormous.

Suggested Actions:

- Give program planners, managers, and service providers information on other programs that have incorporated LAM successfully into their services, especially those programs that are similar in nature and deal with a similar clientele. Whenever possible, highlight case studies from within the same country or region.
- Consider possible alternatives and develop a comprehensive strategy for implementing the required training, monitoring, and supervision of personnel. Is a LAM-specific training of trainers required? How appropriate is it to incorporate LAM into ongoing family planning trainings and refresher courses for service delivery personnel? What changes are required to the current system in order to successfully monitor and supervise field personnel in LAM and breastfeeding counseling skills?
- Review existing client education and training materials previously developed for LAM and decide which, if any, of these materials, can be adapted for use in a given setting, or whether new materials are required. In terms of client materials, women of all education levels—even preliterate audiences—have used LAM successfully. The key messages concerning the three criteria and

fourth condition generally are regarded as clear and succinct. Educational and training materials on LAM have varied, however, depending to a great extent on resources available. Creative partnerships between agencies have helped to ensure higher quality and greater numbers of printed materials specific to LAM or, in the case of Bolivia and the Dominican Republic, have led to the full integration of LAM into training and IEC materials being distributed and used at the national level.

- In family planning programs where managers and/or service providers want to offer LAM as an option but do not want to undertake breastfeeding counseling and support on a routine basis, or, alternatively, in breastfeeding programs where counselors are not in a position to provide a complementary family planning method, the development of referral systems is a viable and synergistic alternative. Mother-to-mother support groups in some communities, for example, have complemented the work of family planning organizations by relieving service providers of much of the counseling and support required to successfully establish good breastfeeding practices.

Issue
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Discussion

Many family planning programs promote only a few long-term or permanent methods, for a variety of reasons. Does LAM, a short-term, education-based method, have a place in these settings?

Numerous examples have been given throughout this document concerning the benefits of incorporating LAM into existing service delivery systems, even those that focus on permanent or long-term methods. Given the level of international interest in the promotion of informed choice, adding another method, even a short-term method, expands a woman's options. LAM also is a perfect adjunct method for postpartum clinic programs offering IUDs: many couples are not prepared to accept an IUD, or any other family planning commodity, in the confusing days after childbirth. Time often is needed to consider and discuss the options. If the service focuses on permanent methods, LAM gives the couple a few months to prepare psychologically for such a procedure or allows them time to feel confident that this newborn will survive before accepting a permanent method.

Suggested Actions:

- Provide family planning programs with information about LAM programs, particularly those in which providers of long-term methods were convinced that LAM had an important role to play in their services.
- Ensure that LAM is incorporated into the data collection or Management Information Systems of family planning programs as a way of tracking the acceptance of a follow-on method. Document continuation rates for follow-on methods chosen by LAM users.
- Encourage programs that do incorporate LAM alongside long-term methods to document and disseminate their experiences.

Some program planners believe that LAM has no place in programs that promote long-term or permanent methods.

Trained community workers who promote family planning and are given monetary incentives for selling commodity-based methods feel they have no incentive for promoting LAM.

Issue

Discussion

While the incentives to providing LAM may not be immediate, they do exist. Some community workers are given credit for CYP, and LAM can be counted as 0.25 CYP per user.

In Ecuador, CBDs were trained to provide LAM. One of the incentives for them to promote such a method was that LAM was shown to attract new clients, women who had previously never used a family planning method. Since LAM counseling emphasized the importance of using another method of family planning when any one of the criteria changed, LAM users would eventually be in the market for another method. Therefore, any time spent promoting LAM was time invested in promoting other complementary methods as well.

Improved perception of client/service provider relationships reported by various LAM programs has additional benefits beyond the sale of an oral contraceptive packet, condoms, or foaming tablets. Satisfied clients will return for additional services as well as to purchase their family planning commodities in the future.

Suggested Actions:

- Where monetary incentives are given to service providers for the sale of commodities, providers should be made aware of the fact that LAM has been shown to attract new clients and that appealing to new clients translates into greater coverage and eventually into higher sales. It can be a "door opener."
- Program planners should consider developing incentives that are somehow linked to CYP, or even to quality of services, instead of, or in addition to, monetary incentives derived through the sale of commodities.
- Programs that currently monitor CYP should be encouraged to incorporate LAM into their information system, tracking, if possible, the number of women that switch to another method, and the timing of the adoption of that method. This information is useful for documenting the long-term benefits related to LAM promotion.
- Programs should emphasize the quality of counseling as well as the quantity of commodities sold. Providers should be oriented concerning the importance of informed choice, the special needs of the postpartum breastfeeding woman, and the role of LAM in expanding family planning options of the postpartum woman.

Some providers believe that LAM can be offered only to women who receive prenatal care and/or who give birth in health facilities.

Discussion

Many women still do not receive prenatal care and far too many do not have access to health facilities when they deliver. Do all of these women “fall through the cracks” when it comes to promoting LAM?

There are many appropriate times to promote LAM: it does not have to be taught before a woman gives birth nor started immediately postpartum. A woman who meets the criteria can start using the method even a month or two after birth, if she meets the criteria. If a woman is not seen for prenatal care or does not deliver in a health facility, she can be approached at a well-baby visit in the early months postpartum or at a family planning or immunization visit. In some programs, LAM is provided by community providers, who visit recently delivered women at home. Because LAM does not depend on supplies and is easy to teach, traditional birth attendants also can be LAM providers.

It is important to stress that since LAM is an information- and behavior-based method that does not require any supplies, it can be provided in a variety of settings. Once a woman is counseled on how to use LAM, she controls its use. In fact, once a woman has experience with LAM, there is no requirement that she receive additional orientation in order to successfully use the method again.

Suggested Actions:

- Provide orientation on breastfeeding and LAM to program planners, managers, and service providers at all levels (physicians, midwives, nurses, and so forth).
- Where possible, include LAM training and hands-on breastfeeding skills training in prenatal courses, especially for first-time mothers.
- Include breastfeeding and LAM in traditional birth attendant and child development worker training programs.
- Include breastfeeding and LAM in training programs for community based distributors and other community-level workers.
- Inform health care providers about the physiological basis of LAM so that they understand and counsel effectively on the importance of full or nearly full breastfeeding.
- Train maternity hospital and postpartum clinic staff in breastfeeding and LAM counseling.
- Add breastfeeding and LAM to the health education messages given to women who have institutional deliveries.
- After health personnel are sensitized and begin offering breastfeeding and LAM services, ensure that potential clients are aware of LAM and its effectiveness through targeted IEC. Include men in the targeted messages whenever possible.

Programs frequently try to incorporate LAM with little or no long-term planning or consideration of the steps required to launch and sustain a new method within a service delivery system.

Discussion

The “six steps to incorporating LAM into a program,” outlined in the IRH *Guidelines* booklet, while not unique to LAM implementation, are based on years of experience in a variety of programs, with well documented success. Where steps have been skipped, results have been less favorable. For example, if an action plan with measurable objectives is not developed, there is nothing against which progress can be measured. If program planners do not grasp the financial resources required, the incorporation of LAM may never move past the pilot project phase. If a training of trainers is conducted, but no resources are made available to conduct the necessary cascade trainings in a timely fashion, the master trainers may require a refresher course prior to conducting the trainings for which they are responsible. If training is provided but receives no follow-up monitoring or supervision, service providers are less likely to incorporate LAM into their daily work.

Suggested Actions:

- Use the “six steps” as guidance to planning the incorporation of breastfeeding and LAM components into ongoing programs.
- Conduct the appropriate advocacy work at the policy level before initiating activities at the program level in order to better ensure future support.
- Identify the level and source of the resources required to execute the plan.
- Review program progress using the “six steps” and revise training plans, objectives, timelines, and budget as indicated by such a review.

Implementing LAM does not occur in a vacuum: successful programs forge effective partnerships and collaborate with other organizations to achieve objectives, expand impact, and promote consistent messages.

Discussion

It is essential to build creative partnerships for the successful implementation of LAM. Given the complexities of the global declines in breastfeeding, whenever possible the promotion of LAM should be integrated into all efforts to promote breastfeeding, increase access to family planning, strengthen reproductive health options for women, and improve food security. Strategic partnerships at the global, regional, and national levels have proven effective in many settings.

In almost all communities around the world, there are key players involved and committed to these issues, including, but not limited to: national ministries of health; United Nations Organizations, particularly, WHO, UNICEF (Mother-Baby Friendly Hospital Initiative), and UNFPA; USAID Cooperating Agencies including AED/Linkages, AVSC, CEDPA, Development Associates, Family Health International, INTRAH, JHU/PCS, JSI/SEATS, Management Sciences for Health, PATH, Pathfinder, and Wellstart International, among others; multinational donor agencies such as the Asian Development Bank, Canadian CIDA, European Economic Community, GTZ, JICA, Sida, the World Bank, and others; professional associations of pediatricians, obstetricians/gynecologists, midwives, and nurses; academic institutions; international nongovernmental organizations (NGOs) such as CARE, Catholic Relief Services, Save the Children, and World Vision; International Planned Parenthood Federation and its affiliates; and a whole range of smaller national-level NGOs working at the local level.

Suggested Actions:

- Identify the major actors in the program’s community, potential partners as well as potential obstacles.
- Identify the supportive policy statements, norms, standards, and legislation inexistence. If supportive policy is not in place, explore the possibilities for making new policy or changing what is in existence.
- Identify all possible sources of direct financial support and/or collaboration.
- Determine if there is a coordinating body for these organizations’ activities. If so, become part of it; if not, set up meetings with these groups and assess interest in coordinating activities.
- Review together the materials of all of the involved groups to assess whether messages currently are consistent.
- Work together to make messages consistent across all interventions and to develop and/or adapt materials. This will pool resources and avoid duplication.
- As frequently as possible, disseminate the progress and results of your work, locally, nationally, and internationally.

V. Beyond Bellagio: Consensus and Common Ground

Over the past decade, LAM has evolved from being a research issue to being a policy and service provision issue. IRH has been at the forefront, with other pioneers, of dealing with the constraints and the skepticism surrounding a new family planning method, developing the science and the advocacy, sharing the knowledge, and bringing LAM to a point where it is recognized worldwide, in both the scientific and programmatic arenas. IRH experience suggests that when logical steps are followed, including

- careful clinical and programmatic study
- immediate and wide dissemination of results
- collaborative program development
- information and sensitization at all levels
- involvement of all concerned parties in all aspects of the study or program and
- building consensus at each step

stakeholders will support and implement successful, integrated policies and programs. The organizations that will continue in this field are challenged to take LAM the next step, proceeding on a broader scale, as was suggested by the consensus reached at the 1995 Bellagio Meeting as well as the 1997 IRH Meeting, *Bellagio and Beyond*.

A. Summary of Lessons Learned

Previous sections of this document dealt with specific lessons learned related to the benefits of LAM and presented solutions to attitudinal, operational, and programmatic obstacles and issues. This section reflects on additional lessons not specifically mentioned earlier regarding programs, IEC, training and education, and research on breastfeeding and LAM, as well as emphasizes and expands some of the points mentioned earlier. A careful reading of this section will guide those who wish to incorporate breastfeeding and LAM into their programs, since, just as programs are not implemented in a vacuum, future LAM programs do not start with a clean slate: health professionals worldwide have gained valuable insights during the past decade of work.

1. Programs

Programmatic lessons vary widely from site to site, but input from program managers, service providers, and clients allows for some generalizations. The following lessons learned are compiled from individual country case studies, as well as experiences shared at Bellagio in 1995, at Georgetown in 1997, from assessments of LAM programs by IRH and other organizations, and by monitoring and supervising programs in the field.

- Family planning programs need to consider the postpartum woman as a breastfeeding woman, and should make every effort possible to take into consideration the special needs of this period in a woman's reproductive cycle.
- Breastfeeding and LAM counseling should be incorporated into service delivery systems. Women should receive counseling concerning LAM along with information about all postpartum contraceptive options. Family planning methods that are complementary to breastfeeding should be available for

women to choose from at the appropriate moment in the postpartum period. For those women who elect to use LAM, complementary methods should be available once any of the three LAM criteria are no longer fulfilled.

- In order for LAM to receive full acceptance as part of an integrated delivery service system, and, in order to be monitored effectively in relationship to other methods, LAM should be included in whatever standardized MIS is being used at the national or institutional level. Although separate LAM information systems have been developed by some projects supported by IRH in an effort to track LAM users, their value is fairly limited. Efforts should be made to incorporate LAM when information systems are updated, or when they are periodically reprinted.
- Once LAM has been incorporated into service delivery systems, information on LAM use should be collected during periodic cluster surveys, national-level population studies such as the Demographic and Health Surveys, and other surveys designed to provide policy makers and program planners with feedback about the use of family planning methods. Efforts should be made to identify and work with those organizations responsible for designing and conducting such surveys.
- The development of referral systems and partnerships with other organizations working with prenatal and postpartum women in the same general community should be explored in order to pool resources, ensure consistency of messages, and generally maximize program impact.

2. IEC, Social Mobilization, and Advocacy

IEC, social mobilization, and advocacy are intricately related and supportive. IRH has learned several key lessons in this area, many of which are not unique to LAM and breastfeeding issues but can be generalized to most health interventions.

- Scientific data, presented concisely and attractively, help convince policy and decision makers.
- An appropriate mix of print and audiovisual materials helps relay consistent messages to audiences at all levels regarding optimal breastfeeding, LAM, and family planning methods complementary to breastfeeding. To the greatest extent possible, professional resource materials as well as training and educational materials should be made available in local languages.
- LAM and breastfeeding related messages must be consistent, appealing, and presented in as brief a manner as possible for people who have little time and many conflicting demands.
- Because practices related to breastfeeding benefit child health as well as maternal health, it is important that all steps be taken to introduce postpartum contraception carefully to include messages that promote breastfeeding and the use of LAM, besides other postpartum contraceptive options.
- Involving key stakeholders who will incorporate breastfeeding and LAM—whether at the policy, program, or community level—in the process of change and program or policy development results in stronger ownership of the final product and more actionable policy and programs.

3. Training and Education

As can be seen from examples provided throughout this document, adequate training of health professionals in breastfeeding and family planning counseling incorporating LAM is crucial to the eventual correct use of LAM. Breastfeeding and LAM trainers have shared the following general lessons:

- In situations where LAM is incorporated into a health facility, field programs repeatedly have stressed the importance of involving all parts of the facility in LAM training and support.
- Selection of participants in training remains an issue. Sometimes the decision on who will participate in a training of trainers, for example, is more politically motivated than program outcome motivated.
- Follow up and supervision of trainees is important and often the deciding factor in ensuring incorporation of optimal breastfeeding and LAM into daily program operations.
- As often as possible, the person(s) overseeing incorporation of LAM into services should visit trainees and conduct refresher training sessions, as well as supervise training sessions conducted by trainees.
- When appropriate, master trainers should be involved not just in conducting cascade training activities and supervising trainees, but also in the direct provision of services. This step has been shown to ensure their “activation” as trainers and improves their ability to relate to specific issues and constraints at the service delivery level. The involvement of trainers in project implementation, especially in direct counseling of LAM clients, helps ensure the overall quality of future trainings, and ultimately improves services at the program level.

Several specific lessons related to training resulted from IRH collaboration with PAHO on the *Lactation Education for Health Professionals* curriculum in the early 1990s. These lessons, divided into two categories, can be generalized primarily to breastfeeding training, but have definite implications for LAM training as well:

Curriculum Content or Technical Issues

- National policies that promote and support breastfeeding and LAM facilitate the integration of breastfeeding and LAM into medical professional studies by validating its importance.
- Guidelines on the technical content to be included in the curricula are paramount to facilitating its successful revision.
- Availability of reference material in the appropriate language is essential to support and facilitate the development of curricular content.
- Faculty trained in and/or knowledgeable about breastfeeding and LAM also are necessary to act as resource persons to all who are involved in teaching breastfeeding and LAM.
- A practical/clinical component is necessary to effectively teach breastfeeding and LAM.

- A good relationship between faculty and service providers facilitates the transfer of theoretical knowledge into practice.
- Interdisciplinary action is the most effective.

Process or Curriculum Change Issues

- The support of the medical/nursing/nurse-midwifery school administration is vital to successful curricular change.
- The support of faculty colleagues is necessary to ensure successful change.
- Participation of the faculty in the development of the new curriculum increases their commitment to it and their motivation for its implementation.
- At the level of the individual medical or nursing school, it is possible to achieve curricular change where there are technically skilled and motivated faculty who have the financial and operational support of the administration to implement the change.

4. Research

Clinical and programmatic research has demonstrated many important points about LAM. Among the general lessons learned are the following:

- LAM is highly efficacious in a variety of settings under a variety of educational styles.
- Extended LAM is possible and appropriate in many settings.
- LAM is best offered where alternative methods are available for client continuation.
- LAM should not be offered only in NFP settings.
- LAM criteria are flexible when the optimal behaviors are what is taught and conveyed.

