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TECHNICAL PROGRESS REPORT

Cooperative Agreement DPE-3061-A-00-1029-00

July 1 - December 31, 1992

**PROGRESS REPORT
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I. INTRODUCTION AND EXECUTIVE SUMMARY

This report describes the activities and accomplishments of the Institute for Reproductive Health under United States Agency for International Development (A.I.D.) Cooperative Agreement DPE- 3061-A-00-1029-00 for the period July 1 through December 31, 1992.

During this reporting period, the Institute continued to implement a broad program of work to achieve our goals: to improve fertility awareness and the acceptability, availability, and effectiveness of natural family planning as well as to increase the availability and acceptability of optimal breastfeeding with a focus on its fertility impact. Our approach involves fertility awareness, natural family planning (NFP), breastfeeding (BF), and Lactational Amenorrhea Method (LAM) program development worldwide, as well as country-specific and subject-specific efforts through strategies encompassing research, education and training, policy, and service delivery.

Because of the different approaches needed to support and develop NFP and fertility awareness programs and to support programs and policy development on the fertility aspects of breastfeeding, the Institute consists of two separate but collaborative divisions: Natural Family Planning and Breastfeeding. The work of the two divisions is presented separately in this report, with cross-referencing as appropriate.

A. NATURAL FAMILY PLANNING DIVISION

The strategy and activities of the NFP Division are designed to make NFP a genuine, viable choice for many couples. We emphasize making NFP more "user friendly": overcoming policy, provider, and user obstacles to NFP. We also provide accurate and appropriate fertility awareness education to increase informed choice and improve method use.

The NFP Division's focus during this reporting period was to monitor and provide technical assistance to ongoing activities, and to plan and initiate activities to achieve the objectives that have been identified as priorities.

Subprojects completed include:

- Comparison of Home Calorimetric Test Kit to Determine the Post-Ovulation Non-Fertile Period to NFP Symptothermal Signs and Symptoms, which helped to refine a version of a home test kit to measure post-ovulatory rise in pregnanediol to indicate the post-ovulatory beginning of the non-fertile phase.
- Assessment of Demand for NFP and Factors Influencing its Acceptability with the University of Nairobi, Kenya, which investigated sociocultural determinants of, demand for, and acceptability of NFP; and identified factors amenable to policy

- and program intervention. A report is being prepared which will provide recommendations to health and family planning providers and program managers.
- Institute Evaluation Strategy to assess impact and quality of NFP and fertility awareness field-based activities.

Subprojects carried out during this reporting period include:

- Outcome of Pregnancies in NFP: Fetal Effects, which discovered no significant increase in spontaneous abortion rates of women who conceived while using NFP compared to other women (although when analysis was restricted to women with prior history of fetal losses, significantly lower loss rates were noted in conceptions on mucus peak and day -1 compared to preovulatory and postovulatory conception). Data collection and analysis continue regarding fetal abnormalities, and data from this study are being combined with additional data from the Estudios Colaborativos Latino Americanos sobre Malformaciones Congenitales (ECLAMC) to determine sociodemographic characteristics and pregnancy intention of couples experiencing contraceptive failures (in NFP users compared to users of other methods).
- Development of Simplified and Non-Competitive Assays to Measure Steroid Hormones with the Weizmann Institute of Science, to develop new antibodies and configure them into assay technologies which can be utilized in a one-step home test to measure estradiol and progesterone using a calorimetric endpoint.
- Changes in Cervical Mucus Which Signify the Fertile Period of the Menstrual Cycle with the University of California at Davis, to develop an improved methodology for monitoring cervical mucus.
- IFFLP Technical Assistance Project, which provides financial and technical support to NFP projects through a subagreement with IFFLP. NFP program management, sustainability and service quality are being strengthened through subprojects in three target countries (Brazil, the Philippines, and Zambia), and a planned subproject in Peru. A zonal meeting was held in Africa to facilitate information exchange and dissemination; management training; and management information systems (MIS). A similar meeting is being planned in Latin America.
- Management Information System, being developed in collaboration with IFFLP and based on the Client Learning Model, to increase the quality and usefulness of data about NFP services from selected NFP programs worldwide.
- Modular Slide Set, which can be adapted to the needs of multiple users and target audiences.

- Fertility Awareness Education Project with the Program for Appropriate Technology in Health (PATH) to communicate simple fertility messages to improve understanding of the fertile and infertile phases of the menstrual cycle among target populations in Bolivia and Guatemala.
- NFP Training in Nairobi: Integrating NFP Services into Health Programmes, a project with the NFP Training Center in Kenya through a subagreement with the Los Angeles Regional Family Planning Council (LARFPC) to expand NFP services in Ministry of Health clinics.

Publications currently being developed by the NFP Division include a monograph on collaboration between NFP provider groups and the public sector (experiences in five-six countries); a paper on Quality of Care in NFP programs; a status paper on the most recent developments in ovulation prediction; and a paper relating recruitment of NFP clients to the message content in outreach strategies.

We continue to respond to requests for numerous documents produced by the Institute, including the "Guide for NFP Trainers" in English and Spanish; three language versions of "NFP: A Good Option" and "Glossary of NFP Terms"; Parts I and II of the proceedings from the conference "Natural Family Planning: Current Knowledge and New Strategies for the 1990s"; and articles by Institute staff on fertility awareness and NFP. We are also preparing papers on studies completed during the previous cooperative agreement. Two papers are under development, one on group teaching and the second on factors affecting successful NFP use.

In addition, technical assistance (TA) was provided to programs in Brazil, Chile, the Dominican Republic, Haiti, Papua New Guinea, Peru, and the Philippines, as well as to Cooperating Agencies (CAs).

The NFP Division participated in key roles in IFFLP's subzonal meeting in Africa. Institute staff led workshops on 1) a Management Information System (MIS) to provide NFP programs in Africa with service statistics for program evaluation; and 2) AIDS/HIV and NFP, which provided NFP program leaders with current information on HIV and its implications for NFP program leaders.

Participation in the "Summit Meeting on the Natural Regulation of Fertility" contributed to a collaborative, positive interaction among NFP leaders worldwide and to a Final Declaration addressing many issues of interest to the Institute.

During the next reporting period we plan to test and finalize the modular slide set; implement the evaluation strategy with field projects in Bolivia, Brazil, Guatemala, the Philippines, and Zambia; develop a users manual on MIS and evaluation, and begin implementation of the MIS on a pilot basis. We also will begin development of an NFP Casebook to assist service delivery programs meet the needs of a wider range of clients; further develop our guidelines for including NFP and fertility awareness in a variety of service

programs; explore issues of message content in NFP program outreach activities; hold a meeting on NFP program collaboration with the public sector to result in a publication on this topic; evaluate hormonal markers as indicators of infertility in perimenopausal women; develop a report on quality of care in NFP programs with emphasis on counseling to clients; develop papers on two studies conducted during the previous cooperative agreement; and begin a clinical trial of the calendar method.

Because the NFP Division carries out the majority of its work through subcontractors and consultants, careful coordination among all project elements is essential to ensure that all involved are aware of each others purpose, strategies, and activities. To increase coordination and enhance our ability to achieve our objectives, a project review meeting will be held with our subcontractors and consultants in late 1993.

B. BREASTFEEDING

The GU/IRH goal in breastfeeding is to increase the availability and acceptability of optimal breastfeeding with a focus on its fertility impact. The Breastfeeding Division's three objectives are:

1. Continued testing and refinement of the Lactational Amenorrhea Method (LAM), an interim, introductory method of family planning which serves to enhance acceptance of family planning and supports women in optimal child health practices;
2. Policy changes favoring optimal breastfeeding for its fertility impact;
3. Program changes to include the fertility aspects of breastfeeding and the timely introduction of family planning postpartum.

During the reporting period July 1, 1992 - December 31, 1992, the Breastfeeding Division completed extensions for subprojects begun under the first project and that continue into the current cooperative agreement. In addition, the Division developed a workplan to accomplish the objectives for the next fiscal year, and identified and contacted potential new subproject personnel.

The Division continues to grow in workscope and is now fully staffed, although with the increase in workscope, the addition of several staff must be considered during the next reporting period. The following projects stand out among the accomplishments during this period but reflect only a small part of the activities conducted during this time.

Under the subject area **LAM: Breastfeeding and Family Planning Interface**, activities consisted predominantly of direct support of the LAM family planning method and LAM/family planning program interface, which includes research, pilot projects, education, and technical

assistance for program and policy change for breastfeeding in family planning and child survival programs, as well as timely family planning method introduction by breastfeeding programs.

Work continued on the following projects/subprojects:

- Chile: A Clinical Trial of LAM by Working Mothers: During the reporting period, a protocol received PUCC/IRB review and approval and was initiated. To date, more than twenty women in the trial have achieved between 90 and 180 days of LAM use and two pregnancies have occurred in month six. A site visit during the next reporting period will assess study progress.
- Ecuador: LAM in a Family Planning Setting: During the reporting period, the current project agreement was modified to include unexpended monies from Year 1 into the present budget. The training of CEMOPLAF clinic staff in LAM and the introduction of LAM to those clinics which will be involved in the project was completed in ten of the twenty clinics. IRH staff completed a project monitoring visit in September 1992 and reviewed the first drafts of the educational materials and the data collection methods. This phase of this study consists of the expansion of LAM services to all 20 CEMOPLAF clinics with operations research to assess the acceptability of LAM on operational methods to ensure the timely introduction of complementary family planning during breastfeeding.
- Updated Guidelines for Breastfeeding in Family Planning and Child Survival Programs: Approximately 4,000 English, 3,000 French, and 6,000 Spanish copies of the original publication have been distributed worldwide since the document's first printing. The Guidelines were distributed at several major conferences during this reporting period: APHA, the LLLI Regional Conference in Guatemala, the LLLI Physicians Seminar, the IFFLP Panafrican Seminar in Yaoundé, Cameroon, the International Congress of Pediatrics in Rio de Janeiro, the IPPF 40th Anniversary Meeting in New Delhi, the SAC Meeting in Barcelona, the Population Council Meeting on Postpartum Family Planning Strategies, and the Vatican Meeting on Family Planning. During this reporting period, IRH began to update the Guidelines to reflect the state of the art in LAM information and to address a wider audience. During this reporting period, a consultant began to work on this update, which includes definitions and up-to-date research findings and incorporates guidelines for working women who wish to breastfeed. The new guidelines will be published in three versions aimed at different audiences: policy maker/decision maker; health care worker/provider; and mother (breastfeeding woman)/LAM user.
- Guatemala: LAM in LLLI: During this reporting period, the IRH participated in the preparation for and the planning of the November 1992 regional conference. The scope and size of the conference were expanded through a

subagreement between La Leche League, Guatemala, and Wellstart, and was divided into two meetings: a two-day La Leche League Regional Meeting and a three-day Regional Mother Support Conference. IRH was represented by two people at both meetings and played a highly visible role throughout the week, providing technical support for a breastfeeding and child spacing workshop during the La Leche League meeting and coordinating both a plenary and a breakout session on LAM during the three-day conference.

- American College of Nurse-Midwives (ACNM): During this reporting period, IRH signed a three-and-a-half-year subagreement with ACNM to develop a LAM-based curriculum and to incorporate LAM into all current nurse-midwifery programming within ACNM's purview. The ACNM Special Projects Section currently receives funding for strengthening nurse-midwifery training and family planning programming worldwide and specializes in curriculum and training development and has developed training modules on several topics relevant to postpartum care.
- Technical Assistance to Cooperating Agencies: The Breastfeeding Division has designed an organized program of technical assistance that includes presentations and workshops with selected Cooperating Agencies and a needs assessment and materials for a broader group. The IRH relationship with CAs was formalized in a June 26, 1992, letter to CAs from Duff Gillespie, noting the recent research/activities in LAM, the contributions to the field of IRH and FHI, and the importance of IRH review of all materials developed by CAs and Missions relating to breastfeeding, family planning, and LAM. During the reporting period, IRH Breastfeeding Division staff provided presentations to CARE and PCS, materials development technical assistance to PCS, and continued their active involvement in working groups with other Cooperating Agencies.
- Technical Assistance to International Donors: Breastfeeding Division staff met with IPPF in London to discuss LAM and Natural Family Planning, and made presentations at the IPPF 40th Anniversary Meeting in India. In addition, IRH staff presented LAM at the SAC Meeting held in Barcelona, and presented LAM and Natural Family Planning at the Summit Meeting on Natural Fertility Regulation of the Pontifical Council on the Family in Rome and the Vatican City.

