

Taking the First Steps: A Decade of Experience

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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 letdown 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 (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.

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 delivery¹. 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.

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:*

¹ By 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)

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 breast-feeding." 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.

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 (PUC) 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 PUC 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 breast-feeding 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, Valdes, 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. (Perez, 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. (Valdes 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 Medico 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 Lobbok, 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. PHI 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 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.

FRI'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.

Reconfirming the Efficacy of LAM

1. 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, PHI, 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, Labbok, 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 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.

2. 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.