B. Recommendations and Challenges for the Future

1. Continued Research

Participants in the 1995 Bellagio meeting agreed that research is needed in both the programmatic and biomedical areas in addition to research on LAM criteria. At the 1997 Bellagio and Beyond Conference at IRH, participants endorsed the research agenda identified by the 1995 Bellagio group, but suggested that more emphasis be placed on the programmatic research. Their recommendations are combined below with priorities identified by others working with LAM in the field.

Programmatic/operations research is needed on:

- Performance of LAM under a wide variety of field conditions;
- Impact of LAM on the use of family planning, especially among women who would not otherwise choose to use family planning;

- Use of LAM in special populations such as mothers who are separated from their infants for a prolonged period each day and mothers of premature babies;
- Integration of LAM into family planning and other relevant health care services, such as those dealing with maternal/child health and reproductive health;
- Level and nature of support needed for effective LAM use, such as ways to simplify counseling without losing efficacy (how many LAM counseling sessions are required? when is (or is there) the most cost-effective time to counsel a woman—prenatally or immediately postpartum? can LAM be taught in the mass media?);
- Whether LAM users are better family planning users, or looking at the impact of LAM on the length of contraceptive use after LAM (among both prior family planning users and those who never have used family planning);
- Integration of LAM into all private and public sector MCH activities;
- How much training is needed to adequately provide LAM services;
- Testing strategies to get LAM and breastfeeding activities outside of formal health care facilities;
- The most appropriate role of social marketing and mass media in LAM promotion;
- Additional demonstration of the impact of LAM on breastfeeding practices and uptake of other family planning methods.

Biochemical research is needed on:

- The factors that determine what triggers menses return at different times in spite of identical breastfeeding patterns and whether a woman ovulates before or after her menses return;
- The levels and patterns of infant feeding necessary to maintain the low pregnancy rates seen with current LAM guidelines;
- The relative importance of the various factors that contribute to lactational infertility.

2. Continued Program Implementation

Many LAM programs have been carried out to date, but much work remains to be done. As stated in the 1995 Bellagio Consensus, . . . *programs should regard LAM as an additional method that increases the family planning choices for postpartum women.* Beyond Bellagio, program planners and implementers are moving past an earlier focus on LAM integration primarily into family planning settings. Greater emphasis on integration of health interventions will bring LAM into the forefront. Some of the issues of interest, in addition to those described under Operations/programmatic research, above, include the following:

- There is a large unmet need among postpartum women for contraception, particularly for immediate postpartum family planning. LAM helps meet that need.

- Developing appropriate referral systems for LAM users to family planning services and/or to breastfeeding counseling and support services may pose a challenge in some settings.
- LAM can help address the needs of the majority of postpartum women who do not deliver in facilities. Different strategies should be developed to reach pregnant and postpartum women in communities since different people come into contact with these women in different locations.
- LAM providers must be able to instill confidence in LAM users to enable them to overcome any breastfeeding problems they might have and to assist them in optimal breastfeeding. Provider may need more lactation management training.
- Programs should include education about complementary feeding along with information on modern contraceptive methods by six months, even while amenorrhea and partial breastfeeding continues.
- Appropriate mechanisms for training program personnel should be explored further, including different models of preservice and inservice education. Many programs are currently experimenting with auto-tutorial or self-study models. The incorporation of LAM into this research should be encouraged.
- Several training issues remain as part of effective program implementation: (1) selection of training participants; (2) standards of performance for training; (3) adequate time for continuing education; (4) lack of resources should lead programs into coordinating efforts and resources within countries and regions; (5) monitoring and supervision systems must be implemented for trainees; (6) comparison of different training approaches (short, intensive, versus long; self-instructional versus guided-study); (7) linking LAM training to other training available in community, such as lactation management training; and (8) ensuring the appropriate mix of didactic and clinical/practical training.

3. Continued Documentation and Dissemination

Perhaps one of the most important reasons that LAM has gained rapid acceptance in the scientific, policy, and program communities is that findings related to LAM studies and programs have been published quickly and widely disseminated, usually in multiple languages. Materials supporting LAM integration are plentiful, and generally well done. In addition to materials and peer-reviewed articles produced by IRH, other organizations—such as the Academy for Educational Development, AVSC, Development Associates, Family Health International, JHPIEGO, JHU/PCS, PAHO, UNICEF, WHO, Wellstart International, and others—have produced excellent materials incorporating messages about LAM.

In the future, as more and more operations research and program experience is available on LAM, every effort should be made to publish, translate, and disseminate it as quickly and widely as possible. The continuation of existing and creation of new partnerships between governments, cooperating agencies, international and local NGOs, as well as donor and UN agencies should be explored and maximized to the extent possible.

As the next generation of policy and program activities in breastfeeding and LAM begin, a retrospective look at what has been learned will lead to new and innovative programs involving key stakeholders at all levels.

C. Conclusions

Since its codification at an IRH-sponsored meeting at Georgetown University in 1989, LAM has been used by couples around the world with impressive results. LAM users in different populations, cultural groups, and health care settings find the method easy to use, effective, and safe. Acceptable both to men and women, the method has the added advantage of improving a mother's breastfeeding practices—an advantage no other family planning method can claim. By design, in addition to these improved breastfeeding practices, LAM encourages timely introduction of complementary family planning during breastfeeding.

The Breastfeeding and MCH Division of IRH carried out an impressive range of activities during the life of its USAID-funded Cooperative Agreements. Initially established as a research project with a small budget, IRH was able to develop excellent partnerships, leverage the resources of other organizations, and become "champions" of LAM, working side by side with in-country and international partners. The IRH approach to incorporating breastfeeding and LAM has always been truly integrated, serving as a model for future programs. As the next generation of policy and program activities in breastfeeding and LAM begin, a retrospective look at what has been learned will lead to new and innovative programs that involve key stakeholders at all levels—programs that will lead communities into taking the next steps for the health of women, children, and families around the globe.

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Project Description

In 1993, LAM was barely mentioned in the language of the health community in Burkina: the only information given was that exclusive breastfeeding has a contraceptive effect. This information was disseminated at seminars held by UNICEF on breastfeeding for health professionals. The Midwives Association was selected to integrate LAM into its clinics and a few other government clinics. SEATS and the Association signed a subagreement for a project with the following objectives: (1) to train physicians, nurses, and midwives who work in subproject service delivery sites in LAM; (2) to establish a data collection system to capture the results of activities; and (3) to incorporate LAM as a method in all service delivery subproject sites.

Sites selected to participate in the project were limited to six to allow close follow up. Sites were chosen based on their provision of combined prenatal, postnatal, and delivery services, as well as family planning services. Those centers that had providers trained in breastfeeding were priority centers. Service providers at the various sites also needed to show evidence of motivation to implement LAM.

The second year, eight additional centers in Ouahigouya, 180 kilometers north of Ouagadougou, were included in the program. This decision was made to allow comparison between regions since some critics stated that results obtained in the capital city alone could not be generalized to the entire country.

The training curriculum was designed by the SEATS Resident Advisor (RA), who then organized a team to carry out the training program. This team was composed of the SEATS RA, the chief pediatrician of the national hospital, an obstetrician/gynecologist (OB/GYN) selected by the chief OB/GYN of the national hospital, and the president of the Midwives Association.

A standard system of data collection was established for each center. Data collected about women who accepted LAM included: age of baby, first and last name, menstrual status, breastfeeding status, and other method adopted after LAM. Data was also recorded on the forms provided by the Ministry of Health. LAM was not among the contraceptives listed on the form, but service providers added LAM to the list when a client selected it as the preferred contraceptive method.

Results

Centers with an integrated maternity unit had more LAM clients. This was achieved due to early education about LAM, close follow up of the mother throughout her prenatal care, and extension of counseling beyond the delivery of her child to her postnatal care. In some centers with maternity wards, up to 50 percent of women who gave birth adopted LAM. The following remarks, derived from supervisory and observations of experts, indicate the various contributions of LAM to quality of care:

- Communication between service providers and LAM users has improved, which has facilitated better counseling about the most appropriate choice of contraception after LAM.
- There is greater involvement of husbands in the choice of LAM and of future contraceptives.
- Service providers pay more attention to management of the health of the baby as well as to mothers' health problems related to breastfeeding.
- With the implementation of LAM, MCH/FP services are effectively integrated: the mother receives postnatal, immunization, well-baby care, and family planning services. During prenatal care and shortly after delivery, the mother is educated about LAM.

Africa

Burkina Faso

Name of Project:
Integration of the Lactational Amenorrhea Method (LAM) into the SEATS Program in Burkina Faso

Dates:
October 1993 to August 1995

Principal Investigator:
Meba Kagone, MD, MPH

Collaborating Institution:
John Snow, Inc./ SEATS Project

Results:

• *Providers trained in LAM:* **41**

• *People sensitized to LAM:* **4,200**

• *LAM Users:* **479**

• *LAM Users Who Switched to Other Methods:* **217**

Since the initiation of LAM services by SEATS and the Midwives Association, the idea has been progressively accepted by policy makers. LAM is being integrated into family planning training curricula and is taught at training sessions at the national as well as provincial levels. LAM was included in the recent situation analysis questionnaire carried out by the Ministry of Health and the Population Council.

For health care providers who were skeptical or otherwise opposed to exclusive breastfeeding, the LAM project illustrated the benefits of the practice to infants and to mothers. LAM has been accepted as a contraceptive method in the country and is now taught in the provinces by local training teams as well as at the central level.

SEATS has built its LAM experience on UNICEF breastfeeding activities. At the time of the introduction of LAM, a good number of health services providers in Ouagadougou and Bobodioulasso, the two main cities in Burkina Faso, had been trained in breastfeeding; this facilitated program implementation. In a number of health centers in Ouagadougou, the two projects are implemented together. Since the breastfeeding program is being implemented countrywide, LAM also is being discussed throughout the country.

Constraints encountered during the implementation of LAM included:

- Follow up of LAM users in the community was not possible due to lack of resources. This monitoring was important to help women who chose LAM overcome obstacles, such as resistance of mothers-in-law and skepticism of husbands. To improve the situation, social workers were trained in LAM and it was added to the health topics covered in their community sensitization talks.
- In health centers where LAM was integrated, there was opposition from family planning service providers who were not trained in the method. To overcome this obstacle, SEATS began training all service providers in health centers where LAM was integrated
- Many health workers did not believe in exclusive breastfeeding. SEATS adopted the strategy of showing babies exclusively breastfed during health talks on LAM and breastfeeding and comparing them to non-fully breastfed babies, the latter generally being healthier than the former.

Lessons Learned

- Innovative activities are often implemented by NGOs: in this project it was the Midwives Association. It would have been very difficult, even impossible, for SEATS to implement LAM without their involvement and collaboration. However, we deliberately involved other key people, such as the chief pediatrician and the chief obstetrician of each city where LAM was implemented.
- Frequent supervision is necessary to enable service providers to offer LAM.
- Success varies from one center to another and is linked to motivation of the service providers and the support of the head of the health center.

Conclusions and Continuing Activity

The LAM experience in Burkina Faso was successful for the following reasons:

- It has resulted in better nutrition of babies, better counseling for women in the choice of contraception (LAM and others), and better communication between spouses about the mode of feeding their babies and about contraceptive method choices.
- Health services are more effectively integrated.
- Health care practitioners are better able to focus on health management and problem resolution for both babies and their mothers, providing continuous quality of care and improving communications between LAM users and their providers.

Project Design

This pilot study evaluated the effectiveness of LAM self-study materials in comparison to trainer-led workshops. Two cohorts of public-sector nurse-midwives from the MCH/FP Unit of the Ghana MOH volunteered to participate in the comparative study of teaching methodologies.

The hypothesis for this study was that self-study learning retention and skills would be at least equal to peers attending workshops and that self-study would provide a cost-effective way to offer continuing education to more midwives at less cost than multi-day workshops. The study design allowed for field testing of the LAM Self-Study Module as well as comparison of the two teaching methodologies, trainer-led vs. self-study.

Implementation began with a three-day training of trainers (TOT) comprised of 22 maternal-child hospital ward sisters. Following the TOT, the participants divided into two groups, the first of which led a training workshop of midwives and postpartum hospital ward sisters. The second group conducted an orientation to self-study materials for a separate cohort of midwives.

The self-study group was oriented to the materials, completed a pretest and then had five months to complete the self-study module. Field visits were made to the self-study cohort to follow up on their progress and to offer technical assistance if needed. At the end of five months, a post-test was administered. Both groups, self-study and trainer-led, were asked to counsel and follow 25 LAM clients.

Pre- and post-tests were used to assess knowledge in areas of general breastfeeding, understanding of the most up-to-date research findings related to BF and LAM, contraceptive choices for lactating women, and criteria for integrating LAM into current programs. Both groups also participated in focus group discussions (FGD) at the end of the five-month study period.

Results

A. Pre/Post-Test Results: Generally speaking, all participants improved their scores from the first tests administered. Differences in the mean for the immediate and five-month post-tests of the trainer-led cohort were not significant. Immediate and five-month results did not differ significantly. Except for one question in the trainer-led group, both cohorts showed improvement on all LAM-related post-test questions. Standard deviations for all cohorts were high.

B. Two-month Follow-up Visit: When field visits were made to 20 self-study participants, four had not yet started any review of the self-study materials. Everyone displayed considerable enthusiasm for the study, however, all expressed their inability to visit clients outside the clinic due to travel cost and lack of personal or work time.

C. Evaluation of Self-study Materials: Eighty-one percent felt that their own objectives as well as those of the Self-study module were met. Ninety-five percent said that the module would be useful to them and help them on the job. Sixty-seven percent found it very easy to understand. Eighty-six percent found the length to be just right with 14 percent indicating it was too short. The majority of written comments indicated that participants found self-study a good way to learn but there was less time at home and at work in which to do it.

D. Five-month FGD Responses: Despite the freedom of structure and perceived lesser cost, all participants indicated that self-study was very difficult and too time-consuming; classroom formats were preferred in order to "share and learn new ideas," view films and flipcharts.

Ghana

Name of Project:
*A Comparison of
Two Teaching
Methodologies for
LAM: Self-study
and Trainer-led*

Dates:
*February 1994 to
April 1996*

**Project
Coordinator:**
*Karen Scanlan,
CNM, MPH*

**Collaborating
Institutions:**
*American College
of Nurse-Midwives,
Ghana Ministry of
Health-Family
Planning Unit*

Project Description

AFR, an affiliate of IFFLP, is a program that specializes in innovative approaches to teaching NFP. The program integrated LAM (known in Rwanda as MAMA) into its choice of methods beginning in October 1991, basing the teaching of the method on the guidelines elaborated by IRH. However, given the circumstances of a large number of breastfeeding women served by the program, a national mean duration of breastfeeding of 25.9 months, and a national mean duration of postpartum amenorrhea of 16.8 months, AFR decided to extend the six-month parameter of LAM to nine months. AFR sought to use MAMA-9 to introduce NFP to a population that typically poses problems to NFP service providers: breastfeeding, amenorrheic (or non-cycling) women. AFR also provided services to couples.

Methodology

The decision to carry out the MAMA-9 program began in 1990. An AFR representative who had attended a meeting at Georgetown in 1990 trained the program's staff in LAM. After several months of LAM trials, in 1991 AFR decided to expand LAM to nine months in the strongest NFP service-delivery points among the ten regional AFR centers. MAMA-9 was defined and codified at this time. Clients who chose to use MAMA-9 were invited to attend monthly group meetings on various topics related to the method. Providers used these meetings to then provide individualized counseling to the couples. After the group meeting, the teacher met with each couple and completed a follow-up form or checklist to ensure that the MAMA-9 criteria still were being met. Some teachers also conducted home visits. Group meetings focused on how MAMA-9 and continued use of complementary family planning could contribute to family life and the couples' communication. Men were counseled on how to be supportive to their partners while they were breastfeeding and on the importance of breastfeeding and appropriate child spacing. Trainers' knowledge and skills were strengthened by means of later refresher courses, during which MAMA-9 parameters were clarified, bringing about changes in data collection.

Results

IRH was invited to assess this program in 1993. Data was collected on 419 MAMA-9 clients from 11 regionally representative sites. No pregnancies were recorded. In-depth analysis of this assessment can be found in an article published in *Studies in Family Planning* (Cooney et al., 1996). Even constructing life tables which counted lost to follow-up as pregnancies at 25 percent and 50 percent resulted in a less than two percent pregnancy rate. Qualitative information gathered which deserves further study in other populations included the positive male involvement in the program and the issue that MAMA-9 may contribute to improved weaning practices among the population using the method (since they are counseled on appropriate addition of complementary food at about six months).