Several important projects have been under development during the reporting period: in Haiti, at the request of USAID/Port-au-Prince, IRH staff traveled to Port-au-Prince to follow up on the August 1991 IRH needs assessment. The Mission requested that IRH modify the proposed 1991 plan according to restrictions under the current political situation to begin to develop strategies to enhance existing NFP programs and to reinforce the use of breastfeeding for its fertility impact, beginning to offer LAM as an introductory family planning method. The IRH representative identified and developed opportunities for technical assistance to expand activities such as training, IEC materials design and development, and others, for breastfeeding,

LAM, and NFP; identified potential institutions to carry out the program; and prepared a final plan and budget for the expansion of breastfeeding, LAM, and NFP activities under the USAID Private Sector Family Planning Project during the next two years (1993-1994). Further discussion took place with USAID/Port-au-Prince to refine the budget in preparation for a Mission buy-in to IRH.

IRH staff traveled to Amman, Jordan, to work with Save the Children on developing a project. During the visit, two lectures were provided to health personnel who would be involved in the future breastfeeding and child spacing initiative. In addition, technical assistance was requested by the MOH Permanent Secretary. A draft project proposal was developed and discussed with USAID/Amman. Further revisions in the timeframe, project scale, and budget were discussed with Save the Children and USAID/Amman. USAID/Amman is currently deciding on the funding mechanism and extent of additional IRH technical assistance to be supported.

Under the subject area **Breastfeeding and Fertility**, the Breastfeeding Division's activities are designed to create support for optimal breastfeeding for its fertility impact on populations. This support includes demographic and biomedical research designed to address controversies and obstacles to optimal breastfeeding. The findings are used in the development of policy, educational materials, and technical assistance. Significant progress included the following:

- **Georgetown University Clinical Studies:** Work continued on the Breastmilk Storage Study, the Bone Density Study, and the Colostrum as an Anti-infective Agent study. For the latter two studies, protocols are in the development stages and will be refined early in the next reporting period. The Milk Storage Study revealed that the growth of microorganisms after storage of breastmilk at 15 degrees C. after 24 hours showed remarkably few organisms. An article for peer review journal publication will be prepared during the next reporting period.
- **Helping Mothers to Breastfeed:** Two thousand copies of this textbook have been received for distribution at IRH during this reporting period, according to the current agreement. IRH plans to use the book as a reference text for the IRH curriculum. The second subagreement with AMREF has been extended to allow for the distribution of the book, by joint AMREF-IRH letter, to 500 key decision makers and program planners in Africa.
- **Breastfeeding: Protecting a Natural Resource:** The booklet continues to be widely distributed worldwide. To date, approximately 15,000 English, 5,000 French, and 6,200 Spanish copies have been distributed. During this reporting period, the booklet was distributed at APHA, the LLLI Regional Conference in Guatemala, the IFFLP Panafrican Seminar in Yaoundé, Cameroon, the International Congress of Pediatrics in Rio de Janeiro, the IPPF 40th Anniversary Meeting in Delhi, the SAC Meeting in Barcelona, the Population Council Meeting

on Postpartum Family Planning Strategies, and the Vatican Meeting on Natural Fertility Regulation.

- Videotape: *Breastfeeding: Protecting a Natural Resource*: During this reporting period, UNICEF/Mexico received a master copy of the videotape, from which they made 300+ copies to distribute countrywide. The French version of the video was distributed at the IFFLP Panafrican Seminar in Yaoundé, Cameroon, and at the 20th International Congress of Pediatrics in Rio de Janeiro, the videotape was screened in English and Spanish two times daily and on the day of the UNICEF-sponsored Breastfeeding Symposium. In addition, PCS has requested that they be able to use a five- to seven-minute excerpt of the video in a family planning video that they are producing for the Latin American region.
- Technical Assistance to International Donors: At the request of WHO, IRH reviewed the findings of the WHO Simplified Methodology Surveys and developed recommendations for modifications of the module and for future actions on this assessment tool designed to identify fertility return in populations. In addition, during this reporting period IRH staff were invited by UNICEF to participate in two activities at the IPA/UNICEF/WHO 20th World Congress of Pediatrics in Rio de Janeiro. An IRH speaker represented UNICEF on a Symposium and Colloquium on *Human Milk Insufficiency: An Iatrogenic Disorder?*, and IRH coordinated the screening of the Institute videotape, *Breastfeeding: Protecting a Natural Resource*.

Activities under the third strategy area, **Breastfeeding and NFP Interface**, are designed primarily to introduce LAM into NFP programs and to improve guidelines for NFP use during lactation. The main activities that took place during this reporting period were the following:

- IFFLP: In August 1992, IRH staff and the IFFLP Breastfeeding Consultant participated in and served as faculty for the IFFLP Panafrican Seminar and pre-seminar presentations. Several LAM training activities were conducted in French and English. The work produced at this seminar was further refined by the IFFLP Breastfeeding Consultant and reviewed by IRH staff. Refinement of the LAM/NFP Teaching Protocol will continue into the next reporting period. Through these meetings, IRH was able to identify several possible LAM project sites and learned about the project in Rwanda under the direction of Father Henri Hoser, of SNAF, which is using an extended LAM of nine months.

Technical assistance continues to be provided to many international donors. Breastfeeding Division staff have been proactive in correspondence with UNFPA, UNICEF, World Bank, and IPPF.

Institute staff continue to be actively involved in working groups with other Cooperating Agencies, including the Working Group on Perinatal Family Planning Education and Counseling

Training, the Working Group on the Family Planning Training Materials Database, and the Working Group on Medical Barriers to Family Planning. In addition, Institute staff continue to review Cooperating Agencies' breastfeeding materials and regularly review articles for peer reviewed journals.

During the next reporting period, the Division plans to begin to continue to test LAM with working women in Chile; continue the expansion of the Ecuador study into more clinics in the country to assess ongoing acceptability of LAM and operational methods to ensure the timely introduction of complementary family planning during breastfeeding; continue to plan a clinical trial of LAM at Georgetown University Medical Center; expand field projects into Africa and Asia, as well as expand IRH assistance to USAID Missions; update several key publications and slide presentations; and develop and implement a LAM training course in conjunction with the National Capital Lactation Center's Lactation Management Training. The first course will be held with SEATS/JSI representatives from several regions, as well as project representatives from projects being developed by IRH in Haiti and Jordan.

The Division also plans to conduct a meeting to bring together IRH and other experiences in LAM to assess the state of the art and to receive input for future planning. In addition, Breastfeeding Division staff hope to finalize an agreement with the new Wellstart project to expand IRH work in key areas. As part of planning for the next few years of the project, IRH plans a series of in-house evaluation and strategic meetings, the result of which will be Strategic Action Plans in Research, Policy and Professional Development, and Country Programs, and in the three support functions: Training, IEC, and Evaluation. These plans will be based on the three Division outcome objectives and strategic plan as outlined in the current Cooperative Agreement.

The Institute is extremely pleased with its progress during this reporting period. IRH and its collaborating institutions have accomplished a great deal worldwide in the areas of Natural Family Planning, Breastfeeding, and LAM. Well into the second year of our new five-year Cooperative Agreement, we have continued to expand our mandate and the areas of the world in which we work, and especially our collaborative efforts with other agencies.

The Institute remains dedicated to working with A.I.D./Washington, USAID Missions, LDC public and private sector programs, agencies, and institutions, and other Cooperating Agencies to carry out our broad-based program of research, pilot projects, training, information, education, and communication, technical assistance, and policy development and change.

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II. NATURAL FAMILY PLANNING

A. OBJECTIVES

The objectives of the NFP Division have evolved over the past six years from our experience in the field as well as from discussions with A.I.D. and other experts. They were confirmed by the recommendations developed during our conference, "NFP: Current Knowledge and New Strategies for the 1990s," held in December 1990. The primary emphasis of these recommendations was to continue our focus on effectiveness of method use and quality of services while increasing our efforts to expand fertility awareness and NFP availability to a wide audience.

The Institute's objectives in NFP are to:

1. Develop and test reliable, **simplified methods** for defining the fertile period.
2. Increase knowledge of and support for NFP and fertility awareness by **policy makers, health/family planning professionals, and the public.**
3. Improve, expand, and evaluate **programs** to increase availability, acceptability, and quality of NFP services and fertility awareness information.
4. Enhance **clients'** fertility awareness and knowledge, acceptance, and effective use of NFP.

The following discussion describes the strategies we employ to achieve our objectives, the activities undertaken as part of each strategy, and planned activities for the next reporting period (January 1 - June 30, 1993).

B. ACTIVITIES

1. **Objective: Develop and test reliable, simplified methods for defining the fertile period.**
 - a. Strategy: Support and encourage research and testing to develop a simple, inexpensive home test kit for detection and prediction of ovulation.
 - (1) Multicenter Study of the Hormonal Definition of the Fertile Days of the Cycle by Home Monitoring for NFP

The purpose of this study, which is sponsored by the World Health Organization (WHO) Natural Methods Task Force, is to (1) establish temporal relationships between hormonal events and fertility signs, (2) compare menstrual cycle phases as determined by clinical symptoms with

those determined by hormone data, (3) determine if use of the Ovarian Monitor (developed by Dr. Jim Brown in Australia) will reduce days of abstinence, and (4) make a qualitative assessment of the Ovarian Monitor. The results of the Ovarian Monitor in previous studies, as reported at the Institute/WHO Conference in December 1990, were published in the American Journal of Obstetrics and Gynecology (AJOG) supplement.

Preliminary testing of the Ovarian Monitor in the Georgetown University Andrology Laboratory using both frozen and fresh urine samples did not produce results consistent with those expected. An evaluation of the meters showed that the meters did not register comparable results when identical samples were used, and they did not hold steady reading following attempts to calibrate the meters. In addition, the time required to run a sample of urine to test for urinary estradiol and pregnanediol glucuronide using the Ovarian Monitor took approximately one hour or longer.

Given the technical difficulties encountered, in addition to several other important reasons, it was decided that the Institute would not participate a clinical trial of the meter as an ovulation prediction device. The Institute continues to offer technical assistance to WHO to review study-related documents and provide other technical assistance as requested.

Planned Activities: We plan to continue to offer technical assistance to WHO on a limited basis as requested by WHO.

(2) Comparison of Home Calorimetric Test Kit to Determine the Post-Ovulation Non-Fertile Period to NFP Symptothermal Signs and Symptoms

The purpose of this study, which was supported by Quidel (formerly Monoclonal Antibodies, Inc., of San Diego, California) and carried out by the Maryland/DC NFP Providers Group, is to (1) determine if women can perform the kit assay and interpret the results, (2) compare NFPCheck™ assay results to urine pregnanediol levels, and (3) compare both NFPCheck™ assay results and urine pregnanediol levels to NFP chart data. The Institute's role in this study was to provide Quidel with the study population, provide technical expertise at recruitment meetings, act as liaison between Quidel and the Provider's Group, and coordinate efforts with the Provider's Group to collect data and specimens for Quidel.

The clinical trial is now complete and all data have been sent to Quidel. A total of 60 women were enrolled. A total of 55 women successfully completed the study. Two versions of the NFPCheck™ home test kit were tested over three cycles. One version proved to be more promising than the other.

As a result of the study, the NFPCheck™ home test kit was further refined and a clinical study of a third version of the home test kit is currently underway in the Washington area with the Maryland/DC Provider's Group. A related study is also being conducted in Phoenix, Arizona with a second NFP group. The current round of studies will be completed in the next

reporting period. As of December 1992 about 35 of the 58 women recruited have already completed the 3 cycles required. Recently, Quidel conducted an in-depth interview with the President of the Provider's Group to obtain information that will be used in marketing and pricing the product.

Planned Activities: Quidel plans to provide a report of the first round of studies in the next reporting period. Although implied, it is not clear at this point whether or not the NFPCheck™ allows women to abstain less than they normally would have when they interpret their own signs and symptoms. Additional testing and refinement of the device will continue to be monitored by Quidel. Further requests for technical assistance will be evaluated by the Institute and provided, as appropriate.

(3) Development of Reagents to Assay Urinary and Salivary Steroid for One-Step Detection of Hormonal Changes

The purpose of this study is to (1) develop new assay technologies to measure small molecules, and (2) incorporate these technologies into a one-step test to measure estradiol and progesterone and their metabolites. The Weizmann Institute in Israel, with the support of the Institute, has developed a non-competitive immunoassay procedure, an **idiometric assay**, that is suitable for measuring small molecules, as well as peptides and proteins. The methodology involves the use of two specific monoclonal anti-idiotypic antibodies that recognize different epitopes (idiotypes) within the hypervariable region of the primary (anti-analyte) antibody. Novel idiometric assays have been developed for estradiol and its primary urinary metabolite, estrone-3-glucuronide (E1-G), plasma progesterone and the corresponding urinary metabolite pregnanediol glucuronide (PgG) and human hormone. These assays will be eventually incorporated into a simple home calorimetric test kit to detect the presence of the hormones.

It is expected that industrial partners will be able to produce test kits, using these new technologies, which will be used to define the fertile period, predict ovulation, facilitate the teaching of NFP, and assist NFP users who are considered to be in special circumstances (i.e., breastfeeding women and perimenopausal women).

Planned Activities: This project will continue under a new subagreement for two more years. The research shows great promise for many applications in addition to NFP. Contact with potential industrial partners has begun and will continue throughout the next reporting period. With the addition of a Biomedical Chief to the Institute staff, this project will be closely monitored, and the principal investigator will be assisted in making contacts with industry.

(4) FSH as an Indicator of Fertility in Perimenopausal Women

Elevated FSH is associated with infertility in perimenopausal women. Typically, in vitro fertilization (IVF) is not attempted if a woman has an elevated FSH level at the beginning of her

cycle. This fact may have significance for women in the perimenopausal period who would benefit from knowing the relative likelihood of becoming pregnant in a given cycle. It follows that if women who are perimenopausal rarely become pregnant if their FSH is above a certain level, FSH may be a very important indicator of fertility in older women who use NFP.

An initial research plan has been developed to study FSH as an indicator of fertility in perimenopausal women. Initially three-four urinary FSH lab tests will be selected to see if the results are similar to serum FSH test results. If it can be shown that urinary FSH tests give us information similar to serum FSH and a suitable urinary anti-serum can be identified, efforts will be made to develop a home test kit for urinary FSH.

During this reporting period, several experts were contacted to determine if it is possible to produce a sensitive and specific assay for metabolites of FSH and the feasibility of producing a home test kit for urinary FSH if it can be demonstrated that FSH is an indicator of fertility in perimenopausal women. As a result of these discussions, it was learned an assay to test for urinary FSH might use several monoclonal antibodies to identify FSH, with one of the monoclonal antibodies designed to identify an epitope that is common to all forms of urinary FSH. Such a monoclonal antibody could be made to detect the last beta epitome to metabolize that is common to all forms of urinary FSH.

This area of research continues to be promising, as it is now known that at least one major pharmaceutical company is also looking at FSH as a indicator of fertility in perimenopausal women. The Wiezmann Institute in Israel is willing to provide FSH antibodies to the Institute for initial testing. In addition, we will also select additional urinary FSH lab test kits for testing. A proposed plan to study FSH has been devised and has undergone initial in-house review.

Planned Activities: During the next reporting period, we will hold discussions with the European sponsors of a study of FSH in perimenopausal women. Our workplan will be reviewed and revised under the direction of the Institute's Biomedical Chief.

(5) Library of Ovulation Prediction Devices

During this reporting period, the Institute started an effort to collect and evaluate various devices that are designed to predict or demarcate the fertile period. Some of the devices that we plan to obtain are currently on the market, while others are in the process of development.

The purpose of this library is to provide the Institute staff with direct practical knowledge of how the devices are designed, and how practically they are used. Experience with the devices, although limited, will facilitate our responses to inquiries from various parties interested in the devices.

During this reporting period, the Institute received two L-Sophia™ devices, which are currently being evaluated by Institute staff.

Planned Activities: We plan to order several new devices in the next reporting period to add to the library. We plan to write a description of each device we obtain and to document our experience with the devices.

(6) Industrial Coordination to Create an Ovulation Prediction Device

The creation of an ovulation prediction device is one of the top priorities for the Institute. The Institute currently supports several basic research projects related to ovulation prediction. Nevertheless, a simple, accurate, cost-effective ovulation device has not been produced to date. During this reporting period, the Institute has continued to expand its contacts with members of the scientific and research community to increase the discussion of ovulation prediction.

During this reporting period, we have continued to be in contact with several researchers and manufacturers of devices and assay kits. We have coordinated an effort with faculty within the Department of Obstetrics and Gynecology at Georgetown to contact experts in the field to determine if they are currently conducting research applicable to the field of ovulation prediction. One Institute member attended a seminar on medical devices and the FDA to determine what issues are most important to the FDA in regards to bringing an ovulation prediction device to market. In August, we discussed with a European manufacturer the possibility of Georgetown's role in participating in a clinical trial of an ovulation prediction device.

Planned Activities: Under the direction of the Institute's new Biomedical Chief, we plan to focus our work by 1) evaluating FSH as a fertility indicator in perimenopausal women, and 2) determining the role Georgetown will have in a multicenter trial of an ovulation prediction device.

- b. **Strategy:** Support research on parameters of the fertile period which can contribute to improved practice of NFP.

(1) Changes in Cervical Mucus which Signify the Fertile Period of the Menstrual Cycle

The focus of this project, which is being conducted by the University of California at Davis, is development of a more incisive, standardizable, user friendly method for self monitoring of cervical mucus during the menstrual cycle, specifically to assist women to identify the onset of their fertile period. Using scanning microcalorimetry, the study will quantitate the entry and survival of sperm in the proliferative phase mucus and relate them to (1) mucus hydration and (2) the number of days before ovulation. The investigators are seeking industrial

support to develop a simple non-isotopic method for mucus hydration measurement, amenable to application in a home kit for self monitoring.

The preliminary phase of this project began in October.

Planned Activities: With the expansion of the Institute's biomedical expertise, closer collaboration with the investigator is expected during the next reporting period.

(2) Prediction of Ovulation and Monitoring of the Fertile Period

A review article on this topic was published by Institute faculty in *Advances in Contraception* in 1987. Various commercially-available devices to assist women in assessing and monitoring their clinical signs and symptoms of fertility were described. Given continued interest in this area and the development of new/improved devices, we would like to up-date this article. The Institute supported this effort by sponsoring a researcher-in-residence at the Institute during the last reporting period to update and bring together in written form the latest advances in ovulation prediction.

During this reporting period, we received a draft of the first part of the two-part paper, which is currently being reviewed in-house. The first paper reviews known fertility markers and ongoing research in this field; the second part will be devoted to describing the current methods of ovulation detection and prediction available and will provide a description of new potential methods of detecting and predicting the fertile period.

Planned Activities: We plan to complete the in-house review of this paper early in the next reporting period. We will continue communication with the researcher regarding preparation and publication of the paper. We anticipate receiving a draft of the second paper during the next reporting period.

(3) Determination of Ovulation and its Relation to Cycle Length

The purpose of this study is to determine the degree of variation in the time of ovulation and its relation to the degree of variability of cycle length for the individual woman as well as for all women in general. A group of women will be followed longitudinally for several cycles. In each cycle serial ultrasounds will be obtained, starting just prior to midcycle to determine the day of ovulation (within 24 hours). Daily urines will be collected to test urinary LH, estrone glucuronide (E1-G) and pregnanediol glucuronide (PDG); and blood samples will be collected to test for LH, progesterone (P_4) and estradiol (E_2). Women will keep menstrual diaries to record cycle length and record vaginal bleeding.

Several important questions will be answered as a result of the study, especially relating to understanding temporal relationships between the time of ovulation and menses. Definition

of the fertile period has important implications for users of NFP methods, the manufacturers of ovulation prediction devices, and the treatment of infertility.

During this reporting period, a draft protocol was reviewed and revised. Although this study was to have begun during this reporting period, the coordination of several divisions within the Department are required to conduct it, including technical and personnel support from the divisions of Reproductive Endocrinology, Perinatology, and the Institute. Under the direction of the Institute's new Biomedical Chief, preparations to conduct this study at Georgetown will be made.

Planned Activities: A draft of the latest protocol has been given to the new Biomedical Chief for review. Coordination with other divisions to conduct the study will be carried out under the direction of the Principal Investigator for the Institute.

- c. **Strategy:** Develop and test simplified methods of NFP to increase acceptability, efficacy, and continuation.

- (1) Trial of the Calendar Method

The Institute plans to conduct a clinical study of the calendar method. This prospective study will build on the information developed in the previous less-controlled studies taking into consideration the lengths of the woman's past cycles.

The Institute plans to conduct this trial for several very important reasons. First, periodic abstinence to space births is used worldwide, but available data indicates that couples often do not know when the fertile period occurs. If couples who use periodic abstinence could abstain on the days when the woman is most likely to become pregnant, the impact of these practices on fertility would most likely be very significant. Second, one of the objectives of the Institute is to simplify the use of NFP. If the calendar method can be adapted to demarcate the fertile period for the majority of women, the use of the calendar method and its acceptability will increase.

A formula which will be used in the clinical trial was selected based upon reanalysis of data from a multicenter trial of the Ovulation Method conducted by WHO. A protocol for a clinical trial of the calendar method is complete, and an investigator to carry out the study has been identified.

Planned Activities: We have requested that the investigator obtain local Institutional Review Board approval, which is required prior to commencing the study. We plan to hold an Investigator's meeting in Ireland during the next reporting period, and begin the study shortly after.

(2) Survey of Periodic Abstinence Users

At the expert meeting held at Georgetown in March 1992 to discuss the above clinical trial of the calendar study, it was noted that very little is known about how users of periodic abstinence use the method and if and how they determine when the fertile period occurs. In discussions held during this reporting period with WHO, it was decided that the Institute and WHO would jointly develop a strategy to study the use of periodic abstinence in developing countries. As a result of these communications, a joint Institute-WHO strategy was developed in August and September to study users of the periodic abstinence method who identify the fertile period by counting days, using a calendar, or a similar method. The strategy consists of three phases. During the first phase, basic knowledge of the users of periodic abstinence will be obtained using focus groups and/or mini-surveys. During this reporting period, both focus group question objectives and a near final draft of the mini-survey has been developed. The survey has been reviewed and is currently under revision.

Planned Activities: We plan to submit a proposal to WHO to conduct the study in one or two sites.

(2) Modified Mucus Method

For the past several years, the Modified Mucus Method (MMM) of NFP, developed by Dr. Kathleen Dorairaj in India, has gained popularity and recognition in some countries -- particularly in parts of Asia and Africa. Unlike other NFP methods, it does not require a woman to chart her fertility signs and symptoms, relies on sensation rather than visual observation of cervical mucus, and requires fewer days of abstinence. The Institute is not directly involved in studies of this method. However, we continue to monitor results of other studies of the MMM (such as the one conducted by The Johns Hopkins University with support from WHO) and are considering how we could best approach this issue.

Dr. Dorairaj's paper on the MMM, presented at the 1990 Institute/WHO conference, was published in Part II of the conference proceedings. Dr. Jennings held discussions with Anna Flynn regarding MMM use in Uganda and several possibilities for an MMM acceptability, use effectiveness, and continuation study. It does not appear that such a study will be possible at this time.

Planned Activities: We will maintain contact with other researchers and field programs using the MMM and develop an appropriate strategy for the Institute in this area.

2. **Objective: Increase knowledge of and support for NFP and fertility awareness by policy makers, health and family planning professionals, and the public.**

a. **Strategy:** Conduct research on key issues to overcome barriers to NFP and fertility awareness.

(1) **Outcome of Pregnancies in NFP: Fetal Effects**

The purpose of this study is to determine whether pregnancies associated with aged gametes result in more frequent incidence of spontaneous abortion and/or congenital malformation than other pregnancies. The second phase of this study, which is being conducted by the University of Tennessee with field sites in several countries, was initiated during this reporting period. An additional 114 cases (for a total of 991) were enrolled. Johns Hopkins University, which is responsible for data analysis, has analyzed in aggregate 923 pregnancies. Data indicate that there is no significant increase in spontaneous abortion rates of women who conceived while using NFP (although when analysis was restricted to women with prior history of fetal losses, significantly lower loss rates were noted in conceptions on mucus peak and day-1 compared to preovulatory and postovulatory conception). The spontaneous abortion rate of the study of pregnancies is 9.6%. The frequency of low birth weight (<2500 grams) was surprisingly low (3.8%), perhaps reflecting early prenatal care or selective bias favoring motivated couples.

Of 697 full-term infants, 22 had major (3.2%) and 138 minor anomalies. To avoid bias, correlation of pregnancy outcome with conception date will not be attempted in full until near the end of the study. Preliminary analysis shows the frequency of anomalies is not increased in nonoptimally-timed conceptions.