Products

AFR produced a follow-up form for its clients that addressed the MAMA-9 parameters and optimal breastfeeding behaviors, with a section on continuation methods after MAMA-9. In addition, a section of the form contained boxes to be filled in on the group session topics the couple had attended. AFR adapted its MIS forms to include MAMA-9.

Rwanda

Title of Project:
Integration of LAM-9 into NFP Service Delivery System

Dates of Project:
October 1991 to May 1994

Principal Investigators:
Thérèse Nyirabukeye and P. Henryk Hoser, MD

Collaborating Institution:
Action Familiale Rwandaise (AFR)

Sénégal

Title of Project:
*Breastfeeding/
LAM/NFP Interface*

Dates of Project:
*February 1995 to
April 1996*

**Principal
Investigator:**
Felicien Adotevi, MD

**Collaborating
Institution:**
*Association
Sénégalaise pour
la Promotion de la
Famille (ASPF)*

* **Project Description**

* The project with ASPF was one of IRH's pilot studies with the International
* Federation for Family Life Promotion (IFFLP) and focused on the introduction of
* LAM into a natural family planning service delivery system. Because ASPF
* wished to ensure high quality services, the project was designed to begin deliver-
* ing LAM services in one pilot site, Kaolack.

* **Methodology**

* IRH and IFFLP provided the first training session on LAM for ASPF NFP
* service providers in February 1995. ASPF trainers, coordinators, and supervisors
* participated in this four-day session. In March and April 1995, the coordinator of
* the LAM project in the country repeated the basic LAM training in different
* centers so that all of the NFP teachers were trained. LAM clients began to be
* recruited and followed up in May 1995. Recruitment took place on both an
* individual and a group level. Efforts focused on recruiting clients in the prenatal
* period. LAM providers generally visited mothers early after delivery. With first-
* time mothers, providers attempted to provide frequent follow-up in the first weeks,
* to support breastfeeding behaviors. Regular follow-up visits were scheduled
* monthly, but less frequently for clients who lived far away from the clinic.
* Providers were willing to travel to the clients' villages if their travel expenses were
* covered. The LAM follow-up form adopted by other IFFLP sites was used here as
* well, with some adaptation. An IFFLP consultant provided continuing education/
* refresher training sessions in March 1996, and made recommendations for the
* project's expansion.

* **Results**

* More than 100 LAM users were recruited during the project, with no recorded
* pregnancies. Recruitment has been slow, with a focus on quality rather than
* quantity. Since many of the LAM users still were active at the end of the project
* period, attention was being given to ensure the transition from LAM to other
* methods, but not many clients had made the transition.

* **Products**

* The LAM follow-up form that is being used was adapted from the IRH-IFFLP
* *Breastfeeding/LAM/NFP Interface Teaching Guide* (Parenteau-Carreau and
* Cooney, 1994). Statistical forms for the MIS also were adapted.

Project Description

As part of a larger LAM training materials and sensitization project geared at health professionals, the Special Projects Section of the American College of Nurse-Midwives (ACNM) worked in conjunction with the Uganda Private Midwives Association (UPMA) to develop a LAM training module and introduce LAM to midwives throughout the country.

Survey: A survey of UPMA midwives trained in family planning was conducted to explore their LAM-related knowledge, attitudes, and practices. A two-page open-ended questionnaire was distributed to 58 midwives who had received family planning training.

Trainings: A series of FP trainings, which included LAM, were conducted with 58 midwives and UPMA trainers from June 1992 into 1993. Using the revised draft LAM training module, 30 additional midwives were trained (April, July 1993). LAM review was offered to 30 midwives from the first trainings during the Regional Representatives' Workshop (February 1993), with the remaining 28 receiving review during their monthly UPMA Headquarter and Branch meetings.

LAM Trainer's Module: Using UPMA training materials as the foundation, a trainer's module on LAM was created. The module followed the same format as those modules covering family planning methods. The module was pretested in several training sessions and revised based on feedback from participating midwives--trainees and trainers.

Integration of LAM into Information Systems: Family Planning Daily Activities Records were revised to include LAM. Statistics were to be analyzed to track the number of LAM users and determine if they were continuing with another family planning method after completing LAM.

Results

A. **Survey Findings:** The survey inquired about the client instructions given by the midwife when counseling LAM clients. LAM instructions had been covered in the training and included the three criteria of the method and details on necessary breastfeeding habits. Survey results indicated that the three LAM criteria were not emphasized appropriately and that instead the midwives focused on the mother's working status, milk supply, and previous length of amenorrhea.

Survey respondents listed the following as positive client comments about the method: it is easy and convenient to use, babies who are fully breastfed are healthier, and there are no side effects. Clients' concerns about the method included: the hardship for working women because of the feeding frequency required, the "flabby breasts" associated with prolonged breastfeeding, and the efficacy of the method.

B. **Trainings:** Survey results suggest that the trainers did not effectively communicate the three criteria for the method to trainees. The use of case studies and role plays is one way of reinforcing the user instructions for the method in a training setting. It is unclear if midwives are actively offering LAM in their family planning counseling.

LAM has not been integrated into the public FP service delivery system. However, it was included in the standardized training curriculum for the Ministry of Health Training Team and in an update session representatives and trainers from all organizations offering family planning training in Uganda. Additional training and promotional activities would be necessary to fully integrate LAM into both the public and private health sectors.

Uganda

Name of Project:
*Lactational
Amenorrhea
Method Training
and Curriculum
Support Project*

Dates:
*October 1992 to
July 1994*

**Project
Coordinator:**
*Betty Farrell, CNM,
MPH*

**Collaborating
Institutions:**
*American College of
Nurse-Midwives,
Uganda Private
Midwives
Association, John
Snow Inc.—SEATS I*

* C. Training Module: The training module has been printed and distributed to the
* UPMA and other midwifery groups as appropriate.

* D. LAM in Information Systems: The majority of LAM-related data recorded on
* the Daily Activities FP Record were incomplete and/or unintelligible, making it
* impossible to accurately enter and analyze. The data indicated that the overall
* rates of any FP being offered by midwives were low. Further follow-up with
* service information systems is necessary to uncover the successes and problems
* incurred when offering LAM as a FP method.

* **Products**

* A training module on LAM was created, tested, revised, and published. The
* module follows the same format as other modules in the family planning training
* series.

* *The Lactational Amenorrhea Method: Trainer's Module.* 1995. Farrell B.
* (Washington DC: American College of Nurse-Midwives/Special Projects Section).

*Additional training
and promotional
activities would be
necessary to fully
integrate LAM into
both the public and
private health
sectors.*

Project Description

The project with FLMZ was one of IRH's pilot studies with the International Federation for Family Life Promotion (IFFLP) and focused on the introduction of LAM into a natural family planning service delivery system. Due to recent changes in traditional practices that have eroded many optimal breastfeeding behaviors, breastfeeding support was targeted as an area that needed improvement for project implementation to occur, so the FLMZ staff were involved in creating a supportive environment by working on change at the policy level in addition to the program level. Although the funded contract for the project ended in March 1996, FLMZ continues to offer LAM as part of NFP service delivery and is extending these services to other provinces.

Methodology

In May 1994, IRH and IFFLP conducted a four-day training of trainers in Lusaka for ten FLMZ trainers/teachers, as well as four other IFFLP representatives from the region and a representative of the Ministry of Health (who was working on the national breastfeeding policy). After the training session, five field workers began incorporating LAM into their NFP services with follow-up, monitoring, and supervision from the LAM Coordinator at the FLMZ central office. No staffing changes were necessary. After the initial training of trainers, one two-day refresher and information training was held in December 1994 and included 15 Lusaka-based field workers as well as one representative each from three other areas. The project then was expanded to offer breastfeeding support and LAM services through NFP teachers in 12 Lusaka-based clinics, one Southern Province clinic, and one Copperbelt clinic. LAM was incorporated into the MIS.

In the clinics, trained teachers give motivational talks to mothers who come to the clinics for antenatal and under-five clinics. Mother interested in LAM are invited to the NFP office and recruited as LAM clients. Tailored lessons are given to each client and she is followed up until she is autonomous, which means that she knows the method and knows when to return for a continuing family planning method. Clients usually return for monthly visits until one of the LAM parameters changes. FLMZ teachers provide instruction on the transition from LAM to one of two NFP methods (cervical mucus or symptothermal); other methods are available elsewhere in the clinic. Monthly client visits take place at the health center or at home. Supervisory visits to the health centers occur weekly when transportation is available; and teachers meet at the FLMZ central office monthly (to review problems and issues, discuss solutions, provide new information, review LAM diaries and follow-up forms). Supervisory visits to community-based programs occur biweekly.

Data is collected on LAM clients in the NFP teacher's daily diary and on a LAM follow-up form. A program follow-up form is completed for each client when they change their status (from LAM to NFP, LAM to other family planning methods, and so forth). Teachers provide data to the central office monthly.

Results

From June-December 1995, 440 women had been registered as LAM users in seven health centers; 40 of these had completed LAM and transferred to NFP; 33 had transferred to other family planning; seven had been lost to follow up; and the remainder still were active LAM users. From January-May 1995, 122 women were registered LAM users in five clinics; 15 had transferred to NFP; 23 had transferred to other methods; and two were lost to follow up. From June-December 1994, 76 women were registered LAM users in five health centers, and no data was collected on continuation methods. No pregnancies were recorded. The program has shown an increased number of users as time went on, and improvements in data collected were noted. In addition, there is a decreased drop-out rate among breastfeeding clients of the NFP program. In the second year of the project, FLMZ counselors were more secure in LAM counseling and began to support clients in Extended LAM.

Zambia

Title of Project:
*Breastfeeding/
LAM/NFP Interface*

Dates:
*May 1994 to
March 1996*

Principal Investigator:
Lubinda Tafira

Collaborating Institution:
*Family Life
Movement of
Zambia (FLMZ)*

Results:

- *No LAM pregnancies*
- *Decreased drop-out rate among breastfeeding clients of the NFP program*
- *Unprecedented level of collaboration between government, NGOs, and PVOs*

Changes in quality have occurred as a result of the program and include: (1) improved breastfeeding behaviors among LAM clients; (2) increased respect for NFP teachers among their peers in health centers; (3) abstinence behaviors among LAM clients have changed since they are more comfortable resuming sexual relations with their partners at about two months postpartum (as opposed to six months or later); (4) national breastfeeding and family planning policies include LAM, and the national breastfeeding policy now promotes six months exclusive breastfeeding (as opposed to four months); (5) the number of acceptors of NFP and other family planning methods has increased in FLMZ centers; and (6) collaboration has increased among FLMZ and the other organizations in the country active in breastfeeding promotion and support.

Products

A LAM counseling card is being used which was developed with IRH; in addition, the LAM follow-up form that is being used was adapted from the IRH-IFFLP Breastfeeding/LAM/NFP Interface Teaching Guide (Parenteau-Carreau and Cooney, 1994).

Project Description

IRH involvement in the Philippines officially began in December 1993 when key decision makers of the DOH attended an NFP Division-sponsored meeting in Washington and met frequently with Breastfeeding and MCH Division staff to discuss their interest in LAM. These key individuals became very active in promoting LAM, building upon various ongoing LAM-related activities in the country (research on LAM conducted by Family Health International and UNICEF Baby Friendly Hospital trainings). Based upon this impetus, the DOH invited IRH to continue the process with them in country, and in February 1994, IRH staff traveled to the Philippines to assist the DOH in developing a family planning policy inclusive of LAM as a program method. The scope of work for this technical assistance visit included conducting a Breastfeeding/LAM/NFP Interface Training of Trainers, a LAM Orientation Seminar for the Department of Health MCH, Nutrition, and Family Planning Units, as well as a LAM Orientation and Policy Workshop to begin the strategic action planning required to integrate LAM service delivery into ongoing programs. Although LAM was formally incorporated into the DOH policy in February 1994, with much apparent enthusiasm, policy implementation was not initiated until later in 1995, when a basic LAM component was included as an add-on module to a number of family planning training of trainers being conducted nationwide on DMPA. The lack of resources dedicated specifically to LAM following the issuance of the LAM policy resulted in little follow up related to the LAM component of this training, and some degree of confusion over LAM.

Recognizing the need to focus on the implementation of LAM, in early 1996 USAID/Manila requested that IRH provide additional technical assistance in the development of a Strategic Action Plan for Introduction and Expansion of LAM Services in the Philippines. IRH recommended that a LAM Technical Secretariat be established and encouraged the formation of a LAM coordinating committee to better ensure the implementation of advocacy and training activities. USAID committed to supporting these recommendations, among others, and helped to ensure that other USAID Cooperating Agencies would begin to incorporate LAM into a variety of programs and materials.

After a delay of several months, Reproductive Health Philippines, Inc. (a local NGO chosen by IRH to provide administrative support and technical oversight) identified and hired the LAM Technical Secretariat. IRH provided him with a one-week training and orientation in Washington in January 1997, and RHP, I seconded him to the Department of Health's Special Projects Division through April 30, 1997. The overall project goals for this short period of time reflected, to a great extent, the 12-to-18 months of activities outlined the year before in the strategy proposal: (1) to establish local expertise in LAM through the establishment of a LAM Technical Secretariat; (2) to raise interest in the promotion of LAM as an effective family planning method; (3) to introduce/integrate LAM into the different health services sectors within the DOH as well as the different NGOs; (4) to establish linkages with other USAID Cooperating Agencies to ensure the integration of LAM into all related programs and materials supported by USAID; and (5) to identify and pursue funding from other potential donors, as well as existing resources within the DOH, in order to ensure continuity of the project after IRH support ended. Specific measurable objectives included: (1) organizing and conducting three sensitization workshops for various divisions of the DOH, donor agencies, CAs, and NGOs working in family planning, MCH, reproductive health, nutrition, and breastfeeding; (2) designing and implementing three separate two-day training of trainers workshops on LAM, optimal breastfeeding, and postpartum contraception for the family planning coordinators and master trainers from each of the sixteen regions of the country; and (3) serving as the technical secretariat for the monthly meetings of the LAM Coordinating Team, members of which were appointed by the Secretary of Health.

Asia

Philippines

Name of Project:

LAM Support Project in the Philippines

Dates:

January 1997 to May 1997

Project

Coordinators:

Rebecca Ramos, MD, and Ralph Curiano, MD

Collaborating Institutions:

Reproductive Health Philippines, Inc., and the Philippine Department of Health

Results

The policy-level work initiated by IRH in 1994 created a supportive atmosphere for the incorporation of LAM into a wide variety of service delivery settings. Despite the short duration of this project, virtually all major objectives were accomplished. Because of last minute scheduling problems, however, several agencies that had been invited to the sensitization workshops were not able to participate, and three of the sixteen regions were unable to attend the training workshops. Participants developed action plans as part of the LAM training, but uncertainties about continued funding for and monitoring of the implementation and impact of the plans has complicated their execution. During the project, the Director of the Family Planning (FP) Division of the DOH requested a separate LAM training, in addition to the sensitization workshop that was conducted for FP personnel, stating that they needed more training in order to provide the level of technical guidance to and monitoring of LAM-related activities in the regions. Unfortunately, time and allotted resources did not allow for the execution of an additional training, but USAID is aware of their concerns. The Technical Secretariat and IRH staff had input in the development and/or review of several important materials being produced by other CAs, including a set of national Clinical Standards for Family Planning that includes a section on LAM and makes reference to the family planning needs of breastfeeding women. The Technical Secretariat also was asked to draft a self-study module on LAM which will be piloted later this year along with other method modules as part of a new training strategy being launched by Management Sciences for Health.

Although the project was not able to negotiate the development of client materials on LAM with other CAs or donors, JHU/PCS and UNFPA expressed interest in developing or adapting/updating existing materials on LAM in the future. Also, a wide variety of MCH and family planning documents that are being printed and distributed in the Philippines by the DOH, UNICEF, and other CAs provide information on LAM, including materials for breastfeeding counseling, traditional midwives training, and pre-marriage counseling, among others. The fact that USAID will be providing continued support for LAM through the new Linkages Project suggests that LAM-related operations research, trainings, and materials development will continue, hopefully focusing to some extent on operational issues and creating partnerships.