Johns Hopkins is also analyzing, separately, data on planned versus unplanned pregnancies in a sample of 740 cases. There were 367 (49.6%) planned pregnancies and 373 (50.4%) unplanned pregnancies. The following table summarizes major outcomes by planning status:

	<u>Planned</u> <u>n=367</u>	<u>Unplanned</u> <u>n=373</u>
Spontaneous abortion	40 (10.9%)	37 (9.9%)
Low Birth Weight (<250 grams)	18 (5.5%)	12 (3.6%)
Preterm pregnancies (<37 weeks)	6.7%	8.0%
Sex ratio	50.7%	49.3%

Two complementary studies have been initiated. The first is by the Latin American Collaborative Study of Congenital Malformations (ECLAMC is the spanish acronym), directed by Dr. Eduardo Castilla (Rio de Janeiro). The prevalence of anomalies associated with various

contraceptive methods, including NFP, is being recorded. Fifteen hospitals are voluntarily participating in this study, the listing of which is attached in ECLAMC's semiannual report. These 15 hospitals observe a total of 50,000 births per annum with an expected birth defect rate of 2.5%, according to the current definitions in ECLAMC. Requirement of 1,250 cases and 1,250 controls is expected on a yearly basis. Current registered patients total 754 cases with 753 controls, which is very close to the predicted prorated recruitment expectations.

A second study, Chromosomal Analysis of Natural Family Planning (NFP) Method Failures: A Study of Aging Gametes in Humans was funded by the March of Dimes in September 1992. This project is a chromosomal study of known method failure NFP pregnancies, specifically pregnancies in which the date of conception is other than the day before (0 or -1) ovulation at the two Chilean centers, Universidad de Chile (Mena) and Pontificia Catolica (Perez). These studies will be performed at the internationally recognized cytogenetics laboratory at the Universidad de Chile (Dr. Ron Youlton, Dr. Silvera Castilla, and Professor Ricardo Cruz-Coke).

In addition to cytogenetic studies at the Universidad de Chile to detect aneuploidy, the parental meiotic origin in studies at the University of Tennessee will be determined. In all Chilean families with aneuploid offspring, parental and meiotic origin on the basis of family studies using RFLP polymorphisms (CA repeats) will be determined. Most trisomies and X chromosomal polysomies result from maternal meiotic errors, and of these, generally (90-95%) maternal meiosis I. Given that delayed fertilization (aging oocytes) would be expected to be associated with errors in maternal meiosis II, significant deviations from expectation could be detected with small amounts of numbers. Such findings would verify aging gametes as a cause of nondisjunction in trisomies.

Planned Activities: An investigators' meeting had been planned for April 1993 in conjunction with the IFFLP Zonal Meeting in Paraguay. However, the date for the IFFLP meeting has been changed to August of 1993. It may be difficult to arrange an investigators' meeting at that time because of schedule conflicts. Other options are being considered.

(2) Analysis of Periodic Abstinence Data from the Demographic and Health Surveys (DHS)

During our original cooperative agreement with A.I.D., we contracted with the Institute for Resource Development (IRD) to conduct separate analyses of periodic abstinence data from their surveys. One of our subrecipients, the University of Pittsburgh Graduate School of Public Health, received relevant data tapes from IRD and was responsible for analyzing them more thoroughly, emphasizing intensive analysis of data from countries with high levels of periodic abstinence use. IRD completed its work, indicating the following: (1) highest levels of current use of periodic abstinence are observed in Bolivia, Peru, and Sri Lanka (15 - 18 percent of all currently married women [CMW]); (2) other countries with significant current levels of periodic abstinence among CMW include Colombia, Ecuador, Ghana, Kenya, Togo; (3) in several

countries with very low levels of contraceptive use (such as Burundi, Mali, Senegal, and Uganda), a large percent of family planning users rely on periodic abstinence; and (4) in many countries, large percentages of CMW who state that they are periodic abstinence users do not know when during their menstrual cycles they are most likely to become pregnant.

We discussed another project with IRD, in which they would analyze data from selected DHS II and III countries, write country reports, and prepare a comparative report. We received a proposal from IRD in mid 1992. At this point, because of the kinds of data available in the DHS and our budget limitations, we will not be able to pursue this. However, we are following closely the DHS published results relating to periodic abstinence, and we are reviewing DHS questions on periodic abstinence to recommend changes that will increase the usefulness of these data.

Planned Activities: We will prepare revised questions and meet with DHS staff to encourage their inclusion in future surveys.

(3) Prospective Monitoring of NFP Services and Users

A potential source of information about efficiency and effectiveness of NFP services and methods is routine data, collected and reported by NFP programs. As part of our comprehensive effort with IFFLP (see section II.3.b.(1) of this report), we are collaborating with colleagues in the field to design, implement, and test a management information system (MIS) to collect data on a pilot basis from 10-14 NFP programs worldwide.

During this reporting period we carried out a number of activities to obtain field input on the design of the MIS reporting form, to refine the reporting form and definitions of terms to be used in the MIS, to introduce the MIS to NFP field program staff and demonstrate its usefulness to them.

Myrna Seidman participated in the IFFLP Africa Zonal meeting in Cameroon and presented the MIS design to participants. Following this presentation she worked with Bob Kambic, JHU consultant, to refine the definitions of MIS data elements and the MIS reporting form to take account of the feedback received. In addition, Ms. Seidman and Mr. Kambic presented a session during the zonal meeting on the use of MIS data for evaluation. This session introduced participants to the MIS design and also stimulated their interest in the use of indicators for program monitoring and evaluation. The NFP Client Based Learning Model, which was revised during the last reporting period, was used to introduce the basic terms and data elements of the MIS.

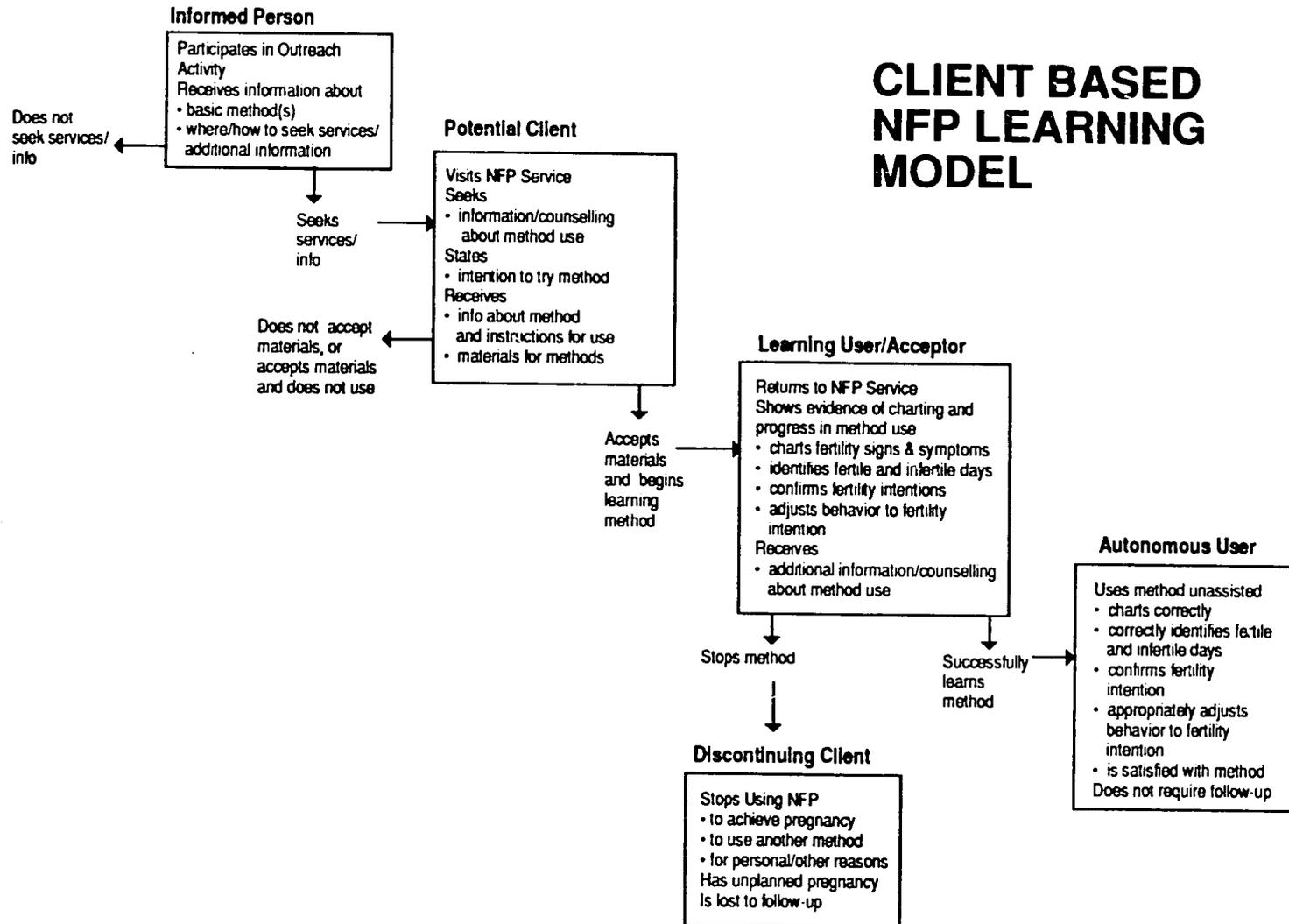
Ms. Seidman also participated in the Management Training Program held in Mauritius for participants from Anglophone Africa. She conducted sessions which introduced participants to program monitoring and evaluation and the use of indicators.

During this reporting period we reviewed the IFFLP proposal for the pilot MIS along with a draft of the agreement that IFFLP will initiate with programs participating in the pilot effort. Suggestions for strengthening these documents were provided to IFFLP.

Planned Activities: Programs will be selected worldwide for participating in the pilot effort, USAID mission approval will be requested, and agreements between IFFLP and the participating countries will be signed. Ms. Seidman will also develop an MIS and Program Evaluation Manual which will explain the MIS and guide users in implementing the system and using data for monitoring and evaluation. We expect that programs will start reporting on the MIS data form during this period.

To assist us in our planning for an MIS, we developed a chart to illustrate a client based NFP learning model.

CLIENT BASED NFP LEARNING MODEL



(4) NFP Prospective Study

A prospective study of NFP users was conducted by Action Familiale/Mauritius, to determine what factors influence the successful use of the Symptothermal Method (STM) and its failure and discontinuation. The study was undertaken from February 1989 - May 1991 among 1,000 NFP users in Mauritius. Eligible users were recruited as they entered the NFP program. The data were collected in respondents' home during a first interview and follow-up interviews until clients reach a period of 18 months.

The preliminary tabular analysis of the study data was submitted by Action Familiale to the Institute in its final report. Findings include the following: (1) neither spacers nor limiters find abstinence difficult, although more spacers find it difficult than do limiters; (2) knowledge of the STM is greater among clients with a secondary education than among those with a primary education; (3) among husbands who do not find abstinence difficult, a large percentage are very interested in discussing NFP with their wives, while among those who do have difficulty with abstinence, there is less interest in discussing NFP.

The preliminary analysis, however, did not completely address one of the purposes of the study, which was to identify the factors associated with successful outcomes (e.g., autonomous use of STM) and those which differentiated successful users from those who discontinued use of the method. The large complex data set which the study produced will require further analysis.

Towards that end, Ms. Seidman met with the study's Principal Investigator, Richard St. Mart, during her trip to Mauritius and discussed a plan for reanalyzing the data. Ms. Seidman has also obtained a copy of the data set on diskettes which will make further analysis possible.

Planned Activities: During the next reporting period we will re-analyze the data in terms of client outcomes, and prepare a first draft of a paper describing these results for review by the study's principal investigator.

(5) Group Teaching NFP

This pilot project, conducted by Action Familiale in Mauritius, developed, implemented, and evaluated a model for group teaching of NFP. Recent changes in the socioeconomic situation in Mauritius had challenged the viability of the individual approach.

Based on study results, Action Familiale recommended that clients for group teaching be recruited in existing groups and that a course should have a minimum of ten clients. They also recommended that the supervisors' time with group teaching courses be reduced and that a modified group teaching curriculum program for specific groups should be developed.

During this period, Myrna Seidman met with the LARFPC study coordinator and Action Familiale staff to explore the preparation of an article on the study for submission for publication. These meetings also reviewed the implications of the study findings for Action Familiale's group teaching activities, which will be discussed in the article.