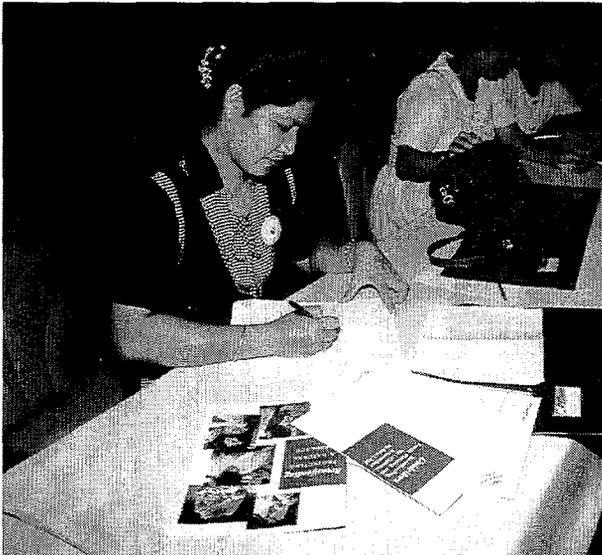


Photo courtesy of P. Koniz-Booher

Project Description

LAM was first introduced in Bolivia in early 1993, when an IRH consultant traveled to Bolivia to explore the possibility of integrating LAM into a set of education and training materials being produced for the National Reproductive Health Program with support from USAID. IRH met with the representative of The Johns Hopkins University's Population Communication Project and members of the IEC and Training Committees of the National Reproductive Health Commission to discuss LAM and ways to include it in the materials. None of the groups working in family planning had technical knowledge of LAM nor previous experience in providing LAM services, so IRH held a series of mini-training meetings with technical members of both committees to ensure their acceptance of LAM. Subsequently, members of the Coordinating Committee of the Commission decided to incorporate LAM into the promotional and training materials under production, and work began. Ultimately, a brochure on LAM was created and the method was included in a poster, a booklet on all methods, and a training manual for service delivery personnel. More than a dozen organizations participated in a training of trainers held in December 1993.

Almost two years later, USAID/La Paz supported the re-initiation of LAM and breastfeeding activities with technical assistance from IRH. In late 1995, IRH and a hired local consultant began working initially with several diverse institutions, (Fundación San Gabriel, GTZ, JSI/MotherCare, JHU/PCS, CIES, Catholic Relief Service, Project Concern International/ Cochabamba, APSAR, Universidad Católica Boliviana [School of Nursing], Escuela Técnica Sanitaria, Freedom from Hunger/Creceer, COMBASE, Cochabamba City Government, Caja Nacional de Salud), all of them providing family planning and other health services in and/or around La Paz. IRH trained small cores of staff, in most cases trainers and/or supervisors, from each institution, who then went on to train co-workers. The next step was to begin service delivery in the city of La Paz and its neighboring towns, developing a critical mass of trained people at each institution, and a model for the incorporation of LAM/breastfeeding within those institutions. Geographical proximity was desirable in order to provide close monitoring, eventually allowing for the training of additional institutions and the replication of the service delivery model elsewhere.

Results

Less than a year after the TOT, many outlets in and around La Paz provided LAM services, and there were more than 1,000 successful LAM users. Demand for postpartum family planning and for other related services has increased significantly at the sites providing LAM. Providers reported that they were applying the lessons learned from their LAM projects to other activities.

IRH expanded its work to the Cochabamba area. IRH adapted and implemented in Cochabamba the model which had proved successful in La Paz. IRH organized a training workshop for cores of providers from several institutions. All of the institutions trained have incorporated breastfeeding promotion activities into their work, however, because of the peculiarities of the work being carried out by some groups, not all of them have completely implemented LAM services.

At the close of the project more than 200 service providers and related staff had been trained and were delivering LAM services. All of these providers had experience in actually providing LAM services to clients and had received feedback from IRH. Institutions developed, implemented, and adjusted specific models for delivery of LAM services. Since emphasis had been placed on LAM being incorporated into already existing programs and activities, it is expected that LAM activities will be fully self sustainable in the long run.

Products

In addition to the IRH inputs into the LAM components of the educational and training materials produced by the National Reproductive Health Program with the technical assistance of JHU/PCS, IRH also supported the development of counseling and client follow-up materials, designed to complement the national materials.

Latin America/ Caribbean

Bolivia

Name of Project:
***Breastfeeding/LAM
Project in Bolivia***

Dates:
***Initial Work in 1993,
September 1995 to
June 1997***

**Project
Coordinator:**
***María Lorencikova,
MD***

**Collaborating
Institutions:**
***National
Reproductive Health
Commission,
PROSALUD***

Brazil

Name of Project:
***Introduction of LAM
in a Postpartum
Program***

Dates:
***October 1989 to
December 1993***

**Principal
Investigator:**
Anibal Faúndes, MD

**Collaborating
Institutions:**
***Universidade
Estadual de
Campinas
(CEMICAMP),
Population Council/
INOPAL***

◦ **Project Description**

◦ This early IRH project focused on the introduction of LAM along with breast-feeding promotion in a maternity hospital (IMIP) in Recife, in Northeast Brazil. ◦ The institution chosen as the site for this investigation had a long history of ◦ breastfeeding promotion and a well-organized postpartum program that provides a ◦ range of contraceptive methods. Breastfeeding and contraception use were ◦ encouraged through counseling during prenatal care, hospitalization, and during ◦ the eighth-day postpartum visit. Prior to developing this project, LAM had not ◦ been offered as a contraceptive option because most providers did not believe that ◦ breastfeeding could be used reliably for child spacing. The study was designed to ◦ to explore the feasibility of overcoming the skepticism of providers about the ◦ impact of breastfeeding on fertility, the level of difficulty that women experienced ◦ in understanding the three criteria of LAM, and also the acceptability of LAM to ◦ these clients.

◦ The intervention consisted of: (1) the development of educational materials in ◦ Portuguese for use during counseling of patients attending prenatal care or giving ◦ birth at the hospital; (2) training of all the personnel involved in the program, ◦ including those who worked with newborns and in the hospital's milk bank; and ◦ (3) counseling of women in both breastfeeding and LAM. The intervention ◦ included 348 women who returned to the institute after the initiation of the project ◦ for their 40-day checkup and volunteered for the study, independent of whether ◦ they accepted to use contraception and of the methods chosen. These women had ◦ four return visits scheduled during the 12 months postpartum. Those who chose ◦ LAM were asked to return before the appointment date if they stopped exclusive ◦ breastfeeding or if their menses returned. A total of 350 women who gave birth at ◦ the hospital and received the traditional orientation on breastfeeding and contra- ◦ ception constituted the control group. Those who still returned to the hospital for ◦ regular checkups were interviewed one year postpartum.

◦ **Results**

◦ The rate of continuation of breastfeeding was significantly higher after the ◦ intervention at 3, 6, 9 and 12 months postpartum as compared to the control group. ◦ At 12 months postpartum the proportion of women not using any method was ◦ more than twice greater among the control group participants than among women ◦ delivered after the intervention. The proportion of women who were pregnant one ◦ year after having given birth was 50 percent lower after the intervention. The ◦ proportion of women who had become pregnant up to one year postpartum was ◦ lower among those using LAM at the three-month visit. The results showed that ◦ an appropriate intervention changed the attitude and practice of the professional ◦ staff responsible for providing information and services to postpartum women. ◦ They also show that the acceptance of LAM as a contraceptive method can be as ◦ high as that of other methods when offered to low income, less literate women who ◦ were thought to be ill prepared to understand and use this information-based ◦ method. More importantly, the study indicated that after introducing LAM, there ◦ was an increased duration of breastfeeding, improved infant health, greater use of ◦ any method of contraception, and fewer pregnancies within the first year postpar- ◦ tum, although the changes could not be fully attributed to the intervention.

Project Design

Dr. Alfredo Pérez of the Pontificia Universidad Católica de Chile (PUCC), had been researching the fertility impact of breastfeeding and natural family planning for nearly 20 years when IRH was founded. He had been instrumental in the dissemination and acceptance of NFP in Chile and had long been an advocate of the fertility impact of breastfeeding. As an academic researcher, he was concerned that the use of NFP during breastfeeding was poorly understood, and was dedicated to a better understanding of this interaction. Chile, long supportive of breastfeeding, was a rapidly modernizing society, and breastfeeding was at risk. As an Obstetrician/Gynecologist, Dr. Pérez realized he needed other physicians, especially a pediatrician, to help him in his studies of this issue.

Methodology

The PUCC proposed to IRH a project to conduct the first prospective study of the use of Lactational Amenorrhea Method and to study the effect of a clinical-based breastfeeding promotion program on the duration of postpartum amenorrhea among urban women in Santiago, Chile.

After much discussion, IRH chose to support a modified protocol that would include a control and intervention groups, offering standard breastfeeding support to the controls and offering LAM, with breastfeeding clinical follow up, postpartum rooming-in and other interventions which later came to be known as "Baby-Friendly." The initial support included training for two staff at the Wellstart LME course and the development of interview forms and standardized protocols with the input of personnel from University of Pittsburgh and IRH. The initial study was completed in 1991 and published in *Lancet* in 1992.

The second phase of the project, which began in 1990, commenced with a dissemination conference held in Chile and attended by representatives from at least 70 health care facilities representing four countries. Dr. Veronica Valdés, a pediatrician, led an effort to have breastfeeding more extensively considered by the MOH. Based on the assessment of the conference and an associated book on breastfeeding and study findings, she was able to increase the profile of breastfeeding in many professional fora. The second phase also included an upgraded breastfeeding textbook, co-funded by PAHO, and a second clinical trial, introducing a modified LAM to working women. This second phase was extended as the personnel involved became more active in national level BFHI training and other breastfeeding work internationally. Final analysis of the data collected continues in concert with the wide acceptance of breastfeeding promotive behaviors throughout Chile.

Results

This project has yielded a variety of research, policy and service results, leading to broader understanding of many important issues related to the incorporation of LAM into service delivery programs, and to a greater acceptance of LAM and breastfeeding promotion practices among policy makers, program managers and medical professionals, not only in Chile, but worldwide. The primary findings from the project include:

- LAM is acceptable, efficacious (99.4 percent), and easily learned.
- Acceptors of LAM, with breastfeeding support, demonstrate improved breastfeeding behaviors.
- With proper antenatal skills-based training, primiparas can achieve breastfeeding success comparable to that of multiparous women.

Chile

Name of Project:
*Impact of
Breastfeeding on
Child Spacing*

Dates:
1988 to 1996

**Principal
Investigator:**
Alfredo Pérez, MD

**Collaborating
Institution:**
*Pontificia Católica
Universidad de
Chile (PUCC)*

- Properly planned dissemination conferences may have a direct effect on clinical behaviors and policy.
- Charismatic, dedicated individuals, given proper training and support for study, can have a profound impact on a nation's health and family planning strategies.

Analyses and publication of data from this research will continue, as will the policy and clinical impact of the project and dedicated researchers involved. Chile has shown strong commitment to the continued promotion of breastfeeding and LAM, and to enabling women to utilize LAM successfully as an introductory postpartum method of family planning.

Products

The project resulted in a number of scientific articles published in a variety of peer-reviewed journals, several of which have been translated by IRH in order to facilitate a wider distribution. These articles, along with numerous presentations of the project results in professional fora, have contributed substantially to the efforts of IRH to establish LAM in the scientific community. One of the published articles was recognized by UNICEF as the article of the month, highlighting the importance of prenatal hands-on skills counseling for first time mothers in order to increase their breastfeeding success. The publication, in Spanish (and translated into Portuguese) of a medical text book on breastfeeding has had considerable impact on efforts to update or reform medical and nursing school curricula in several Latin American countries, providing a concrete material for use by faculty and students alike. The major publications related to the project include:

- *Lactancia para la Madre y el Niño*. Valdés V, Pérez A and Labbok M. Santiago, Chile: Publicaciones Técnicas Mediteráneo Ltda., 1994.
- Pérez A, Labbok M and Queenan J. 1992. Clinical Study of the Lactational Amenorrhea Method for Family Planning. *Lancet* 339:968-70.
- Pugin E, Valdés V, Labbok M, Pérez A and Aravena R. 1995. Does Prenatal Group Skills Education Add to the Impact of a Comprehensive Breastfeeding Promotion Program? *Journal of Human Lactation* 11(4):15-20.
- Valdés V, Pérez A, Labbok M, Pugin E, Zambrano I and Catalan S. 1993. The Impact of a Hospital and Clinic-based Breastfeeding Promotion Programme in a Middle-Class Urban Environment. *Journal of Tropical Pediatrics* 39:142-51.
- Valdés V, Pugin E, Labbok M, Pérez A, Catalán S, Aravena R and Adler M. 1995. The Effects on Professional Practices of a Three-Day Course on Breastfeeding. *Journal of Human Lactation* 11(3):185-90.

Results:

• **Efficacy of LAM:
99.4 percent**

• **Improved breast-feeding behaviors among LAM users**

• **Numerous peer-reviewed journal articles published to advance the science**

Project Description

IRH's involvement in the Dominican Republic began in 1993, when the USAID Mission-supported Family Planning and Health Project (FP&H), coordinated by Development Associates, Inc. (DA/DR), identified as a priority the incorporation of LAM into service delivery programs of three major NGOs supported by the project. DA contacted IRH to explore various mechanisms of collaboration and to request multiple copies of IRH education, training, and promotional print and audiovisual materials for conducting various activities. A country visit by both the IRH Director and Deputy Director in early 1994 provided several important opportunities for advocacy and public relations. An initial sensitization workshop was conducted for government and United Nations officials, program planners, and appropriate technical-level staff of both the national family planning program and a wide variety of NGOs working throughout the country. DA coordinated interviews with several major newspapers and called a press conference to announce plans to incorporate LAM into the project, resulting in numerous articles concerning LAM and the importance of improving breastfeeding practices, which were then in serious jeopardy in the country.

Although IRH never secured direct USAID Mission support for conducting LAM activities in the DR, the Wellstart Expanded Promotion of Breastfeeding Project developed a small centrally-funded technical task order that allowed IRH to continue to collaborate with DA/DR and Wellstart/DR in the design and implementation of a number of LAM and breastfeeding related activities. These activities included inputs into several national conferences in 1994 and 1995, a high-level sensitization meeting, a national-level training on LAM, a medical school curriculum modification workshop, and materials development. Collaboration and coordination among agencies ultimately included the Ministry of Health/DR, the National Commission for the Promotion of Breastfeeding, UNICEF, UNFPA, La Leche League/DR, the three family planning NGOs of the USAID-supported Family Planning and Health Project, and ten child survival NGOs supported under an umbrella group known as CONASUMI.

As its major activity under the Wellstart task order, IRH planned and conducted the national-level training of trainers (TOT) workshop in May 1996. One IRH staff person and two regional consultants facilitated a two- and one-half-day training and other scheduled events in coordination with DA/DR and Wellstart/DR staff. The high-level half-day sensitization meeting which immediately preceded the TOT was considered the official kickoff for LAM. The TOT itself provided the technical personnel of ten participating institutions with the motivation and tools required to add LAM to their in-house training and service delivery activities. The timing of this workshop, although ultimately conducted almost a year later than originally scheduled, was considered ideal, in that the foundation was in place to capitalize on the training. The clinical family planning standards including LAM had been published. The integrated set of family planning educational materials including LAM had just been printed and distributed nationwide. The LAM TOT was in such demand that the number of participants (more than 80) was much greater than is normally considered ideal for any training of this nature but was thought to add to the general enthusiasm for the subject. Given the fact that resources were limited and that no additional TOTs could be conducted with that level of outside technical expertise, there was no acceptable alternative but to adjust the program and methodology to allow for a combination of lecture and small group work. A one-day seminar with the faculty of the medical school of the National University of Santo Domingo followed the TOT and ensured the incorporation of LAM into a curriculum modification process that was currently underway with support from Wellstart, EPB.

Dominican Republic

Name of Project:
LAM Advocacy and Training in the Dominican Republic

Dates:
March 1994 to May 1996

Project Coordinators:
Maria Castillo, Lic., Peggy Koniz-Booher, MPS, and Clavel Sanchez, MD

Collaborating Institutions:
Development Associates, Inc./DR and Wellstart/DR

Results:

- *LAM is part of the five-year National Integrated Plan for the Promotion of Breastfeeding*
- *LAM is included in MIS and National Demographic and Health Survey*
- *LAM is incorporated into clinical family planning standards and list of MOH-approved family planning methods*

Results

Although not a typical in-country approach for IRH, the high level of coordination achieved over a two-year period of time helped secure the incorporation of LAM into the following: the five-year National Integrated Plan for the Promotion of Breastfeeding (1994-1999); clinical family planning standards developed by the FP&H Project (1995) and list of MOH-approved FP methods; cascade family planning trainings (conducted by the MOH and NGOs nationwide); a set of integrated family planning education and training materials, coordinated by DA/DR, but distributed throughout the country to more than 20 organizations; the revised Baby Friendly Hospital Initiative (BFHI) training curriculum; a breastfeeding counseling training guide prepared by Wellstart/DR; medical school curriculum modification project spearheaded by Wellstart in the national university, Universidad Autonoma de Santo Domingo (UASD); La Leche League/DR (LLL/DR) peer counselor trainings supported by UNICEF for the BFHI Tenth Step; a flipchart developed by LLL/DR with technical review by the National Commission for the Promotion of Breastfeeding; inclusion of LAM in the Management Information Systems of the FP&H Project and the National Demographic and Health Survey (DHS) conducted in coordination with MACRO in late fall 1996 and early spring 1997. Preliminary results of the DHS show that after less than one year of officially establishing LAM as a family planning option for postpartum women, approximately five percent of those surveyed had used LAM, 75 percent of women listed LAM as a family planning option, and more than 25 percent of these women could correctly identify the three criteria established for correct use of the method. (Knowledge concerning the timely transfer to another method was not measured.)