Planned Activities: During the next reporting period we will complete our preparation of the article and submit it for publication to an appropriate journal, or issue it as a Special Institute Report.

(6) Multicenter STM Trial:

We were contacted by a group of European NFP researchers about partial Institute support for a prospective study of STM users to assess the fecundability of various cycle days. Because of the depth and range of data they propose to collect, we have inquired whether they would be interested in re-focusing the study, similar to the multicenter study of the Ovulation Method conducted by WHO in the early 1980s.

Planned Activities: Dr. Bernardo Colombo, the study coordinator, will meet with us in Washington in early 1993 to discuss the study.

- b. Strategy: Communicate with target audiences to increase their knowledge of and support for NFP.

(1) NFP: A Good Option

This document, which was developed during our initial cooperative agreement in collaboration with the IMPACT project at the Population Reference Bureau (PRB), has been very well received. Its purpose is to encourage policy makers to include NFP in comprehensive family planning efforts. We are unable to meet any further requests for the English version; however, we have a sufficient stock of French and Spanish versions. The results of a survey of several of the major recipients of the document identified several relatively minor changes which would make the document more useful. Most of these can be made without substantial reformatting. However, the logistics of republishing the document are rather complex, and it has not been possible for us to follow through on this.

Planned Activities: We plan to modify and reprint the English version and disseminate it as appropriate. A consultant will assist us with this. We expect that the document will be published and disseminated during the next reporting period.

(2) Glossary of NFP Terms

This document also was developed during our initial cooperative agreement. Its purpose is to provide a common terminology which can be used by the NFP field. The definitions that describe a client's flow through the process of accepting and learning to use NFP (the NFP Learning Model), are being revised according to the recommendations from the MIS meeting. Several of the terms relating to breastfeeding also need to be updated. The Institute's Breastfeeding Division has provided the definitions in the area.

Planned Activities: A consultant will help us to incorporate the revised terms into the Glossary. It will be reprinted in English, French, and Spanish and disseminated.

(3) Guide for NFP Trainers

The Guide is a resource for trainers who plan, implement, and evaluate training courses for NFP instructors. The first edition has been widely disseminated in English since early 1990. The French and Spanish versions have been disseminated during this reporting period. The demand for the Guide has been quite high: we have negotiated with the publisher to produce a less expensive version (in English) for wider distribution. This is now being disseminated.

Planned Activities: The Guide will be re-sent to selected CAs, with a letter regarding adaptation of the fertility education component for general family planning training. We will continue to meet requests from other organizations.

(4) Natural Family Planning: Current Knowledge and New Strategies for the 1990s (proceedings of a conference)

An international conference, "Natural Family Planning: Current Knowledge and New Strategies for the 1990s," was held at Georgetown University in December 1990. It was supported by the Institute, A.I.D., and WHO. The conference, with an attendance of approximately 150 people from 30 countries, offered a forum for representatives of the population and health fields, including both the NFP and multimethod family planning communities, to present research and program results and to exchange ideas and experiences. The proceedings of the four conference sessions that focused on biomedical research have been published as a special supplement to the December 1991 American Journal of Obstetrics and Gynecology (AJOG) and disseminated by the Journal to its approximately 22,000 subscribers worldwide. We also have disseminated 2,000 additional copies. The proceedings of the remaining nine sessions and the round table discussions have been published as a companion piece to the AJOG document. WHO requested and has received 500 copies each of the AJOG supplement and companion piece. FHI also received 500 copies of each of these documents for distribution to their mailing list. IRH has also answered approximately 400 additional requests from interested individuals.

Planned Activities: A major distribution of both volumes of the proceedings will continue during the next reporting period.

(5) NFP/Fertility Awareness Modular Slide/Audio Set

A great need has been identified for a comprehensive, flexible set of slides that can be used with multiple target audiences (e.g., policy makers, educators, health workers, etc.). A consultant is working with us on a four-phase process to:

Phase I: Review appropriate background materials on fertility awareness and NFP; conduct initial discussions with six-eight key people to identify needs, target audiences, etc.; review existing slides (Institute slides as well as those available elsewhere); and prepare an outline of the final product and a time line/management plan for completion.

Review outline/concept with a larger audience for feedback (NFP programs, other CAs, communications specialists, etc.); incorporate their ideas and revise outline accordingly; identify additional resources for slides.

Phase II: Assemble slides and order ideas and messages to provide a "draft" slide set for initial testing and review.

Phase III: Pretest slide set with target audiences, revise per feedback, and prepare a copy for final field testing.

Phase IV: Disseminate the slide set for final field testing, make final revisions, and disseminate widely.

During this reporting period, Phase II was almost completed. Slides have been collected from several NFP programs and additional slides have been made. Portions of the slide set were used in presentations at four conferences. Two TA sessions (presentations to CAs) utilizing the slide set have been scheduled for early 1993.

Planned Activities: During the next reporting period, Phases II and III will be completed.

3. **Objective: Improve, expand, and evaluate programs to increase the availability, accessibility, and quality of NFP services and fertility awareness information.**

a. **Strategy:** Conduct research and provide guidelines to improve the use of NFP by women in special circumstances.

(1) Efficacy of the Symptothermal Method in Lactating Women After the Return of Menses

The purpose of this project, which was conducted in collaboration with the Maryland/DC NFP Providers Group, was to determine (1) the ability of the Symptothermal Method to predict ovarian activity and ovulation in breastfeeding women after the period of lactational amenorrhea; (2) the amount of abstinence actually required for women to avoid pregnancy versus what they identify as necessary based on their observation of clinical signs and symptoms; (3) the relationship of feeding patterns to cervical mucus activity; (4) the relationship of subjective assessments of cervical mucus to the volume of aspirated cervical-vaginal fluid; (5) the reliability of cervical-vaginal fluid volume as a predictor of ovarian activity after the end of lactational amenorrhea; (6) the bleeding patterns, number, and characteristics of ovulatory cycles and ovarian activity in these women; and (7) the ability of basal body temperature to reflect ovulatory activity during this time period. Preliminary results of this study have been reported previously. The remaining assays have been conducted, and the remaining data is being entered and reviewed.

Planned Activities: Upon retrieval of the cleaned data tape from the University of Pittsburgh, a complete data set will be created, allowing analysis of the entire data set and the subsequent publication of the results of the study.

(2) Interpreting Cervical Mucus in the Presence of Vaginal Infections

The purpose of this planned study will be to determine if women who use NFP are able to distinguish cervical mucus from vaginal discharge concurrent with an infection, or if having a vaginal infection is a special circumstance which may cause difficulty using NFP.

During this reporting period, we have begun to contact various experts involved in NFP research to determine if 1) there are any data sets that may contain data relating to vaginal infections in NFP users or 2) if there are upcoming large-scale clinical studies in NFP in which prospective data could be collected relating to vaginal infections.

Planned Activities: We plan to continue to contact various NFP programs leaders and others to determine the possibility of using previously collected data to determine the impact that vaginal discharge has on interpreting fertility using cervical mucus. An assessment of responses to our inquiries to a selected group of NFP investigators will take place early on the next reporting period, and further action will be based upon the results.

b. **Strategy:** Provide financial and technical support for NFP service delivery.

(1) **NFP Technical Assistance Project**

The initial subagreement with IFFLP has been modified to extend the agreement through to 1996. Under the workscope for 1993, IFFLP is providing technical assistance and financial support to NFP programs in four countries, supporting the implementation of the MIS in three to five countries, supporting the conduct of a Pan-African Zonal meeting in Cameroon, and sponsoring two special projects: a Lifestyle Education project in Zambia and Management Training conducted by l'Action Familiale of Mauritius.

During this reporting period, a successful African Zonal Meeting was held in Yaoundé, Cameroon from August 4 - 18 for over 60 participants from more than 20 countries. The meeting included a five-day Leadership Training Seminar which devoted a full day to MIS and program service statistics, scientific presentations and sessions on Family Life Education and AIDS, Program Management, and Breastfeeding and LAM.

Subagreements for Brazil and the Philippines were approved, and an IFFLP staff member participated with Institute staff in consultation meetings to assist ATLF to develop a project for Peru. IFFLP has reviewed the ATLF proposal and provided the Institute with suggestions for strengthening the project.

The Zambia Lifestyle Education Project which had been signed in August was unilaterally canceled by the Family Life Movement of Zambia, and the consultant is seeking alternative collaborators.

A special project for NFP Program Management Training in Mauritius was also approved, and its first training program was held in November and December for 12 English speaking participants from 7 countries.

IFFLP staff conducted technical assistance visits to Cameroon, Côte d'Ivoire, Ghana, Mauritius, Rwanda, Senegal, and Zambia. Trip reports for Côte d'Ivoire, Ghana, and Senegal have been received, approved by the Institute and forwarded to A.I.D. The report for Rwanda has just been received, and the other trip reports are pending.

The Institute reviewed the proposal for the MIS pilot effort and the "boilerplate" agreement for participating countries and provided IFFLP with suggestions for strengthening the evaluation section of the proposal.

The Institute has also reviewed IFFLP's proposal for a Pan American zonal meeting in Asunción, Paraguay from August 26 - September 3. We provided numerous suggestions to IFFLP regarding the content of their meeting and offered our assistance with several of the planned activities.

Planned Activities: We expect that during the next six months, IFFLP will implement subagreements with the MIS pilot countries, finalize and sign an agreement with ATLF Peru, initiate a new lifestyle education project to replace the Zambia project, finalize plans for the Pan American zonal meeting in Asunción, and develop a program plan for the VIth International Congress to be held in Poland in 1994.

(2) Integrating NFP Services into Public Health Programs

The purposes of the subagreement between LARFPC and the NFP and Medical Services Centre of Nairobi, Kenya, is to train NFP supervisors and instructors to expand the integration of NFP services within MOH sites.

During this reporting period a site visit was conducted by LARFPC to assess progress and provide technical assistance for NFP instructor training in the areas of supervision, client education, and evaluation. As a result of the technical assistance a new data system was put in place which will make it possible for the project to report on the MIS reporting form. In addition the curriculum used for instructors' training was modified. Instructor training for eleven of the twelve participants also occurred during this period.

Planned Activities: A second NFP instructor training course will be held, and the first group of MOH supervisors will be trained. Data analysis, which has been postponed because the consultant was out of the country, will also take place.

(3) Guidelines for NFP and Fertility Awareness Incorporation

During our initial cooperative agreement, draft guidelines for incorporating NFP and fertility awareness into other ongoing programs (e.g., multimethod family planning, child survival, women in development, and community development programs, etc.) were developed. Expansion of NFP and fertility awareness beyond traditional NFP programs was identified as a high priority by the participants in the international conference in December 1990; it is clear that for such expansion to produce the desired results, programs will require considerable guidance in all aspects of planning and implementation. During this reporting period, the draft Guidelines were distributed for in-house review.

Planned Activities: We will identify an appropriate consultant to work with us on this effort. The existing draft guidelines will be reviewed, and input from a variety of sources will be solicited. The next draft will be ready for external review by June.

(4) Evaluation

Substantial progress has been made in the design of an MIS for NFP programs, which represents one of the building blocks for putting in place a program capacity for evaluation. Field reactions to the MIS have been obtained, and modifications in the MIS data elements and forms have been made. Training in the use of indicators for evaluation conducted during the Africa zonal meeting in Yaoundé and the Management Training program in Mauritius have also helped to build understanding of and interest in the use of data for monitoring and evaluation.

An approach to evaluating the MIS pilot was developed during this period. The evaluation will examine the implementation and technical assistance processes as well as the benefits of an MIS system for participating programs in terms of improved management and supervision and expanded services. A baseline profile on MIS pilot programs will be developed so these assessments can be made.

Planned Activities: Our efforts during the next 6 months will focus on developing a Manual on MIS and Program Evaluation for countries reporting program statistics and developing baseline profiles on these countries for our evaluation of the MIS pilot program.

(5) Public-Private Partnership: A Strategy for NFP Expansion

Plans are underway to conduct an "experts meeting" on this topic to present and analyze the experience in selected countries worldwide. A concept paper is being written, following preliminary discussions with several NFP programs that have experience working with the public sector. The expected outcomes of the meeting are (1) an enhanced working relationship between the public and private sector groups attending, (2) an increased understanding of public private partnership dynamics, and (3) a publication describing and analyzing experiences for the benefit of a wide audience.

Planned Activities: A concept paper will be finalized and plans for the expert meeting will be made. The meeting is tentatively scheduled for July 1993.