Products

Although IRH did not directly support materials development in the Dominican Republic, they did provide technical review of the clinical family planning standards and all educational and training materials produced under the FP&H Project, coordinated by Development Associates. Products included 100,000 copies of a full-color brochure on LAM; 200,000 copies of a brochure on postpartum contraception encouraging breastfeeding for its impact on fertility and offering LAM as an important option after birth; and a section on LAM in two community-level manuals, one for orienting clients and one used as a reference material for promoters. All of these materials are currently being used, nationwide, by more than 5,000 volunteers and other family planning service providers.



Photo courtesy of P. Koniz-Booher

Project Description

In 1989, IRH entered into discussions concerning a potential LAM project with the Centro Médico de Orientación y Planificación (CEMOPLAF), a private, nonprofit, multimethod family planning service delivery system. CEMOPLAF operates 20 clinics throughout Ecuador, and a network of 500 community based distributors (CBDs) provides additional outreach services. The proposed LAM program appealed to the organization's leadership for at least two reasons: (1) the breastfeeding education component would enhance their ability to provide more comprehensive maternal and child health services, and (2) LAM had the potential to attract new clients who had previously been hesitant to initiate contraception or who had no prior family planning experience.

The CEMOPLAF operations research (OR) project represented the first opportunity to test the incorporation of LAM into an established family planning program. The focus was on testing a model for the timely delivery of contraceptive methods to lactating mothers through the provision of breastfeeding and family planning counseling in medical care centers, as well as through CEMOPLAF's CBD system. The project was divided into three phases: the first phase was the pilot project, during which the overall model and educational/counseling materials were developed and tested in a limited number of clinics; the second was the OR introducing LAM into most of CEMOPLAF's clinics; and the third was the introduction of LAM into CEMOPLAF's CBD system.

Start-up activities included initial and continuing training for all staff members of the medical centers, and developing a counseling guide and educational materials to support the counselor. Counseling services were subsequently instituted as a preliminary step prior to consultation with the physician who would actually provide the contraceptive method. LAM counseling was done by the counselor and reinforced by the physician. Using the counseling guide and the educational material, information provided to the user was standardized throughout the institution. Once the program was established in the medical centers it was extended to the CBD system.

Results

During the OR phase, 2,178 mothers with children less than six months old were counseled on the importance of child spacing and the methods available for postpartum women. More than half of these women had never used a modern contraceptive method. Counseling increased the demand for contraceptive for these women from 69 percent prior to counseling to 96 percent following counseling. Of the 2,178 who were screened, 886 met the three LAM criteria. Of these, 330, or 37 percent, accepted LAM and continued in the study. Eighty percent of the LAM acceptors switched to another method on a timely basis, while 15 percent switched to another method with delay and five percent did not begin another method. The final results showed an efficacy of 99.8 percent for LAM, with two pregnancies due to method failure during the study. In the CBD phase of the project, 552 mothers with babies less than six months old were identified. A total of 390 of them received counseling, 368 accepted a method, with 149 (or 40.5 percent) opting for LAM.

Products

The project developed, in collaboration with Johns Hopkins' Population Communication Services, a large number of IEC materials for use in counseling and for training the counselors and other professional staff. A counseling guide was developed as a screening tool for LAM users and a MIS instrument was developed to record information about LAM users. The client materials were especially popular, and the posters, counseling boards, and two brochures developed for this project have been adapted for use in numerous other LAM programs, both regionally and internationally. The project's principal investigator has presented the OR results and shared the IEC materials in a number of regional fora.

Ecuador

Name of Project:
***Incorporation of
LAM into a
Multimethod Service
Delivery Family
Planning Program***

Dates:
***August 1990 to
June 1995***

**Principal
Investigator:**
***Francisco Sevilla,
MD***

**Collaborating
Institution:**
***Centro Médico
de Orientación y
Planificación
(CEMOPLAF)***

El Salvador

Name of Project: *Enhancing Child Survival and Family Planning in El Salvador*

Dates:
*July 1995 to
June 1997*

**Project
Coordinator:**
*Ana Josefa de
Garcia, Lic.*

**Collaborating
Institution:**
*Centro de Apollo
Lactancia Materna
(CALMA),
Ministry of Public
Health (MPS),
Salvadoran Institute
for Social Security
(ISSS),
University of
El Salvador*

Project Design

The El Salvador Project was designed to foster LAM use among the population at large and to increase the duration of full breastfeeding for both maternal and child health. Activities were designed to achieve the following goals: (1) increase the understanding of LAM and postpartum FP among Salvadoran decision makers; (2) develop in-country expertise on LAM; and (3) provide technical assistance and seed support for implementation of service delivery directly to end users.

The approach used in El Salvador to reach the project's goal was a four-phased effort. During the initial phase, IRH made a technical assistance visit during which a needs assessment was conducted, including meetings with Salvadoran and in-country international medical and public health decision makers. IRH presented the project design, identified potential partner agencies, and reconfirmed the continued interest of the government and a wide variety of NGOs in the project. During the second phase, the leading Salvadoran breastfeeding organization, CALMA, assisted IRH by facilitating a sensitization seminar. National policy makers and other key personnel from government and nonprofit family planning organizations were invited. IRH supported the participation of several international and national LAM experts who presented the physiology of LAM as well as technical and programmatic issues that have been encountered during the introduction of LAM in other countries, especially throughout Latin America. Phase three revolved around the preparation and execution of a five-day TOT workshop for key service delivery personnel, also facilitated by CALMA. The workshop was held in January 1996 in San Salvador. Thirty-two high-level providers participated in the training with the anticipation that they would serve as in-house, in-country LAM experts in their respective family planning and maternal-child health units of their organizations (both governmental and nongovernmental). Follow-up technical assistance by IRH staff, with the assistance of CALMA, was the focus of the fourth phase, monitoring the level of commitment of the various institutions to the established objectives, and ensuring that LAM was being delivered properly at the service delivery sites. Each participating institution had developed a workplan during the training, setting objectives with measurable indicators related to the number of follow-up trainings that would be conducted, policies and standards that would be reviewed and modified to include LAM, and other activities.

Results

At the close of this IRH field project, in less than one year, an impressive amount of follow-up work had been accomplished by each of the participating agencies. The Ministry of Health had conducted five LAM and breastfeeding conferences, involving a total of 280 physicians from the Health Department, as well as 20 conferences involving 345 hospital- and health unit-level physicians and nurses from 17 health departments. They also organized 37 one-day trainings for 1,400 promoters and midwives from five Health Departments. The Salvadoran Institute for Social Security held a conference for 40 physicians from the Metropolitan Region. The University of El Salvador held a one-day conference for 60 faculty members from the schools of medicine, nursing, nutrition, and maternal and child health education. One hundred and fifty pre-graduation students also attended the five conferences conducted by the MOH. CALMA organized a five-day seminar for representatives from MOH health units and NGOs and a one-day training for 16 CALMA counselors and midwives and 13 MOH promoters. They also organized an eight-day training for 230 women from breastfeeding support groups. Ten nongovernmental organizations organized a total of 34 one-day trainings for a total of 43 technicians and 550 promoters, midwives, and community-level volunteers.

In addition to meeting all of the objectives established for the project, CALMA also reported a number of unanticipated achievements, including the fact that the Ministry of Health authorized and launched the dissemination of LAM at the national level. The School of Medicine of the University of El Salvador incorporated LAM as part of the curriculum in the schools of medicine, nursing, nutrition, and maternal and child health education. A network of 14 organizations committed to the promotion of LAM and breastfeeding was established and was being facilitated by CALMA. All of the institutions that participated in the project had institutionalized LAM within their service delivery systems and had surpassed the established level of effort or counterpart contribution expected during the life of the project.



Photo courtesy of CALMA

Guatemala

Name of Project: ***Breastfeeding and Natural Child Spacing Training Project, La Leche League***

Dates:
***February 1990 to
January 1996***

Project
Coordinator:
***Maryanne
Stone-Jimenez***

Collaborating
Institution:
***La Leche League
International***

Project Description

The Guatemala project was one of the first IRH field support projects, providing new opportunities for IRH to test issues related to the dissemination of information about LAM and the incorporation of LAM counseling into the ongoing field activities of a breastfeeding nongovernmental organization. La Leche League/Guatemala (LLL/G) and IRH jointly developed the project to complement, to a great extent, the LLL/G mother-to-mother support project activities being funded at that time through a USAID Child Survival grant. The objectives of the Guatemala project were developed in a four-phased strategy. The first twelve-month phase of the project encompassed three distinct levels of training activities designed to give adequate information to health professionals, community health and family planning workers, and mothers living in marginal urban neighborhoods, about the relationship of breastfeeding and natural child spacing. Specific objective of phase one included: (1) the planning and execution of a two-day national conference on breastfeeding and child spacing; (2) the organization of five training workshops; (3) the evaluation and documentation of the training strategies developed for both the national conference and training workshops, as well as the dissemination of results to all regional USAID missions; and (4) the development and field testing of context specific, culturally appropriate training materials for counseling mothers on LAM. This phase essentially helped to establish La Leche League/Guatemala as the local expertise and a regional resource for the promotion of LAM.

The objectives of the second phase included: (1) the preparation of the proceedings of the national conference of Breastfeeding and Natural Child Spacing held in April 1993, entitled *Latest Findings Related to the Uniqueness of Breastfeeding*; (2) the publication and dissemination of 2,000 copies of the proceedings throughout Guatemala and also eight to ten Latin American countries; and (3) the planning and presentation of a LAM-related component at the LLLI Regional Training Workshop held in Guatemala.

Phase three objectives focused on: (1) the development of a training curriculum in LAM for LLL in Latin America; (2) the training of La Leche League leaders from each of five Latin American focus countries to serve as technical resource persons in LAM; (3) the development of workplans for the introduction of LAM into community-level programs in the five countries; and (4) the development of plans for follow-up visits to the focus countries.

During the last phase of the project, LLL/G planned the following activities: (1) production of a brochure for NGOs who are promoting breastfeeding and child spacing in rural indigenous communities; (2) provision of two three-day training workshops on LAM for NGOs who are promoting breastfeeding and child spacing in rural communities; (3) field testing of LAM materials developed by LLL/G with indigenous communities in various NGO project sites; and (4) coordination with APROFAM (the major family planning organization in Guatemala) and other child spacing agencies to ensure LLL/G input in the incorporation of LAM into their management information systems and training courses.

Results

During the first phase, LLL/G conducted the national-level conference with the participation of over 340 professionals from at least 100 different organizations and held five workshops covering LAM and optimal breastfeeding for NGOs (AGROSALUD, CARE, PAMI, School of Nursing-Auxiliary Nurse Training Section, APROFAM). During phase two, LLL/G prepared and published the conference proceedings in a 78-page document, *Ultimos Descubrimientos Sobre La Excepcionalidad de la Leche Materna*, and distributed copies to all participants at the conferences. LLL/G also presented LAM in a variety of ways at the Second Regional LLL Conference attended by 38 leaders from 13 Latin American countries. Phase three included the development of a detailed training curriculum in LAM, designed specifically for LLL Leaders. Also, a LLL leader from each of

Haiti

Title of Project:

Integration of Breastfeeding, LAM, and NFP into Multimethod and NFP Service Delivery Systems

Dates of Project:

July 1994 to August 1996

Principal Investigator:

Gadner Michaud, MD, and Elsie Lauredent, RN, MPH

Collaborating Institution:
PROFAMIL

Project Description

The project with PROFAMIL was designed to be the first phase of a two-phase project and had as its goal to contribute to the improvement of the health of mothers and infants through the promotion of NFP and LAM. The overall objectives were to demonstrate the effectiveness of NFP and LAM and to experiment with different NFP and LAM service delivery models. During the two years of the project, PROFAMIL planned to accomplish the following: (1) inform and sensitize decision makers and health program planners about LAM and NFP; (2) increase the number of health personnel capable of teaching LAM and cervical mucus method; (3) adapt and develop educational and teaching materials on LAM and cervical mucus method; (4) strengthen several existing programs and improve their service delivery capabilities relative to LAM and NFP; and (5) develop a Management Information System to better manage and follow up LAM and NFP programs.

Methodology

IRH and PROFAMIL held an information and sensitization workshop to launch the program (December 1994). Key decision makers and program planners from governmental and nongovernmental organizations, as well as USAID Cooperating Agencies representatives, attended. In March 1995, PROFAMIL held a training of trainers for 20 health workers, with representation from each site as well as several other organizations. In addition, the Local Project Coordinator conducted several refresher training sessions in all project sites, and provided technical assistance to other organizations on breastfeeding, LAM, and NFP. The project carried out a focus group study on birth spacing practices in the country, as well as developed educational materials. An MIS was developed and implemented in the four project sites.

IRH and PROFAMIL selected four project sites to which technical and financial assistance would be provided to incorporate LAM and NFP or to strengthen existing service delivery of NFP. Service delivery systems varied among the sites.

- In Limbé, recruitment, teaching, and follow-up of clients was carried out by 20 community leaders supervised by an auxiliary health care provider and two nurses. The program functioned primarily at the community level, with home visits, and meetings were held to sensitize traditional birth attendants. At the same time, in the clinic, prenatal and immunization services were used to educate women about breastfeeding and LAM.
- In Milot, LAM and NFP were integrated into the regular activities of the center. Two nurses supervised three auxiliary health care providers and one assistant auxiliary provider. All staff of the center were involved in the implementation of activities. A LAM clinic was initiated, as well as regular follow-up meetings for cervical mucus method users, and home visits were used as well to follow up clients.
- At Haitian Health Foundation in Jérémie, LAM and NFP were integrated into the community health system. Four auxiliary health personnel supervised the activities of 20 health agents. Regular activities consisted of community meetings, mothers' clubs meetings, and home visits.
- In Port-de-Paix, 12 community leaders served as monitors, with four auxiliary health care personnel responsible for local dispensaries serving as supervisors. LAM and NFP were promoted with home visits and community meetings. No coordination took place with the dispensary services.

Honduras

Name of Project:
*The Promotion of
the Lactational
Amenorrhea
Method and Child
Spacing through
Breastfeeding
Advocates*

Dates:
1990 to 1992

**Principal
Investigator:**
Judy Canahuati

**Collaborating
Institutions:**
*La Leche League/
Honduras,
The Population
Council/Inopal II*

Project Design

In order to address the problem of low levels of exclusive breastfeeding and inadequate birth spacing, La Leche League Honduras (LLLH) tested the use of breastfeeding counselors trained in the LAM guidelines to promote the use of LAM and timely initiation of other birth spacing methods. The intervention consisted of training community volunteers and medical personnel in Ministry of Health centers and hospitals in exclusive breastfeeding and LAM, implementing community-based mother support groups and establishing a formal referral process to other health services.

A non-equivalent pre-post test control design was utilized to evaluate the intervention. Neighborhoods in a peri-urban community of San Pedro Sula were assigned to the control or the experimental group. In the experimental communities, breastfeeding counselors (called BAs) were trained and formed support groups. Training of medical staff was identical in control and experimental communities, as both were served by the same health services.

Several problems with the implementation of the study design made it impossible to follow the original analysis plan. First, socio-demographic differences between the samples between the baseline and endline surveys suggest possible non-comparability of samples, possibly biasing the results in favor of the intervention. Conversely, the results may be negatively biased due to contamination of the control groups. Midway through the intervention, breastfeeding advocates were placed in a hospital and clinic serving both control and experimental communities. As a result, 3.9 percent of women in the control group reported contact with a counselor and 0.5 percent reported attending a support group. This contamination, combined with the relatively low level of coverage reported in the experimental group, approximately 12 percent, made the observation of significant differences between experimental groups unlikely. Therefore, comparisons were made between the women who had contact with the BAs (contact/experimental group) and the control group.

Results

The strategy of placing BAs in the community proved effective in improving breastfeeding practices. Women who had contact with the counselors, either individually or within a support group, were more likely to exclusively breastfeed longer. For example, the median survival time for exclusive breastfeeding for the contact group was 9.6 weeks as compared to 4.3 weeks for the control group. However, no significant differences in the duration of postpartum amenorrhea were observed, and the percentage of women who reported information regarding LAM was very low at 10 percent.

Nonetheless, the BAs were also effective in increasing knowledge. Women who had contact with the counselors were more likely to know each of the criteria individually and know more than one rule. However, overall knowledge remained low. The mean number of rules mentioned spontaneously was 0.3 by the women in the contact group, which compares favorably with the control group at 0.08.

No women reported use of LAM as a family planning method, perhaps due to a lack of familiarity with the term. Therefore, practices of women reporting use of breastfeeding for birth spacing were analyzed. Of these, only 6.5 percent were complying with all three LAM guidelines. However, the BAs were effective in encouraging contraceptive methods compatible with breastfeeding. Women who had contact with the counselors were more likely to use the IUD and less likely to use hormonal methods.

Products

A comprehensive breastfeeding counseling guide, *Manual de Lactancia Materna para Consejeras Comunitarias*, was developed in conjunction with this project by the Academy for Educational Development, La Leche League/Honduras, Wellstart EPB, and IRH. The UNICEF regional office for Latin America coordinated the printing and distribution of the guide throughout the region.

Project Description

The purpose of this pilot project was for SIES, the Chiapas State affiliate of the Mexican Family Planning Foundation (MEXFAM), to introduce LAM as another method in the promotion of multiple methods currently being offered in Chiapas. The project was developed as a two-year pilot with the hope that the service delivery model and the educational and training materials developed during the course of the project could be adapted for use at the national level by other MEXFAM affiliates.

The pilot project had three primary objectives: (1) to integrate LAM into the services provided by SIES by the end of the second year; (2) to successfully introduce LAM to SIES users and to evaluate the rates of LAM acceptance and understanding among women up to six months postpartum; and (3) to determine the impact of LAM on the acceptance of modern methods by new SIES users, with the goal of at least 50 percent selecting a complementary method. These objectives were pursued through training SIES coordinators and volunteer promoters. Once these personnel were trained they actually began promoting LAM in the prenatal period through home visits and at community meetings. Users were enrolled soon after delivery and were followed-up on a monthly basis.

Results

Trainings were completed by March 1996. Following the final trainings, LAM acceptance more than doubled. Many postpartum breastfeeding women who were counseled concerning method options chose LAM as their preferred method of family planning. The number of LAM users enrolled through August 1996 was 267 (73 percent of women counseled). Of the 91 users completing LAM as of August 1996, 71 (80 percent) were using a complementary method. (The 1997 data was not available at the time of writing.) A LAM training of trainers for all MEXFAM affiliates throughout the country had originally been planned for March 1997, but was postponed because of funding constraints.

Products

A variety of training curricula and creative low-literacy education and counseling materials and other resources were developed during the course of the project including: a training course for coordinators and three 12-hour workshops for volunteer promoters; a guide to LAM for coordinators; a fabric-based flipchart for promoters; a guide to implementing LAM for mothers; a follow-up schedule for promoter reports; and audiocassettes for conducting promotional activities in communities.



Photo courtesy of P. Lerma

Mexico

Name of Project:
*Integration of the
Lactational
Amenorrhea Method
into an Established
Network for
Promoting Family
Planning in Mexico*

Dates:

*May 1994 to
April 1997*

Project

Coordinator:

Paloma Lerma, Lic.

Collaborating Institution:

*Mexican
Family Planning
Foundation
(MEXFAM)*

Perú

Name of Project:
*LAM/Breastfeeding
Project in Perú*

Dates:
*September 1995 to
June 1997*

**Project
Coordinator:**
*Diego Fernández-
Concha, MD*

**Collaborating
Institution:**
*Asoc. Benéfica
PRISMA*

Project Description

Project activities began in late 1995, when IRH initiated a subagreement with A.B. PRISMA to conduct a series of LAM-related activities. A sensitization conference was held for decision makers from many institutions (Ministry of Health/Ayacucho, Peruano de Seguridad Social, INPPARES, PLANFAMI, PLANIFAM, Universidad Gonzaga/Ica, Universidad Basadre/Tacna [School of Midwifery], Universidad Antunez/Huraz, Universidad San Cristobal/Ayacucho).

IRH trained small cores of staff from several private and public institutions in LAM, breastfeeding, and postpartum family planning (both technical and programmatic aspects). Participants were preferably trainers and/or supervisors, who then went on to train co-workers, mostly service providers. The next step was the initiation of service delivery in a limited number of outlets. The goals were to develop a critical mass of trained people at each institution, and to develop models for the incorporation of LAM/breastfeeding appropriate to the needs of each particular institution and its target population, setting, etc. The strategy was that once this was achieved, more staff could be trained and the service delivery models could be replicated elsewhere. Institutions that are actively participating in the project all provide family planning services, and most of them also provide other types of health services.

The incorporation of LAM into services proceeded at different paces, depending on the institution. Some workshop attendees apparently overestimated the support LAM had inside their institutions, and thus needed more time to begin their activities than originally planned. Changes in staffing at some of the sites also caused some delays and other difficulties.

Results

LAM/breastfeeding services are now provided at several sites in the Lima area and in other regions of Perú. Several hundred clients accepted LAM in the first months of project activities, and the numbers are growing. Many of these clients switched to other family planning methods after using LAM.

Important improvements in the quality of other services have taken place as a direct result of incorporating LAM, including the fact that family planning clients now receive counseling, where none received it before, and postpartum women are now offered family planning services, whereas before, postpartum services were not available and/or not prioritized.

Demand for postpartum family planning services has increased in those service delivery programs participating in the project. Anecdotal reports indicate that mothers are delaying introduction of supplementary foods until babies are five-six months old.

PRISMA and IRH staff have been monitoring service delivery, providing feedback to service providers and to their supervisors, updating and reinforcing technical concepts, and suggesting programmatic adjustments to improve the quality of the services.

A training of trainers workshop for other institutions in Ayacucho region was held in early 1997 (including other MOH sites and several NGOs). The faculty of Universidad San Cristobal (located in Huamanga, Ayacucho) participated in a workshop in breastfeeding, LAM, and related topics, and incorporated some of these elements into the curricula of the School of Midwifery. At the close of the project in June 1997, it was estimated that more than 100 service providers and other related staff had been trained in LAM, and had experience in actually providing LAM services to clients, with feedback from PRISMA and IRH. Institution-specific models for delivery of LAM services were developed, tested, and adjusted. As emphasis has been put on LAM being incorporated into ongoing programs and activities, it is expected that LAM activities will be fully integrated and self sustainable.

Products

A follow-up card for LAM and postpartum family planning was developed by PRISMA, with more than 5,000 copies printed for distribution to LAM users.

Project Description

IRH designed this project at the request of USAID/Amman to improve breastfeeding practices and increase family planning prevalence through LAM. The project's goals were to: (1) institutionalize LAM as a method of choice for Jordanian couples within the existing health and family planning system; (2) increase optimal breastfeeding practices for their impact on child spacing and child health; (3) increase the acceptance of LAM as a family planning method both among providers and clients, for its impact on maternal and child health; (4) incorporate LAM into key organizations and selected service delivery sites; and (5) increase the accessibility of maternal and child health and family planning services. The strategy for introducing LAM focused on building linkages with existing health and family planning programs. Initially three primary health care clinics were selected as demonstration sites for Phase I of the project to determine the best means of integrating LAM into existing services. Phase II concentrated on expanding to other primary health care clinics within the country and on integrating LAM into two of USAID's primary MCH and family planning projects: The Family Health Services Project and the Comprehensive Postpartum Project. The LAM and Breastfeeding Support Project also collaborated with the Noor Al-Hussein Foundation's Population Program to integrate LAM into the motivational activities carried out among rural women in 18 villages.

Methodology

IRH hired a Local Project Coordinator to work at CCTSS and supported a Policy Advisor at the University. Both of these individuals attended a training course at IRH. At the outset of the project, a sensitization seminar was held for 75 policy level staff from the MOH, the private health sector, and NGOs involved with MCH and family planning. The project then held a three-day training in LAM and breastfeeding support for 21 master trainers from the MOH, NGOs, and the private sector. A one-day training course was held at each of the three demonstration sites. Trainees represented the antenatal, postpartum, nutrition, and family planning clinics. To support the integration of LAM into family planning services, materials were adapted and developed.

As an integral part of implementing the project at the demonstration sites, a referral system was established between the postpartum and well baby clinics and the family planning clinic that would ensure that all eligible mothers were informed about LAM and then, if interested, referred to further counseling to the family planning clinic. The project also included LAM sensitization of mothers in the antenatal clinics. Those who accepted LAM after counseling in the family planning clinic were registered and given a client card. Follow up was carried out according to the needs of the women: some women expressed the need to come for follow up on a monthly basis, while others preferred to come back whenever any one of the three conditions changed. The latter were provided with a backup method. Demonstration site staff filled out quarterly monitoring forms for use during the project's ongoing monitoring and evaluation. A LAM protocol was developed based on the experience at the demonstration sites.

In the project's second phase, LAM was integrated into 42 additional centers, and several training sessions were conducted by the master trainers in five governorates. The project collaborated closely with several family planning and breastfeeding programs operating in the country, and held a two-day workshop at the University of Jordan to integrate LAM into the teaching curricula of midwifery and nursing colleges in the country.

Results

Within 16 months, the project attained all of its objectives and had unexpected impact on health services. The project was evaluated using several instruments: monitoring visits, pre and post-tests from the training sessions; quarterly monitor-

Near East/ North Africa

Jordan

Title of Project: *Breastfeeding and LAM Support Project*

Dates:

***January 1996 to
April 1997***

Principal

Investigators:

***Issa Al-Masarweh,
PhD, and Rania
Kawar, MS***

Collaborating Institution:

***Center for
Consultation,
Technical Services,
and Studies
(CCTSS), University
of Jordan***

Results:

- *MOH providers trained in LAM: 655*
- *LAM Users: 457*
- *LAM Users Who Switched to Other Methods: 457*

ing forms; client and service providers KAP surveys in the demonstration sites; and a case/control study of LAM users and non-LAM users to observe differences in breastfeeding and family planning practices between the two groups. LAM and breastfeeding support trainings were conducted for 665 MOH health care providers representing five governorates and including the 21 master trainers and the 26 nurses and midwives from colleges and the University of Jordan. In the second phase of the project, LAM was incorporated into the family planning services of 42 MCH centers and one hospital in five governorates. Four hundred and seventy women had been informed about LAM in health education sessions. When the project ended, there were 210 LAM acceptors from the Phase II sites. Since the beginning of service delivery, 457 mothers became LAM acceptors. Of all eligible mothers referred to the family planning clinic, 70 percent chose to use LAM, and 54 percent of LAM users were first time users of any family planning method. All of the LAM users who experienced a change in any one of the parameters switched to another method of family planning: 44.5 chose a long-term method. Seventy-two LAM users completed six months of use.

KAP surveys recorded extraordinary changes in health care provider knowledge and attitudes about breastfeeding and LAM. For example, before the introduction of LAM, 19 percent of the providers would have recommended exclusive breastfeeding for infants 4-6 months old; after the LAM intervention, 100 percent recommend it. Prior to the intervention, no health care provider could list the three LAM parameters; post intervention, 72.5 percent can recall the parameters. Client breastfeeding practices also improved.

Products

A counseling flipchart was developed on breastfeeding benefits and LAM. IRH's Guidelines videotape was translated into Arabic, as well as the IRH-supported IDT module on Breastfeeding Support and LAM. The Local Project Coordinator was a member of the Task Force on the development of a national IEC strategy for family planning and was able to ensure that LAM will be integrated into the final strategy. There are assurances that LAM will be included in the national population strategy as well. Finally, the project developed a LAM Resource Book to assist other projects and service delivery personnel who would like to integrate LAM into their activities

Project Description

At the request of USAID/Kyiv, IRH participated in a program designed to update reproductive health knowledge among health care providers in three selected sites, Donetsk, L'viv, and Odessa, Ukraine. The updates were conducted by several USAID Cooperating Agencies and contractors. The activities of this group were coordinated by AVSC International. Several agencies that were operating in Ukraine without USAID funding also coordinated their activities with the USAID group.

Several seminar/training series were planned, and IRH participated in two of the series. The first was a four-day seminar on general aspects of reproductive health at each of the selected sites. At these seminars IRH provided lectures on breastfeeding, LAM, and family planning. In addition, IRH offered three-day seminars at each of the selected sites that went into further detail on breastfeeding, LAM, and postpartum reproductive health. To supplement the seminar, IRH identified and translated several important materials into Russian for use by the participants, including videos, self-taught LAM courses, brochures, scientific articles, and other items.

Results

The Breastfeeding Division participated in three AVSC-led seminars and conducted three of its own seminars. At the AVSC-led seminars, 431 people were trained and 75 people were trained at the seminars. At each of the seminars, the participants created an action plan for themselves or joined together as groups from the same organization to create an action plan for their organization to implement their new knowledge.

Products

The following materials were translated and produced in Russian:

- *Breastfeeding: Protecting a Natural Resource* (video)
- *Guidelines: Breastfeeding, Family Planning, and the Lactational Amenorrhea Method (LAM)* (booklet and video)
- Breastfeeding and the Lactational Amenorrhea Method of Family Planning-Self-study Training Module, Institute for Development Training.
- Breastfeeding and Child Spacing Fact Sheets
- "The Lactational Amenorrhea Method: a Postpartum Introductory Family Planning Method with Policy and Program Implications." Labbok et al. *Advances in Contraception*
- "Breast feeding in the First Six Months: No Need for Extra Fluids." Martinez et al. *British Medical Journal*

The action plans created by IRH trainees are being implemented throughout Ukraine. Preliminary information from Ukraine indicates success at implementing changes that have updated breastfeeding support and reproductive health information and will help promote LAM. Final results will not be available until exit interview surveys have been completed and analyzed.

Europe/Newly Independent

Ukraine

Name of Project:
Introducing LAM and Updated Lactation Management Techniques into Reproductive Health Services in Ukraine

Dates:
January 1995 to July 1996

Project Consultant:
Elena Stroot, MD

Collaborating Institution:
AVSC International

A. Yes. There is evidence that a mother can pass the virus to her baby through breastmilk. WHO Guidance (WHO, 1992) suggests that if a safe alternative to breastfeeding is available and affordable, a woman who is known to be HIV positive or has AIDS should be informed of the risks of breast and bottle feeding and allowed to make an informed choice based on full information. In circumstances where infectious diseases constitute the main cause of infant mortality, women should be advised to breastfeed irrespective of their HIV status.

Q. *If a mother is infected with HIV, or has AIDS, can she pass the virus to her baby though her breastmilk?*

A. Numerous consequences of breastfeeding have an impact on the health of the mother. Research on the effects of breastfeeding on maternal health has concentrated primarily on breast cancer, bone loss, and maternal depletion. However, it is important to place the health consequences of breastfeeding into a more broad and valid health context. A discussion of women’s health is incomplete if it focuses only on the physical and ignores women’s psychosocial and economic well-being, to which breastfeeding can contribute immensely. Maternal depletion is a potential risk of full breastfeeding for which a solution exists: prolonged weaning and child spacing. Bone loss does seem to occur during lactation, but bone is remineralized during and after weaning, again arguing for a long weaning period and adequate child spacing. Regardless of how the relative risks and benefits of breastfeeding for the mother are weighed, it is clear that two programmatic issues related to breastfeeding women are ensuring that they are (1) adequately fed and (2) enabled to space their pregnancies beyond the period of breastfeeding.

Q. *Is full breastfeeding harmful to women?*

A. LAM is effective even if a mother is not exclusively breastfeeding. Guidelines suggest that a woman relying on LAM practice *full or nearly full breastfeeding*, which means she is breastfeeding when the baby wants, during the day and night, and she only gives infrequent supplementation in small amounts. Other foods or liquids should never replace a feeding at the breast. Exclusive breastfeeding, however, should be encouraged for the first six months to optimize the many health benefits. Worldwide, more than 95 percent of women breastfeed, but few exclusively breastfeed for the optimal six months. Three issues are relevant to LAM: (1) LAM does not demand exclusive breastfeeding; (2) with sufficient support, women can exclusively breastfeed; and (3) women who rely on breastfeeding for their contraception are more likely to change to exclusive breastfeeding (Labbok et al., 1994). LAM allows for some supplementation, but more importantly, when women are informed of the importance of ‘close to full breastfeeding’ for contraceptive efficacy, they do improve their breastfeeding patterns.

Q. *How much supplementation can a mother who is using LAM give her baby?*

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Q. Can a woman who works outside of the home or who is separated from her infant for long periods of time still use LAM?

A. Yes. In truth, all women are working women. Whether it is in the household, in agriculture, or in the organized labor sector, the realities of life will separate women from their infants for varying periods of time. How can they use LAM? First, it must be recognized that not all LAM users will use it for the full six months: the return to the organized work sector may be the moment of "long intervals between breastfeeds" that indicates that LAM can no longer be relied upon. However, with proper instruction, women may continue to exclusively breastmilk-feed by expressing their milk frequently, eliciting a hormonal response similar to that of the infant at the breast. This can certainly allow the continuation of LAM use when intervals of separation are brief. However, the efficacy of LAM will probably decline if milk expression begins to replace the infant at the breast.