(6) Technical Assistance

Technical assistance (TA) to USAID missions, CAs, and developing country organizations is a major mechanism to encourage family planning, child survival, and educational programs to include fertility awareness and NFP in their efforts. TA is provided by Institute staff and consultants as well as by several of our subcontractors (particularly IFFLP).

TA to USAID Missions: As a follow-up to the mid-1991 trip to Haiti to conduct a status analysis/needs assessment on NFP and Breastfeeding for child spacing, a second trip was

conducted to develop a large-scale project jointly implemented by the Breastfeeding and NFP Divisions of the Institute. The purpose of the trip, which took place in December, was to further develop plans for several projects by selecting strategies to select appropriate organizations and personnel to carry out the various projects. Since the political coup in September 1991, and the subsequent cutting off of relations with the Haitian government, it will no longer be possible to work directly with the Ministry of Health to implement any Institute projects. However, under the Humanitarian Assistance Program, the Institute will be able to work with non-governmental organizations to implement the projects. Examples of the types of interventions planned include conducting a major fertility awareness campaign, incorporation of fertility awareness, NFP and LAM into training programs for all levels of health care workers, at the nation's key health training center (re)training of NFP teachers, and supporting three to four model NFP and LAM program sites.

Planned Activities: We plan to conduct another site visit in March/April when funds are scheduled to be released from the USAID mission in Haiti. Before this visit, more details of the overall project will be refined, and a more detailed budget will be produced for individual project activities.

TA to CAs: The Institute continued to assist JHPIEGO with the NFP and fertility awareness portions of its family planning guidelines. Assistance also was provided to the authors of Contraceptive Technology with NFP/fertility awareness chapters for the new edition of the U.S. and African versions of this publication.

During this reporting period, we have been contacted by the Macro/Institute for Resource Development to assist in the revision of the Demographic and Health Survey (Phase III). We hope that pertinent questions relating to users of periodic abstinence will be incorporated into the survey. The information obtained from the proposed questions will provide basic information about periodic abstinence users that has not been obtained to date. We also plan to provide TA to IPPF/WHO and have tentatively scheduled a meeting with them in early 1993.

Planned Activities: We plan to create our questions and submit them to Macro/IRD early in the next reporting period. In addition to the meeting with IFFLP, we will meet with SEATS and at least two other CAs. We also will assist FHI with the NFP component of the medical barriers slide presentation.

TA to NFP Programs: Assistance was provided by the Institute and its subcontractors to NFP programs in Cameroon, Côte d'Ivoire, Ghana, Mauritius, Rwanda, Senegal, and Zambia.

Planned Activities: As part of the further development of the "Guidelines for Incorporating NFP and Fertility Awareness into Other Ongoing Programs," the Institute will contact numerous CAs and USAID missions regarding their interest in and perspectives on this issue. This is expected to lead to several requests for TA in NFP and fertility awareness. The proceedings from the December 1990 conference, which are being disseminated to all CAs and USAID missions as well as to a wide range of field programs, may also lead to requests for TA.

In the dissemination cover letter, we will highlight Institute interest in providing TA and suggesting areas in which this assistance could be most useful. We also will review TA strategies with IFFLP, and identify ways of assisting projects through off-site TA approaches such as mail, telephone, FAX, and document review.

(7) Management Training for NFP Programs in Africa

A workshop to introduce NFP managers to basic management tools was held in August during the zonal meeting in Yaoundé, and a three-week management preceptorship for selected participants from Anglophone Africa was held in Mauritius during November-December. Ms. Seidman observed the last week of the Mauritius management course in which participants identified management improvement needs and developed program proposals for funding.

Planned Activities: Follow-up visits will be made by IFFLP and Action Familiale to help managers seek funds and implement the management-strengthening plans developed during the preceptorship. In addition, course materials will be refined and prepared for the next offering of the course in French. One of our recommendations to IFFLP and Action Familiale for the subsequent offering of the course is to formalize the development of management-improvement plans and the use of these plans as a basis for the follow-on TA. We will assist them to make the appropriate modification in the course.

(8) Lifestyle Education: Teen Star Program

The subagreement between IFFLP and the Family Life Movement of Zambia (FLMZ) for a lifestyle/sexuality education pilot program for teens has been unilaterally canceled by FLMZ. This project had been developed by Dr. Hanna Klaus, who also provided technical assistance to FLMZ.

Planned Activities: Dr. Hanna Klaus, who developed the project, is seeking other sites for the project's implementation and we expect that a new site will be selected and approved.

(9) HIV/AIDS/NFP Workshop in Africa

A four-day workshop on AIDS/HIV and NFP was conducted for leaders of NFP programs in Africa as part of IFFLP's African Zonal Conference held in Yaoundé, Cameroon in August. Approximately 15 NFP program leaders attended representing many countries where HIV is pandemic. The workshop was intended to equip the leaders with current information on AIDS and HIV, and provided a forum for how AIDS education can be incorporated into family life education. However, more emphasis was devoted to discussing the qualities of a good family life education rather than specifically providing family-life educators with factual

information about AIDS. Institute personnel were invited to teach the one-half day didactic session when the intended speaker did not arrive in Yaoundé.

A one-day workshop was provided covering the following topics: general information about AIDS/HIV: definitions, transmission, demographics; women and AIDS; AIDS in Sub-Saharan Africa; Condoms; Rates of Transmission; Family Life Education and AIDS; Breastfeeding and AIDS; AIDS in discordant couples; and AIDS and right to privacy versus disclosure. Materials were provided to all workshop participants, including recent articles and source documents on AIDS, including those published by Family Health International (condom breakage studies, use of condoms, efficacy rates of condoms), the World Health Organization (breastfeeding and HIV transmission and health consequences of not breastfeeding; AIDS in Sub-Saharan Africa; school health education to prevent AIDS and STDs; women and AIDS, and basic definitions, ways of transmission, etc.) and the French magazine, Le Point ("Les Sidamnes de l'Afrique").

Planned activities: We plan to continue TA to IFFLP relating to HIV/AIDS. The TA will take the form of reviewing documents and the content of future zonal and subzonal meetings to ensure accuracy and adequate coverage of topics.

4. **Objective: Enhance clients' fertility awareness and the knowledge, acceptance, and effective use of NFP.**

- a. **Strategy:** Develop and test messages and communication strategies to improve fertility awareness.

(1) **Simple Fertility Awareness Messages**

The Program for Appropriate Technology in Health (PATH), under subagreement for Technical Services issued by IRH, carried out development activities for a pilot project to examine issues relating to fertility awareness in Bolivia and Guatemala. Data from the Demographic and Health Surveys indicate that in many countries where use of periodic abstinence is high, the majority of women are unable to correctly identify when during their menstrual cycle they are most likely to become pregnant. The purpose of this project is to develop and test a fertility awareness education program targeting Bolivian and Guatemalan couples--particularly those who state that they use periodic abstinence as their method of family planning or who use no method at all--with information to help them monitor their fertility.

PATH conducted parallel activities in both countries. During Phase I activities, PATH staff conducted project development visits to Bolivia and Guatemala. In each country, PATH staff met with representatives from the USAID mission, the Ministry of Health, and local nongovernmental organizations (NGOs) to discuss the interest and feasibility of conducting a fertility awareness education program. In Guatemala, site visits were made to the *altiplano*

indigenous region, and to the eastern *ladino* (Caucasian and Indian mix) region to determine the appropriateness of the possible sites for conducting project activities.

Based on the results of these discussions and the site visits, an appropriate local NGO was identified in each country for project development and implementation--Centro de Investigacion, Educacion y Servicios (CIES) in Bolivia, and Programa de Apoyo para la Salud Materno Infantil (PAMI) in Guatemala. A final project proposal was prepared by both organizations, submitted to USAID, and approved.

Planned Activities: Phase II will include: 1) negotiating an agreement with CIES and PAMI for local coordination and implementation of project-related activities; 2) quantitative research to examine current knowledge, attitudes, and practices regarding fertility; 3) designing an educational strategy which includes messages and means; 4) pretesting of messages and materials; 5) strategy implementation; and 6) strategy evaluation.

(2) NFP Casebook

The Institute plans to develop an NFP Casebook to assist in training teachers to work successfully with a wide variety of clients, particularly with regard to counseling issues. The cases will be based on actual experiences of NFP teachers in selected developing and developed countries worldwide. Each case focuses on a specific "problem" (e.g., couples with different fertility intentions, women who have become "uncertain" with their method because of special circumstances, couples having difficulty with abstinence) or "situation" that is common in NFP. The casebook will be organized developmentally, i.e., beginning with issues particularly relevant to a young woman/couple just beginning to learn/use the method, progressing through couples during their child bearing years to those entering pre-menopause. A project development plan is being prepared.

Planned Activities: The project development plan will be finalized and implemented. Because of funding and time constraints, most of the development plan implementation will be postponed until next fiscal year.

(3) Quality of Care in NFP Programs

The Institute supported two participants to attend the AVSC-sponsored workshop on Quality of Care, which was held in Turkey in April. The primary focus of the workshop was the role of counseling in quality of care. An Institute participant made a presentation on fertility education as an element of counseling. As a result of this meeting, the two participants, with Institute personnel, are writing two related papers on Quality of Care in NFP programs. These two papers will be published together as an Institute Issues Report.

During this reporting period, a detailed outline of the first paper has been drafted and is currently being reviewed. We received the draft of the second paper which focuses on the technical aspects of quality of care in NFP programs. It has been reviewed in-house and is now being revised.

Planned Activities: We plan to publish the two papers together in an Institute Issues Report titled "Quality of Care in NFP Programs."

(4) National Coalition Of Natural Family Planning

Currently the National Coalition of Natural Family Planning has 54 individual and 12 organizational members. A new/renewal membership campaign is being planned. In addition, the Coalition is exploring the cost and development of a national certification test for NFP instructors.

The annual meeting of the National Coalition of Natural Family Planning was held at Georgetown University in Washington, DC, on June 29, 1992. During the meeting, the coalition unanimously agreed that committees be formed for specific work to be accomplished during the year. There will be a scientific/research committee, a public relations committee and an archive committee. The standardization of record keeping forms to document the use effectiveness of NFP was stressed.

The Coalition has submitted a proposal to the Institute to incorporate NFP into two multimethod family planning programs.

Planned Activities: The Coalition is proceeding with plans for a conference entitled "Unity in 1993 Conference." The conference plans were discussed at length during the June meeting. At present this conference is scheduled for the Fall of 1993. The Institute will review to Coalition proposal.

C. ADMINISTRATION

Because the NFP Division carries out the majority of its work through subcontractors and consultants, careful coordination among all project elements is essential to ensure that all are aware of each other's objectives, strategies, and activities. To increase coordination and enhance the Institute's ability to achieve its objectives, a project review meeting will be held with our subcontractors and consultants in late 1993. This will enhance subproject collaboration and help us identify priorities for the subsequent year. Tentatively, participants will include all interested Institute staff (including both NFP and Breastfeeding Divisions), representatives from IFFLP, LARFPC, the Maryland/DC NFP Providers Group, PATH, the Institute for Resource Development, and other subcontractors; Institute consultants working with us on the MIS, the evaluation strategy, and the modular slide set; and A.I.D. In addition, we may invite a small

number of experts who are familiar with the Institute's work and can contribute to our review and discussions. During this reporting period, we will discuss this meeting with our colleagues, develop an agenda, and make arrangements for the meeting.

During this reporting period, a PhD laboratory director and a laboratory technician joined the staff. A Biomedical Chief is being recruited.

The IEC position (50% in the NFP Division) remains unfilled, and most of the responsibilities of this position are being met by a consultant.

III. BREASTFEEDING

A. OBJECTIVES

The GU/IRH goal in breastfeeding is to increase the availability and acceptability of optimal breastfeeding with a focus on its fertility impact. The Breastfeeding Division's three objectives are

1. Continued testing and refinement of the Lactational Amenorrhea Method (LAM);
2. Policy change favoring optimal breastfeeding for its fertility impact;
3. Program changes to include LAM, the fertility aspects of breastfeeding, and the timely introduction of family planning postpartum.

LAM is an introductory method of family planning which enhances acceptance of family planning and supports women in optimal child health practices.

The Division's strategy to achieve the objectives of refining LAM use, achieving policy change, and producing program change focuses on three program areas: (1) LAM and the timely introduction of family planning during breastfeeding; (2) optimal breastfeeding for its fertility impact; and (3) the breastfeeding and LAM/NFP interface. In each program area, the Breastfeeding Division (a) provides technical and funding support for research and pilot projects; (b) provides information and education to health professionals and policy makers; (c) and uses the research and policy results in support of program and policy change through technical assistance to existing programs, especially addressing family planning organizations, including Cooperating Agency and USAID Mission needs.