Q. Can a woman who is malnourished use LAM?

A. Yes. Women who are malnourished can use LAM. The question of whether or not malnourished women can and should exclusively breastfeed and/or use LAM is often raised out of real concern for the health and well-being of the women in the area served. Several studies have been conducted and IRH convened an expert panel presentation and discussion for these researchers. The proceedings document the outcome of the debate: If intervention is possible and affordable, that intervention should be to support continued breastfeeding and to feed the mother. One researcher pointed out that there really is no choice if child survival is weighed into the decision, while another showed that maternal supplements have a negligible impact on fertility return. If the concern is the maternal nutritional status, intervention should begin well before the girl-child reaches her reproductive years. (Krasovec, Labbok, Queenan, 1991).

Q. Can LAM use continue after supplementation of infant's diet begins?

A. Yes, if breastfeeds precede each feeding of a supplement (no feeds replace breastfeeds) and breastfeeding frequency remains high. In the child health literature it is clear that the nutritional requirements of infants can be met by full breastfeeding until six months in well-nourished mothers. However, a less well nourished lactating woman may require additional calories in order to meet both her own energy needs and the needs of the infant. Mothers should be encouraged to continue to exclusively breastfeed their infants until six months of age and increase their caloric intake to meet energy needs. Messages should be consistent, so that women understand the need to use a contraceptive method compatible with breastfeeding once substantial calories in the infant's diet are obtained from food supplements and the frequency and intensity of breastfeeds have decreased.

Related to this issue is the continuation of exclusive breastfeeding past six months. Although it is not often raised as a deterrent to LAM use, prolonged exclusive breastfeeding, well past six months, also can have negative health effects. The extended LAM guidance encourages timely commencement of weaning. The evaluation of the project in Rwanda showed that LAM-9 resulted in improved weaning practices. In sum, LAM supports changes in infant feeding practices that benefit both mother and child.

A. Provider misconceptions about the need for contraception during lactation are often based on a lack of knowledge of the exact physiological mechanisms of LAM and the influence of contraceptives on lactation. Family planning updates must address these misconceptions in a scientific way. It is clear that breastfeeding is very important for an infant's health and survival, and therefore any contraceptive measure that decreases breastmilk output, or decreases the duration of breastfeeding, must be avoided. At the same time, the fertility-inhibiting effect of breastfeeding is only reliable during the first six months of full or nearly full breastfeeding among women who have lactational amenorrhea. Providers must clearly understand that their counseling message should be to begin supplementing the infant's diet and start using another method of contraception whenever any one of the three LAM criteria is no longer met.

Q. *What are some common provider misconceptions about when contraception should be encouraged among breastfeeding women?*

A. The conditions that rule out use of LAM include those that would rule out breastfeeding: maternal use of mood altering drugs; and maternal use of reserpine, ergotamine, antimetabolites, cyclosporine, bromocriptine, radioactive drugs, lithium, or anticoagulants.

LAM generally is not recommended when a woman has AIDS, confirmed HIV+, or active tuberculosis, except, on the basis of careful clinical judgment and informed choice, when the severity of the condition and the availability, practicality, and acceptability of other methods warrants consideration of breastfeeding and LAM.

According to the World Health Organization, where risk of infectious disease, such as diarrhea and acute respiratory infection, is low and a safe and affordable alternative to breastfeeding is available, women who are HIV+ or have AIDS should be advised to give the alternative food and not breastfeed. In all other cases, breastfeeding is indicated and LAM is an appropriate postpartum family planning option. (World Health Organization, 1992)

Tuberculosis infection spreads through direct contact with the mother, not through her breastmilk. However, if the mother has an active case of tuberculosis, breastfeeding increases the risk of infection due to frequent and intimate contact with the infant.

Conditions affecting newborns, such as specific infant metabolic disorders, may affect breastfeeding and in turn, negatively impact the length of lactational amenorrhea, making LAM a less effective method. These conditions include: congenital deformity of the mouth, jaw, or palate, and small-for-date or premature newborns needing intensive neonatal care. (World Health Organization, 1996)

Q. *What are the conditions that rule out the use of LAM?*

Countries with BF Policy/Norms with LAM, and/or breastfeeding for fertility impact

- Bangladesh
- Cameroon
- Dominican Republic
- Ecuador
- Haiti
- India
- Madagascar
- Pakistan
- Swaziland
- Zambia

Countries with FP Policy/Norms with BF, LAM, and/or breastfeeding for fertility impact

- Bangladesh
- Bolivia
- Chile
- Côte d'Ivoire
- Dominican Republic
- Egypt
- Jordan
- Liberia
- Mali
- Nepal
- Nigeria
- Philippines
- Rwanda
- Uganda
- Yemen
- Zambia

Countries with MCH, RH, or other Policy/Norms with LAM, and/or breastfeeding for fertility impact

- Cameroon
- Dominican Republic
- Guatemala
- Honduras
- Perú
- Sweden
- Zambia

International Organizations with LAM, and/or
breastfeeding for fertility impact statements

- International Federation for Family Life Promotion (IFFLP)
- International Lactation Consultant Association (ILCA)
- Innocenti Declaration
- International Conference on Population and Development (ICPD)
- International Planned Parenthood Federation (IPPF)
- United Nations Development Program (UNDP)
- United Nations Population Fund (UNFPA)
- UNICEF
- United States Agency for International Development (USAID)
- Pontifical Council on the Family and the Vatican
- World Health Organization (WHO)

The following curricula have been compiled over the life of the IRH project. Copies of any listed curriculum are available from the Linkages Project, 1255 23rd Street, NW, Washington, DC 20037 Tel. (202) 884-8700, Fax (202) 884-8701.

Nurses and Midwives

1. ACNM LAM Trainers' Module

- Developed by:** American College of Nurse-Midwives with IRH
- Length:** One day (approximately six hours)
- Audience:** Midwives and nurses (for preservice and inservice education program)
- Language:** English
- Goal:** To prepare midwives to train in providing LAM in family planning service delivery. It provides trained practicing midwives with current information on specific family planning practices.
- Other:** Module includes handout samples such as pre- and post-tests, evaluations, and clinical skills checklist.

2. ACNM LAM Self-Study Module

- Developed by:** American College of Nurse-Midwives with IRH
- Length:** Learn at own speed (self -study module - four sections)
- Audience:** Midwives and nurses (continuing education program)
- Language:** English
- Goal:** To prepare midwives to provide LAM in family planning service delivery. Provides trained practicing midwives with current information on LAM and breastfeeding practices that support the method.
- Other:** Each of four sections includes pre- and post-tests.

3. Guidelines for Training Nurses and Midwives as Lactation Counselors

- Developed by:** International Union of Nutritional Sciences Committee IV/6
- Audience:** Nurses and midwives
- Language:** English
- Goal:** To learn about breastfeeding, infant nutrition, and all aspects of lactation in order to become lactation counselors.

4. National Capital Lactation Center Training

- Developed by:** V. Hughes
- Length:** Five days
- Audience:** Nurses, lactation consultants, midwives, health care personnel
- Language:** English
- Goal:** To train health care personnel in all aspects of breastfeeding so they are able to counsel mothers (also to prepare them to become certified lactation consultants).
- Other:** Held two to three times a year.

* **Physicians and Nurses**

* **1. Breastfeeding, LAM, and Reproductive Health:**
* **An Information Update**

* **Developed by:** C. Coffin, M. Labbok, and E. Stroot

* **Length:** Three days

* **Audience:** Health providers - OB/GYNs, pediatricians, nurse-midwives,
* and departmental directors, and chiefs

* **Language:** Russian

* **Goal:** To train trainers on breastfeeding, LAM, and postpartum
* reproductive health.

* **Other:** Participants will develop action plans for implementation of a
* BF/LAM program.

* **2. International Training in Breastfeeding, LAM, and Postpartum**
* **Reproductive Health**

* **Developed by:** K. Cooney, J. El-Warari, and M. Labbok

* **Length:** Two weeks

* **Audience:** High-level health professionals who are trainers and are
* able to actively incorporate LAM into existing programs
* (physicians, nurses, nurse-midwives)

* **Language:** English

* **Goal:** Development of an action plan to incorporate LAM into existing
* programs is part of the curriculum.

* **3. Indian Medical Association Lactation Management Consultant**
* **Correspondence Course**

* **Developed by:** Indian Medical Association with the support of the
* Ministry of Health and Family Welfare, Government of India,

* **Length:** Self-study to be completed in 9 to 12 months (14 modules)

* **Audience:** Doctors (members of IMA)—general practitioners, pediatricians,
* and obstetricians

* **Language:** English

* **Goal:** To train physicians as Lactation Management Consultants who
* will in turn be capable of (1) managing and supporting the
* breastfeeding mother by providing skilled assistance, (2)
* conducting breastfeeding promotion campaigns, and providing
* ongoing training to other health professionals.

* **Other:** Once this phase of the training is successfully completed, the
* participant is certified as a Lactation Management Counselor and
* may go on to complete the 12-hour clinical training. Upon
* completing both phases of training, the participant receives
* certification as a Lactation Management Consultant.

**4. Module 5 - IMA Family Planning Training Programme: Part A
The Lactational Amenorrhea Method**

Developed by: Development Associates in collaboration with the Indian Medical Association (IMA)
Length: 2.5 hours
Audience: Physicians
Language: English
Goal: Participants will be able to promote and counsel pre/postnatal women in the use of LAM, manage minor breastfeeding problems in support of LAM, and counsel a breastfeeding woman on appropriate family planning methods.
Other: Uses role play as practice/demonstration.

5. Breastfeeding Management Training of Trainers Course

Developed by: National Task Force Baby Friendly Hospital Initiative
IMA Headquarters, New Delhi, India (1994)
Length: 21 hours (or three days)
Audience: Doctors, nurses, and breastfeeding counselors
Language: English
Goal: To train health care workers and breastfeeding counselors in the skills needed to both support and protect breastfeeding.
Other: The materials are designed for trainers with limited teaching experience on breastfeeding to conduct up-to-date and effective courses. A variety of teaching methods are used such as lectures, demonstrations, clinical practice, reading, role play, and practical exercises.

Health Care Professionals

1. Breastfeeding and the Lactational Amenorrhea Method of Family Planning-Training Course in Women's Health

Developed by: Institute for Development Training (IDT) with IRH
Length: Learn at own speed (self-study module)
Audience: Clinical mid-level health care workers, midwives, and family planning counselors
Language: Arabic, English, French, Spanish, and Russian
Goal: To understand importance of breastfeeding and LAM for mother, child, and family health
Other: End of each section includes test questions for learner. Answers are provided in the back of the module.

2. Lactation Education for Health Professionals

Developed by: R. Rodriguez-Garcia, L. Schaefer, and J. Yunes (PAHO)
Length: Included in a six-month education curriculum
Audience: Undergraduate nurses' education, health providers
Language: English, Spanish
Goal: Students will be able to teach mothers optimal breastfeeding and weaning practices.
Other : Based on incorporating breastfeeding into basic undergraduate curricula of nursing schools.

3. **Lactation Education for Health Professionals: Annotated Curriculum**

Developed by: American College of Nurse-Midwives and IRH

Length: Included in a six-month education curriculum

Audience: Health Professionals—mid-level trainers and teachers

Language: English

Goal: To give teachers and trainers more comprehensive teaching materials on the art and science of breastfeeding support.

Other: Teaching curriculum was annotated using six textbooks and five journal articles.

4. **Breastfeeding Manual for Breastfeeding Advocates and Mother-to-Mother Support Groups**

Developed by: La Leche League/Guatemala (with input from CONAPLAM and UNICEF)

Length: One hour

Audience: Breastfeeding advocates, health personnel, parents

Language: English and Spanish

Goal: This manual was produced to facilitate the work of breastfeeding advocates and health personnel.

5. **Manual de Lactancia Materna y MELA**

Developed by: Centro Médico de Orientación y Planificación (CEMOPLAF)

Length: One week

Audience: Clinical-level counselors

Language: Spanish

Goal: To be able to counsel women on breastfeeding and LAM.

6. **Unit VIII - Lactation and Birth Spacing: Introduction to the Lactational Amenorrhea Method**

Developed by: M. Labbok, R. Lovich, R. Rodriguez-Garcia, and L. Schaefer

Length: One day

Audience: Health professionals

Language: English

Goal: To prepare participants for LAM provision, counseling on postpartum family planning, and breastfeeding support.

7. **Lactation Counselor's Manual**

Developed by: Illinois Department of Public Health

Audience: Health professionals and paraprofessionals

Language: English

Goal: To assist the health professional and paraprofessional in providing a support system for the breastfeeding woman. The manual provides general information on the skills necessary for successful breastfeeding.

Other: Topics include counseling techniques, nutritional requirements, breastfeeding techniques, and management of special situations.

8. Lactancia Materna

- Developed by:** Several individuals responsible for various chapters.
Length: 8 hours, 18 hours, and 40 hours
Audience: 8 hours for hospital directors/administrators; 18 hours for health care workers; and 40 hours for health personnel involved in the Baby Friendly Hospital Initiative (doctors, nurses, and nutritionists)
Language: Spanish
Goal: To train health care personnel in breastfeeding and its impact on fertility, LAM, and methods of family planning that do not interfere with breastfeeding.

9. Breastfeeding and Reproductive Health Training

- Developed by:** C. Coffin and M. Labbok
Length: One day
Audience: Health care providers
Language: English
Goal: To teach positive attitudes towards breastfeeding, discuss optimal breastfeeding behaviors and to introduce LAM.

Supervisors/Counselors/CBDs

1. A Community-Based Approach to the Promotion of Breastfeeding

- Developed by:** K. Aumack, A. Ramos, and R. Rodriguez-Garcia
Length: Approximately two weeks
Audience: Site supervisors and coordinators
Language: English, French, Spanish
Goal: Comprehensive education strategy links training, community, and mass media efforts to enhance breastfeeding practices.

2. Memoria del Seminario/Taller para la Formación de Capacitadoras del Método de la Lactancia y la Amenorrea "MELA"

- Developed by:** La Leche League/Guatemala
Length: Three days
Audience: For La Leche League leaders to train other LLL leaders
Language: Spanish
Goal: To train other trainers in breastfeeding, LAM, and child survival and to teach how to include LAM in existing programs.
Other: Review of a Training of Trainers Workshop in LAM. Action plans will be developed.

3. Seminario Informativo (CEMOPLAF)

- Developed by:** Centro Médico de Orientación y Planificación (CEMOPLAF)
Length: One day
Audience: Counselors (doctors and midwives)
Language: Spanish
Goal: To train counselors in offering LAM to clients.

* 4. **Guia de Lactancia y Fertilidad para Coordinadoras de MEXFAM**

* **Developed by:** MEXFAM (Chiapas, 1994, with review by IRH)

* **Length:** Two days

* **Audience:** Supervisors of CBDs

* **Language:** Spanish

* **Goal:** To be able to counsel women on breastfeeding and LAM and to supervise/train CBDs.

* 5. **Planeando la Familia con el Método de la Lactancia Materna MELA**

* **Developed by:** MEXFAM (Chiapas, 1994, with review by IRH)

* **Length:** Two days

* **Audience:** CBDs

* **Language:** Spanish

* **Goal:** To be able to counsel women on breastfeeding and LAM.

* **Family Planning/Service Delivery Providers**

* 1. **Memoria del Seminario/Taller del Método de la Lactancia y la Amenorrea "MELA"**

* **Developed by:** Institute for Reproductive Health, CALMA, and the Ministry of Health (Summary of LAM Workshop, El Salvador, 1996)

* **Length:** One week (five days)

* **Audience:** Service delivery personnel from various institutions

* **Language:** Spanish

* **Goal:** To train supervisors in LAM so they can train counselors to offer LAM as a method of family planning and teach good breastfeeding habits.

* 2. **Lactational Amenorrhea Method and Other Family Planning Choices for the Breastfeeding Mother**

* **Developed by:** SEATS (Uganda, 1993) with IRH

* **Length:** Two hours

* **Audience:** Family planning service providers

* **Language:** English

* **Goal:** Participants will be able to manage clients for family planning services, manage clients with contraceptive-related side effects, and manage postpartum clients.

3. Family Planning Practitioners Training Curriculum: Breastfeeding and the Lactational Amenorrhea Method

Developed by: SEATS, Ministry of Health, University of Malawi, Nurses and Midwives Council, and Lilongwe School for Health Sciences (1993) with IRH

Length: One hour

Audience: Family planning service providers

Language: English

Goal: Participants will be able to counsel clients on advantages of breastfeeding and LAM and to assist in helping breastfeeding mothers choose appropriate family planning methods (in accordance with breastfeeding guidelines).