B. ACTIVITIES

The following activities took place during the reporting period July 1, 1992 - December 31, 1992.

1. LAM: Breastfeeding and Family Planning Interface

Activities in this area consist predominantly of direct support of the LAM/family planning method and family planning program interface, which includes research, pilots, education, and technical assistance for LAM in family planning and child survival programs, as well as timely family planning in breastfeeding programs.

a. LAM: Research and Pilots

(1) Chile: Pontificia Universidad Católica

(a) Chile: Clinical Study of LAM

The first phase of the Institute's project in Chile with the Pontificia Universidad Católica was a case-control breastfeeding support intervention study. It has shown: (1) the efficacy of LAM in clinical trial is higher than 99.5 percent; (2) family planning coverage at six months is increased when LAM is offered to women as a family planning option; (3) infant growth excels under full breastfeeding; (4) with proper support for breastfeeding, women within feeding category demonstrate increased durations of amenorrhea; and (5) the "LAM eligible" population (those fully breastfeeding and amenorrheic) increased when there was support for breastfeeding.

A conference was held in October 1990 to present *Advances in Breastfeeding for Health and Child Spacing*. The efforts of the project team, Drs. Perez, Valdes, and their colleagues, resulted in an extremely successful conference that was attended by more than 350 doctors, nurses, and nurse-midwives. While participants were primarily Chilean, representatives from the Ministry of Health of Honduras and CEMOPLAF/Ecuador also attended; and speakers were drawn from the regional Institute projects. Institute staff were heavily involved in the conference as well, and Institute breastfeeding materials were widely disseminated to all participants. Wellstart's collegial participation added yet another area of expertise and network of potential activity.

The 99.5 percent efficacy of LAM demonstrated in this study included only women who did not plan to work outside their homes. However, many women return to work before the sixth month postpartum, and in Chile, in particular, 20-30 percent of the female population returns to work at about 84 days postpartum; therefore, it was essential to determine a protocol for LAM use and its efficacy among working women. The project is proceeding with the hypothesis that, by supporting working women in achieving optimal breastfeeding, the number of women eligible for LAM (i.e., those who maintain full breastfeeding and amenorrhea), can be increased, and that by following certain rules or guidelines, LAM can be an effective introductory family planning method for working women.

During this reporting period the following activities were accomplished:

- A site visit resulted in significant changes in study instruments, including transfer of data to EpiInfo and revision of timing and expansion of support for follow-up visits. The visit also identified increased resources needed to properly follow the clients.
- Final revision and translation of Lactancia Materna: a draft revision has been completed and has been translated to English.
- Publication of the breastfeeding and LAM reference book, Lactancia Materna: pending.

- Publication and presentation of scientific papers: Dr. Perez presented LAM findings in two international meetings.
- Follow-up to the October 1990 conference: Participants found by questionnaire to be specifically interested in LAM were interviewed and site visits have commenced based on size and area of potential influence.
- A clinical trial of LAM use by working mothers: A protocol was written, sent out for external review, revised, submitted for PUCC/IRB review and initiated. To date, more than twenty women in the trial have achieved between 90 and 180 days of LAM use and two pregnancies have occurred in month six. These pregnancies occurred under the guidelines. If additional pregnancies occur, study termination will be considered.

Planned Activities: A visit to the project site is planned in May 1993 to continue manuscript finalization and to assess study progress. The draft Lactancia Materna will be reviewed in English and Spanish, to be published in Spanish in April 1993. The Chilean investigators will visit additional sites in Chile to follow up expressed interest in breastfeeding and LAM. Recruitment will continue, and, based on the rate of recruitment, the project may be further extended.

(2) Honduras: LAM in a Mother-to-Mother Setting

The Institute is working with La Leche League International in Honduras. Here the focus is LAM in a Mother-to-Mother Child Survival Support Project. This operations research project encompassed: (1) the training of physicians, nurses, and breastfeeding advocates (BAs) who serve the Las Palmas area of San Pedro Sula in breastfeeding and LAM; (2) the identification of study and control areas (three) and the initiation of six mother support groups in the study areas; and (3) the assessment of the referral of mothers in the community to family planning services as a direct consequence of LAM training. Research documented the effectiveness of breastfeeding advocates in the promotion of breastfeeding practices, communication of LAM, and family planning referral above and beyond the impact of the breastfeeding supportive health services. Technical assistance related to the implementation of the project was provided through a subagreement with INOPAL, which is also assisting with data analysis and development of the final project report.

The project was carried out with the participation of various institutions, including the Ministry of Health, Social Security, the Municipality of San Pedro Sula, and the neighborhood organizations known as the patronatos. This approach was used to integrate the project's findings and program changes into the existing maternal child health system. This condition was required by the MOH so that the project would not be an isolated endeavor. A number of training activities were conducted during the project, including a five-day regional medical conference on Advances in Infant Nutrition and Child Spacing.

The first phase of the Honduran study of LAM in a mother-to-mother setting was completed in 1991. The continuation project was signed in November of that year. The five specific objectives of the continuation project were the following:

- Execute a follow-up survey to evaluate the impact of a full year of the community intervention;
- Organize four skill training workshops for both La Leche League staff and breastfeeding advocates (BAs);
- Develop educational materials related to exclusive breastfeeding and LAM;
- Plan and execute a national-level medical conference on family planning during lactation for key MOH and Social Security personnel;
- Conduct an end-of-project dissemination meeting for cooperating institutions.

An IRH consultant made a trip to Honduras in March 1992 to monitor activities under the extension project. In June 1992, IRH staff from Washington and a representative of CEMOPLAF/Ecuador presented LAM and the Ecuador project at a conference on Family Planning During Breastfeeding which was held in Tegucigalpa.

During the second phase of the project, the follow-up survey was completed to assess the impact of the intervention on breastfeeding and on the timely acceptance of family planning by breastfeeding women and will provide written steps for other programs wishing to use this approach. The data from the survey is currently being analyzed and the final report is being written.

Upon preliminary analysis it became apparent that the researchers had contaminated the control area by establishing mother-to-mother support groups in that area as well. This variance from the protocol has obfuscated any potential to assess the impact of this intervention.

All other activities were completed as scheduled, with the exception of the development of educational materials. The researcher has not as yet completed her analysis; therefore a no-cost extension has been granted. A low-literacy, community-level training manual and other materials on breastfeeding are being developed with a section on LAM and family planning during breastfeeding, in coordination with the Academy for Educational Development.

Planned Activities: The final report of the data analysis and the educational materials will be completed during the next reporting period. Canahuati, Lundgren, and Rivera will submit a plan for completion of the data analysis and an outline of the final report before the document is finalized.

(3) Ecuador: LAM in a Family Planning Setting

In Ecuador, the Centro Médico de Orientación y Planificación Familiar (CEMOPLAF) in Quito is testing the LAM guidelines in a family planning service delivery system. The project

was designed to facilitate the successful integration of LAM into an existing multimethod family planning service delivery system.

The current phase of this study consists of the expansion of LAM services to all 20 CEMOPLAF clinics with operations research to assess the acceptability of LAM on operational methods to ensure the timely introduction of complementary family planning during breastfeeding. The project will provide written guidance for other free standing family planning programs wishing to introduce LAM.

A field visit was conducted in January 1992 to finalize the operations research protocols for the project and provide technical assistance to the training and educational materials development components of the project. During the visit it was decided that the introduction of LAM services would include LAM education in the clinics themselves as well as in the existing community outreach network attached to each clinic. The target populations for LAM education is pregnant women, walk-in clients, or previous barrier method users who are within the first five months postpartum and whose family planning intention is to space a subsequent pregnancy.

Follow-up on LAM acceptors generated descriptive data regarding method continuation, satisfaction, and use of complementary methods of family planning. An implementation study with a concurrent formative/process analysis of the program components was employed in addition to the statistical analysis of service and follow-up data collected.

A separate pilot study regarding the feasibility of the introduction of MOH-assisted well baby services (growth monitoring and immunizations) in conjunction with LAM will be conducted in the six clinics which have already introduced LAM. Assuming that operational and research problems can be resolved, these additional services will be phased into the remaining clinics.

After the field visit in January 1992, the project research staff submitted drafts of data collection instruments which were reviewed and approved after minor technical revisions. CEMOPLAF also submitted a preliminary analysis plan to IRH.

The direct service providers of LAM services are the multimethod family planning counselors in the clinics, and the community educators in the outreach strategy. In June 1992, these personnel completed an intensive training program, presented by CEMOPLAF staff with a background in LAM and breastfeeding, on LAM, related breastfeeding support services, and data collection procedures. Other clinic personnel have received on-site orientation to LAM in order to have an understanding of the method, the research goals, and their role in the program.

The Ministry of Health agreed to train CEMOPLAF's nursing assistants in immunization procedures for the well-baby services pilot study. Physicians from the pilot clinics have been trained in growth monitoring and other well-baby services by a Wellstart-trained pediatrician sensitive to the issues of interpreting growth curves of the breastfed baby. In exchange for these

training services, CEMOPLAF has agreed to train the pediatrician's clinic staff in LAM. A similar collaboration which will introduce LAM into the Ministry's programs is also in process.

The materials being developed under this project include: a large poster for teaching clients about LAM and the optimal breastfeeding practices; educational material for low and nonliterate populations; and material geared to the LAM and breastfeeding information needs of the pregnant client. CEMOPLAF has brought an artist to the site of focus groups for the nonliterate population so that the artist and the women together could develop images which effectively communicate the three LAM criteria.

Further development and field testing of the new materials was delayed until the second phase of the LAM implementation because of heavy demands on project staff time in the development and implementation of the first phase trainings. The first phase LAM introduction used the materials developed during the pilot project. Additionally, a baseline survey instrument was developed to assess existing knowledge about LAM and optimal breastfeeding practices among the client population, in order to later assess the impact of the new materials on client knowledge. Lucia Kramer, in-country representative of Population Communication Services, is involved in the IEC components of this project.

The training curriculum for the family planning/LAM counselors is being revised, as well as drafts of supporting training materials, based on deficiencies discovered during the pre/post test and assessment of subsequent priorities. Although not a required "product" of this subagreement, with some encouragement and assistance to the CEMOPLAF staff, this curriculum could be formalized and distributed as a "model" of LAM training for the family planning worker.

During the reporting period, the project agreement was modified to include unexpended monies from Year 1 into the present budget. The training of CEMOPLAF clinic staff in LAM and the introduction of LAM to those clinics which would be involved in the project was completed in ten of the twenty clinics. IRH staff visited the program in September 1992 and reviewed the first drafts of the educational materials and the data collection methods. Suggestions by the IRH staff on the educational materials, data collection, and the LAM project in general were discussed on site with the senior CEMOPLAF staff. The CEMOPLAF staff responded satisfactorily to all the suggestions in a written report indicating what actions had been taken.

Planned Activities: The training of the remaining ten clinics' staff is programmed for the first week in March 1993. Upon completion of that training, LAM will be introduced into those additional clinics. The field testing of the new educational materials was begun during the reporting period and will be completed in January as planned. A field visit is planned in March to participate in and monitor the LAM training and to monitor the LAM implementation supervision.

(4) Georgetown University Clinical Trial of LAM

It is important that family planning methods offered in LDCs also be tested formally in the United States. In addition, the use of LAM at Georgetown will enhance IRH's ability to serve as a technical resource in this area. Accordingly, a clinical trial of the introduction of LAM among Georgetown patients has been planned. In discussion with other investigators at the SAC Meeting, a decision was made to include other sites in addition to Georgetown. Probable sites include the United Kingdom, Germany, Turkey, and Nigeria.

Planned Activities: A protocol for the study has been developed and will be refined and submitted to Georgetown's Institutional Review Board. Institutional arrangements have been initiated with other possible study sites and a meeting of the directors of centers is planned.

(5) Projects in Preparation

New projects related to goals and strategies for completing work from the previous Cooperative Agreement as well as furthering the goals and strategies of the current Cooperative Agreement will be pursued for the remainder of the project. Institute staff continue to explore and develop opportunities for field projects in Africa, Asia, and Latin America. The following project development took place during this reporting period.