4. La Leche League Training of Trainers for Community Health Projects in Guatemala

Developed by: La Leche League

Length: 3 days

Audience: Service delivery and training personnel from NGOs and Ministries of Health

Language: Spanish

Goal: To train individuals in breastfeeding and LAM for child spacing in community health projects in Guatemala.

Students

1. Lactation Management Curriculum

Developed by: University of California, San Diego, Division of General Pediatrics, in collaboration with Wellstart International

Length: Incorporated into other curricula

Audience: Medical students and residents in pediatrics, obstetrics, and family medicine, directors of basic science courses, clerkship directors, residency directors, and those with direct teaching responsibility in perinatal areas.

Language: English

Goal: To assist faculty to integrate lactation management into educational programs.

Also Available

- BF/LAM/NFP Interface Teaching Guide and Training Guide
- WHO Consultation on Lactation Management Training
- Clinical Trial of the Lactational Amenorrhea Method - Procedures Manual for Motivators/Field Workers (1991, Jose Fabella Memorial Hospital, Philippines)
- PAHO Module for Breastfeeding Training (1989 - Spanish: Modulo Para Capacitacion Sobre la lactancia materna)
- Lessons Learned - Lactation Education for Health Professionals (from the testing of the breastfeeding curriculum)

Study Design

An eleven-site Multicenter LAM Study was carried out by IRH in collaboration with the World Health Organization and the South to South Cooperation for Reproductive Health. The study was launched in January 1994 and completed in December 1995. Sites were chosen to reflect different populations, cultural groups, and health care settings. The purpose of the study was to confirm the efficacy of LAM; assess correctness of use of the method, including acceptance of a complementary family planning method; and improve clinical guidance through a longitudinal examination and analysis of both its use and the circumstances that may have led to unplanned pregnancies. The design of the study also allowed for the measurement of satisfaction with LAM, and to draw general conclusions about acceptability of the method in different settings.

The protocol, instruments, and procedures were drafted by IRH staff with input from WHO and the principal investigators at each site. The protocol was pretested and revised before recruitment of clients began. Initial training was conducted during investigators' meetings, and operational plans were developed in conjunction with each site team to inform and acquaint local health and breastfeeding support organizations with LAM, and with the study. Approval for the research was obtained from the Institutional Review Board of Georgetown University and from ethics committees at each site.

The principal investigators from each site attended one or more preparatory meetings with IRH staff and WHO collaborators. The meetings included review of study design, instruments, and procedures. Counseling guidelines and a prototype for a client information pamphlet also were developed by IRH and adapted and translated for use in advising mothers at each site. IRH provided technical monitoring and assistance for the study procedures by mail, through telephone calls and facsimile transmissions, and with site visits as necessary.

Two articles were published describing the general findings from Protocol I:

- Labbok M, Hight-Laukaran V, Peterson AE, Fletcher V, von Hertzen H and Van Look P. 1997. Multicenter Study of the Lactational Amenorrhea Method: I. Efficacy, Duration, and Implications for Clinical Guidance. *Contraception* 55:327-36.
- Hight-Laukaran V, Labbok M, Peterson AE, Fletcher V, von Hertzen H and Van Look P. 1997. Multicenter Study of the Lactational Amenorrhea Method: II. Acceptability, Utility, and Policy Implications. *Contraception* 55:337-46.

Data from Protocol II are being analyzed and findings will be released in Fall 1997. Several co-investigators also are publishing their country-specific findings.

Egypt

Germany/Italy

Indonesia

Mexico

Jos, Nigeria

Sagamu, Nigeria

Philippines

Sweden

United Kingdom

United States

Methodology

At the German site, women were recruited through the Obstetrics and Gynecology Department of the Benrath Hospital, University of Dusseldorf. In Italy, women were recruited from a private practice associated with C.A.M.E.N. Regularly scheduled follow-up visits were conducted monthly from intake to six months postpartum, with additional contact at months 9 and 12 postpartum. At these visits, information was collected on amenorrhea status, infant feeding patterns, contraceptive use, intercourse rates, knowledge of the three LAM criteria, employment status, and child care arrangements. At the time of LAM discontinuation, participants were questioned about satisfaction with the method, problems associated with full breastfeeding, and advantages and disadvantages of the method. At the same time, knowledge of the method was assessed by asking the women to recall the criteria for LAM and other essentials for the method to be used properly. Life tables were generated to estimate efficacy, and other simple statistical operations were used to determine acceptability and utilization of, as well as satisfaction with, the method.

Results

Forty-seven women from the Germany/Italy site were used in the final analysis. The efficacy of LAM at this site was 100 percent, with no reported LAM pregnancies; 30 percent of women used LAM for the full six months. Eighty-eight percent of the women at this combined site had previously used family planning, and 77 percent and 76 percent were using family planning at months 9 and 12 postpartum, respectively. Eighty-seven percent of the participants at this site were "very satisfied" with LAM, and when asked to recall the three LAM criteria (bleeding, six months, and full breastfeeding), 87, 87, and 85 percent, respectively, responded correctly.

Site-Specific Observations/Problems:

Recruitment was a serious problem at the German site: a high proportion of the German women screened for the study were not able or motivated enough to fully breastfeed for six months. Compounding the recruitment problem was the fact that German women commonly believe that breastfeeding as contraception is extremely risky, and this thinking is passed from generation to generation; every woman claims to know someone who became pregnant while breastfeeding. Because of the recruitment problems in Germany, it was decided to allow for a combination of two European sites. A counterpart in Milan, Italy, began recruiting clients, and completed their recruitment at approximately the same time as Germany. The Italian women were very willing to try LAM, and overall satisfaction at this combined site was the highest of all the industrialized sites.

Location:
Dusseldorf,
Germany, and
Milan, Italy

Co-Investigator:
Gunter Freundl, MD
Michele Barbato, MD

Collaborating
Institutions:
Frauenklinik
Des Stadt,
Krankenhauses
Benrath/Centro
Ambrosiano Metodi
Naturali-C.A.M.E.N.

Location:
Jakarta, Indonesia

Dates:
**January 1994 to
December 1995**

Co-Investigator:
Anthony Tan, MD

**Collaborating
Institution:**
BKKBN

* **Methodology**

* At the Indonesian site, which was funded by the World Health Organization's
* Special Programme of Research, Development and Research Training in Human
* Reproduction, women were recruited from the maternity ward of Budi Kemuliaan
* Hospital in Central Jakarta. Regularly scheduled follow-up home visits were
* conducted monthly from intake to six months postpartum, with additional contact
* at months 9 and 12 postpartum. At these visits, information was collected on
* amenorrhea status, infant feeding patterns, contraceptive use, intercourse rates,
* knowledge of the LAM criteria, employment status, and child care arrangements.
* At the time of LAM discontinuation, participants were questioned about satisfac-
* tion with the method, problems associated with full breastfeeding, and advantages
* and disadvantages of the method. At the same time, knowledge of the method was
* assessed by asking the women to recall the criteria for LAM and other essentials
* for the method to be used properly. Life tables were generated to estimate effi-
* cacy, and other simple statistical operations were used to determine acceptability
* and utilization of, as well as satisfaction with, the method.

* **Results**

* Sixty-one women from the Indonesian site were used in the final analysis. The
* efficacy of LAM at this site was 98 percent, with one reported LAM pregnancies in
* month two; 23 percent of women used LAM for the full six months. Only 16
* percent of the Indonesian women had previously used family planning, and 23
* percent were using family planning at both months 9 and 12 postpartum. Ninety-
* seven percent of the participants at this site were "very satisfied" with LAM, and
* when asked to recall the three LAM criteria (bleeding, six months, and full
* breastfeeding), 90, 98, and 92 percent, respectively, responded correctly.

* **Site-Specific Observations/Problems**

* Follow up was a problem at this site for a few different reasons. Many of the
* participants did not return to the hospital for their scheduled follow-up visits,
* forcing local family planning field workers to perform home visits for this purpose.
* This, in turn, created a twofold problem for the field workers: many women do not
* have telephones, and many of the women were only home in the evening, making
* contact more difficult than had previously been anticipated. The Indonesian
* women were also reluctant to discuss their frequency of sexual intercourse: they
* protested, saying this type of question had not been asked/mentioned previously.

Location:
Jos, Nigeria

Co-Investigator:
Joe A. M. Otubu, MD

**Collaborating
Institutions:**
**Department of
Obstetrics and
Gynecology,
University of Jos**

* **Methodology**

* At the Jos site, which was funded by the South to South Cooperation for
* Reproductive Health, women were recruited from the Obstetrics clinics of the
* University Teaching Hospital which has been designated as a "Baby Friendly
* Hospital." Regularly scheduled follow-up visits were conducted monthly from
* intake to six months postpartum, with additional contact at months 9 and 12
* postpartum. At these visits, information was collected on amenorrhea status, infant
* feeding patterns, contraceptive use, intercourse rates, knowledge of the three LAM
* criteria, employment status, and child care arrangements. At the time of LAM
* discontinuation, participants were questioned about satisfaction with the method,
* problems associated with full breastfeeding, and advantages and disadvantages of
* the method. At the same time, knowledge of the method was assessed by asking
* the women to recall the criteria for LAM and other essentials for the method to be
* used properly. Life tables were generated to estimate efficacy, and other simple
* statistical operations were used to determine acceptability and utilization of, as
* well as satisfaction with, the method.

* **Results**

* Sixty women from the Jos site were used in the final analysis. The efficacy of
* LAM at this site was 100 percent, with no reported LAM pregnancies; 58 percent
* of women used LAM for the full six months. Seventy-five percent of the women
* participating at the Jos site had previously used family planning, and 82 percent
* were using family planning at both months 9 and 12 postpartum. Eighty-two
* percent of the participants at this site were "very satisfied" with LAM, and when
* asked to recall the three LAM criteria (bleeding, six months, and full breastfeed-
* ing), 55, 65, and 65 percent, respectively, responded correctly.

* **Site-Specific Observations/Problems**

* Participants were encouraged to return to the study center for follow-up visits
* (transportation costs were reimbursed), but if there was a default, the interviewer
* visited the home. However, home visits were rather problematic as many streets,
* particularly in the traditional areas of the city, bear no name, and the houses no
* numbers. However, descriptions of the addresses, in a complete a form as pos-
* sible, were obtained at intake.

* The project was housed in a spacious, project-dedicated office adjacent to the
* OB/GYN clinics. Clients were seen and data forms completed in this office. Data
* entry personnel as well as the computer were located about half a kilometer away
* (although still on the hospital campus) adjacent to Dr. Otubu's office. As a result
* of the separation, the interviewer and the data entry staff were seldom able to
* review forms together before or after entry into the computer. This appeared to be
* the underlying cause of data duplications and inconsistencies at the start of the
* study.

* Another problem at this site concerns the financial resources available for the
* management of the study. Apart from reimbursing clients for transportation costs
* when a follow-up visit to the clinic was made, no additional motivation or incen-
* tive was given. When a pregnancy test was done (mandatory at six months
* postpartum, according to the University Teaching Hospital protocol) the client was
* expected to pay. In the economic difficulties of this country, this payment was
* hard for many to find, and it tended to discourage full cooperation in this study.

Location:
*Manila,
Philippines*

Co-Investigator:
*Rebecca Ramos,
MD*

**Collaborating
Institution:**
*Dr. Jose Fabella
Memorial
Hospital*

* **Methodology**

* In the Philippines, women were recruited from the Dr. Jose Fabella Memorial
* Hospital (JFMH), a designated “Baby Friendly Hospital.” Regularly scheduled
* follow-up visits were conducted monthly from intake to six months postpartum,
* with additional contact at months 9 and 12 postpartum. At these visits, information
* was collected on amenorrhea status, infant feeding patterns, contraceptive use,
* intercourse rates, knowledge of the LAM criteria, employment status, and child
* care arrangements. At the time of LAM discontinuation, participants were
* questioned about satisfaction with the method, problems associated with full
* breastfeeding, and advantages and disadvantages of the method. At the same time,
* knowledge of the method was assessed by asking the women to recall the criteria
* for LAM and other essentials for the method to be used properly. Life tables were
* generated to estimate efficacy, and other simple statistical operations were used to
* determine acceptability and utilization of, as well as satisfaction with, the method.

* **Results**

* Forty-seven women from the Philippine site were used in the final analysis.
* The efficacy of LAM at this site was 100 percent, with no reported LAM pregnan-
* cies; 34 percent of women used LAM for the full six months. Thirty-four percent
* of the Filipino women had previously used family planning, and 77 percent and 64
* percent were using family planning at months 9 and 12 postpartum, respectively.
* Of the 31 women who had never used family planning pre-LAM, 22 (71 percent)
* and 21 (68 percent) were using family planning at months 9 and 12 postpartum,
* respectively. Ninety-eight percent of the participants at this site were “very
* satisfied” with LAM, and when asked to recall the LAM criteria (bleeding, six
* months, and full breastfeeding), 98, 84, and 91 percent, respectively, responded
* correctly.

* **Site-Specific Observations/Problems**

* The Philippines is one of the few countries, among those participating in this
* study, where there is a government-supported National Population Program. In the
* Philippines, this program seeks to improve maternal and child health by intensified
* family planning service delivery. The Philippine Department of Health, through
* the Philippine Family Planning Program, has adopted policies for the inclusion of
* LAM as a specific program method; because of this, LAM is an additional choice
* in the menu of methods offered for postpartum family planning. JFMH is a special
* tertiary government hospital under the Department of Health, and it caters specifi-
* cally to women and children. Even before this clinical trial was conducted, the
* Lactation Management Program of JFMH had instituted specific hospital policies
* and guidelines for full rooming-in and 100 percent breastfeeding initiation for all
* mothers in the obstetrical beds. Since breastfeeding is a common and socially
* accepted practice in the Philippines, there were no problems recruiting clients for
* the study, and acceptability of the method was among the highest of all sites. It is
* likely that the high percentages achieved for LAM knowledge can also be attrib-
* uted to its inclusion in the national family planning program.

Location:
**Birmingham,
United Kingdom**

Co-Investigator:
**Anna Flynn, MD,
MRCOG**

*Collaborating
Institutions:*
**Queen Elizabeth
Medical Center**

◦ **Methodology**

◦ At the U.K. site, women were recruited through several methods: exposure at
◦ antenatal classes, where all methods of family planning are discussed, and La
◦ Leche and National Childbirth Trust meetings; exposure to posters and leaflets
◦ giving details of LAM; and from obstetricians and gynecologists who referred their
◦ lactating patients for screening. Regularly scheduled follow-up visits were
◦ conducted monthly from intake to six months postpartum, with additional contact
◦ at months 9 and 12 postpartum. At these visits, information was collected on
◦ amenorrhea status, infant feeding patterns, contraceptive use, intercourse rates,
◦ knowledge of the three LAM criteria, employment status, and child care arrange-
◦ ments. At the time of LAM discontinuation, participants were questioned about
◦ satisfaction with the method, problems associated with full breastfeeding, and
◦ advantages and disadvantages of the method. At the same time, knowledge of the
◦ method was assessed by asking the women to recall the criteria for LAM and other
◦ essentials for the method to be used properly. Life tables were generated to
◦ estimate efficacy, and other simple statistical operations were used to determine
◦ acceptability and utilization of, as well as satisfaction with, the method.

◦ **Results:**

◦ Forty-nine women from the United Kingdom site were used in the final
◦ analysis. The efficacy of LAM at this site was 100 percent, with no reported LAM
◦ pregnancies; 31 percent of women used LAM for the full six months. Ninety-eight
◦ percent of the British women had used family planning previously, and 69 percent
◦ and 61 percent continued on to use another form of family planning at months 9
◦ and 12 postpartum, respectively. These numbers directly reflect the number of
◦ women who desired child spacing during these time periods. Seventy-six percent
◦ of the participants at this site were “very satisfied” with LAM, and when asked to
◦ recall the LAM criteria (bleeding, six months, and full breastfeeding) 71, 74, and
◦ 100 percent, respectively, responded correctly.

◦ **Site-Specific Observations/Problems**

◦ Initial attempts at recruitment through maternity hospitals was not productive,
◦ for many women, particularly those who are most interested in breastfeeding for
◦ appropriate periods, deliver at home. Recruitment at the community level, through
◦ the La Leche League and the National Childbirth Trust, was found to be a more
◦ fruitful source of clients. Recruitment problems were also encountered due to the
◦ intensity of the breastfeeding requirement; the six-hour interval alarmed many
◦ women to the point that they declined participation in the study. And, finally,
◦ recruitment at this site was problematic because women, and their partners, refused
◦ to accept the contraceptive efficacy of LAM, and could not be persuaded to have
◦ unprotected intercourse during breastfeeding. Another problem found at this site
◦ was that most of the women were strongly advised by their General Practitioners to
◦ begin supplementing with solids at four months postpartum.

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Breastfeeding

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