- Haiti: At the request of USAID/Port-au-Prince, IRH staff traveled to Port-au-Prince to follow up on the August 1991 IRH needs assessment. Specifically, the Mission requested that the following activities be accomplished: (1) modify the proposed 1991 plan according to restrictions under the current political situation; (2) develop strategies to enhance existing NFP programs and to reinforce the use of breastfeeding for its fertility impact, beginning to offer LAM as an introductory family planning method; (3) identify and develop opportunities for technical assistance to expand activities such as training, IEC materials design and development, and others, for breastfeeding, LAM, and NFP; (4) identify, at the department level, potential institutions to carry out the program; and (5) prepare a final plan and budget for the expansion of breastfeeding, LAM, and NFP activities under the USAID Private Sector Family Planning Project during the next two years (1993-1994).

All of the above activities were accomplished during the visit and a trip report was written and submitted. Further discussion took place with USAID/Port-au-Prince to refine the budget in preparation for a Mission buy-in to IRH.

- Jordan: IRH staff traveled to Amman, Jordan, to work with Save the Children on developing a project. During the visit, two lectures were provided to health personnel who would be involved in the future breastfeeding and child spacing initiative. In addition, technical assistance was requested by the MOH Permanent

Secretary. A draft project proposal was developed and discussed with USAID/Amman. Further revisions in the timeframe, project scale, and budget were discussed with Save the Children and USAID/Amman. USAID/Amman is currently deciding on the funding mechanism and extent of additional IRH technical assistance to be supported.

- Mexico: After an IRH consultancy at a three-day workshop in Mexico on Educational Materials for the Mexican Baby Friendly Hospital Initiative which took place during the last reporting period, Division staff were asked to develop two educational modules: "Breastfeeding and Fertility" and "Breastfeeding Working Women." These modules were completed during this reporting period and have been revised in Mexico to be incorporated, after final review by IRH staff, into the training curriculum for health care professionals at Baby Friendly Hospitals throughout the country.

Planned Activities: During the next reporting period, project development visits are planned to several sites in Africa (Morocco, Egypt, Rwanda), to Jordan, and possibly to India and Bolivia. Further activities in Mexico are under discussion. The buy-in from Haiti is expected in the spring of 1993, after submission of a reformatted report with the refined budget. The project with Jordan will be revised as needed and a buy-in from the Mission is expected in early 1993.

(6) Research Symposia/Conferences

Several projects have been completed and others are nearing completion. It is appropriate at this juncture to bring together IRH and others experienced in LAM to assess the state of the art and to receive input for future planning. The modest acceptance of LAM by the international family planning community must be addressed. Therefore, during this reporting period an increased effort has been made to have these subjects included in professional meetings.

Planned Activities: A meeting is planned which will serve as a Division ad hoc TAG for Strategic Action Plan review and review of the current workplan. Strategic Action Plans are being developed in the following areas in preparation for this meeting: research, policy and professional development; country technical assistance and programs, and in support areas of IEC, training, and evaluation. In addition, a major symposium/working session may be coordinated with the planned meetings of WHO and FHI on the Multicenter Lactational Amenorrhea Study and Post Bellagio Results, respectively.

b. LAM: Education for Health Professionals and Policy Makers

(1) Guidelines for Breastfeeding in Family Planning and Child Survival Programs

The primary purpose of the Guidelines is to assist family planning and child survival program planners in formulating and implementing a breastfeeding component including a fertility emphasis within their programs. Recommended breastfeeding behaviors for optimal child survival and child spacing are outlined, and guidelines for the use of LAM for child spacing and the introduction of complementary family planning methods during breastfeeding are provided. An outline of considerations for program change is also presented, with the intention that it be adapted or modified, depending on the specific needs, interests, and resources of individual programs and local settings.

Approximately 4,000 English, 3,000 French, and 6,000 Spanish copies of this publication have been distributed worldwide since the document's first printing. In addition, the Guidelines have been translated into Bahasa Indonesia and Portuguese. The Guidelines were distributed at several major conferences during this reporting period: APHA, the LLLI Regional Conference in Guatemala, the LLLI Physicians Seminar, the IFFLP Panafrican Seminar in Yaoundé, Cameroon, the International Congress of Pediatrics in Rio de Janeiro, the IPPF 40th Anniversary Meeting in New Delhi, the SAC Meeting in Barcelona, the Population Council Meeting on Postpartum Family Planning Strategies, and the Vatican Meeting on Family Planning.

JHPIEGO continues to provide the guidelines as one of the documents in their standard information packet and has continued to receive multiple copies of the document for this use. The Institute Resource Center responds regularly to requests for the document.

Planned Activities: Dissemination of the 1992 revised version of the Guidelines will continue until the update and revision of the publication is completed.

(a) Update of the Guidelines for Breastfeeding in Family Planning and Child Survival Programs

IRH is updating the Guidelines to reflect the state of the art in LAM information and to address a wider audience. During this reporting period, a consultant began to work on this update. The update includes definitions and up-to-date research findings, and incorporates guidelines for working women who wish to breastfeed. The new guidelines will be published in three versions aimed at different audiences: policy maker/decision maker; health care worker/provider; and mother (breastfeeding woman)/LAM user.

The update is proceeding and two drafts of the health worker version have been reviewed in-house.

Planned Activities: During the next reporting period, the Breastfeeding Division will continue to work with the consultant to refine the health worker version of the document and to proceed with the other two versions of the document. It is hoped that pretesting, review, and publication of all versions will occur during the next reporting period, with subsequent translation and publication of all versions in Spanish and French.

(b) Working Women Guidelines: Assisting Working Women Toward Optimal Breastfeeding

This monograph addresses the special needs of women who, due to work or other obligations, are frequently separated from their infants, yet desire to breastfeed in a manner which is optimal for the health of their infants and which contributes to lactational infertility. It was originally conceptualized as the companion piece to Guidelines for Breastfeeding in Family Planning and Child Survival Programs and was developed, with input from LARFPC, for health care program planners and health professionals/workers to aid in

- Increasing awareness of the options available to breastfeeding working women, thereby encouraging the development of programs that address the lactation information and support needs of working women who wish to breastfeed, and
- Providing guidance for the health professional or breastfeeding counselor to assist the individual woman to identify and incorporate strategies to lengthen the duration of optimal breastfeeding for child health and child spacing in accordance with the realities of the woman's life circumstances.

The document was revised at Georgetown to reflect the concerns of reviewers, and is being published in its present form as an "Institute Occasional Paper." Key sections of the Working Women Guidelines are being incorporated into the new three-audience versions of the Guidelines for Breastfeeding in Family Planning and Child Survival Programs (see III.B.1.b.1.).

Planned Activities: During this reporting period, the Resource Center was unable to complete the formatting of this document as an Occasional Paper; therefore, this work is expected to be completed early in 1993.

(2) Other Publications/Papers

Institute staff continue to disseminate information on LAM through presentations (see listing at Appendix 3) and publications (see listing at Appendix 2). In addition to final reports on projects, Breastfeeding Division staff attempt, in-house, and encourage contractors to produce additional articles for publication. As noted above, several articles on the results from the Chile and Honduras projects will be published in various journals and additional papers on more general topics have been requested by American Family Physician, the Journal of Human Lactation, the Journal of Contemporary OB/GYN, and Breastfeeding Abstracts. Abstracts on

LAM and the fertility aspects of breastfeeding were accepted and presented at NCIH, ISRHML, and APHA meetings. A total of five abstract submissions were made this period. Other papers are being prepared as Institute Occasional Papers.

Planned Activities: Breastfeeding Division staff plan to continue to submit four to ten papers, abstracts, and chapters for publication over each reporting period.

(3) Support to Professional Organizations

IRH supports acceptance of LAM through participation in medical and professional society meetings and other high-level fora, and by provision of requested assistance to professional organizations and through presentation at professional meetings.

During this reporting period, IRH staff provided presentations to a number of groups on LAM, including the LLLI Physicians Conference, NCIH, SNE, ISRHML, APHA, and others (see listing at Appendix 3). Presentations at the IPPF 40th Anniversary International Meeting in Delhi and at the SAC International Meeting in Barcelona were well received.

Planned Activities: In addition to continuing this series of activities, including an invited presentation at the Preventive Medicine Meeting in April 1993, the IRH subagreement with ACNM includes support for these activities (see section on LAM in Nurse-Midwifery, below). Presentations will be made at WIC and LLLI regional conferences and several APHA and NCIH abstracts have been submitted. In addition, IRH plans to work with the ACOG public health task force.

(a) Guatemala: LAM in LLLI

In Guatemala, the Institute has been working with La Leche League International (LLLI), on a "Breastfeeding and Natural Child Spacing Project." The original twelve-month training intervention focused on introducing the fertility aspects of breastfeeding into that country's already significant breastfeeding activity. The overall project encompasses three distinct levels of non-hospital based 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 between breastfeeding and natural child spacing. Through coordination with the National Breastfeeding Commission in all of its activities, this project is creating both policy and behavioral changes.

During the first phase, LLLI staff planned and implemented a two-day national conference on breastfeeding and child spacing (co-sponsored by INCAP and the Guatemalan National Commission for the Promotion of Breastfeeding); organized several training workshops (with health related PVOs--AGROSALUD, CARE, and PAMI); evaluated and documented the training strategies developed for both the national conference and training workshops; and

developed and field tested context specific, culturally appropriate training materials for counseling mothers in the relationship between breastfeeding and natural child spacing.

In May 1991, the project held a conference entitled *Los Ultimos Descubrimientos en Relación a la Excepcionalidad de la Lactancia Materna: Implicaciones y Aplicaciones*. This conference, co-sponsored by INCAP, the Guatemalan National Commission for the Promotion of Breastfeeding, and IRH, included a one-day invitational conference for medical professionals and program planners; a half-day symposium open to the general medical community; and a curriculum development workshop for representatives of the local universities.

The 18-month extension project, which was signed in November 1991, builds on the accomplishments of the original project and stimulated the expansion of activities regionally. The specific objectives of Phase II of the project are as follows:

- Maintain a designated liaison person to ensure inclusion of LAM in each of six breastfeeding workshops planned for NGOs and government health institutions under the currently funded Child Survival Extension Project as well as to help develop conference proceedings and training workshops;
- Develop and disseminate a book of relevant articles based on conference proceedings of the National Conference on Breastfeeding and Natural Child Spacing, which was held in May 1991;
- Plan and execute a LAM component in Regional La Leche League training workshops;
- Develop subsequent project extension proposals for short-term technical assistance on LAM to five to seven countries who participated in the November 1992 training workshop.

During this reporting period, the IRH consultant to this project continued to coordinate the development of the proceedings of the May 1991 conference and monitored the preparation for the November 1992 regional conference. The scope and size of the conference were expanded through a subagreement between La Leche League, Guatemala, and Wellstart, and was divided into two meetings: a two-day La Leche League Regional Meeting and a three-day Regional Mother Support Conference. IRH was represented by two people at both meetings and played a highly visible role throughout the week, providing technical support for a breastfeeding and child spacing workshop during the La Leche League meeting and coordinating both a plenary and a breakout session on LAM during the three-day conference.

Planned Activities: The May 1991 conference proceedings will be finalized and an extension proposal will be developed to be submitted to IRH in February or March 1993.

(b) LAM in Nurse-Midwifery

The American College of Nurse-Midwives (ACNM) Special Projects Section currently receives funding for strengthening nurse-midwifery training and family planning programming worldwide. This group specializes in curriculum and training development and has developed training modules on several topics relevant to postpartum care. During this reporting period, a 42-month subagreement with ACNM was signed to develop a LAM-based curriculum and to incorporate LAM into all current nurse-midwifery programming within ACNM's purview.

Planned Activities: During the next reporting period ACNM will confirm Mission clearances and begin the production of LAM modules, the development of LAM self-study materials, and the integration of LAM into family planning materials in Ghana and Uganda. IRH will be providing a LAM presentation to ACNM staff in January 1993 and ACNM staff will present a paper on LAM at their annual professional meeting. IRH also may request that ACNM submit to APHA an abstract to present this collaborative project at the annual conference.

(c) Modules on Breastfeeding and LAM for Mid-level Health Professionals in Developing Countries

The Institute for Development Training (IDT) is currently revising their series of training modules designed to train international health workers in women's health. During this reporting period, a workplan for a subagreement between IRH and IDT was negotiated to incorporate LAM into the IDT training modules.

Planned Activities: IRH plans to initiate a six-month agreement with IDT to develop a self-instructional training module on breastfeeding and LAM for mid-level health professionals in developing countries. The modules will be published as part of IDT's *Revised Training Course in Women's Health*.

(4) Audiovisuals

User-friendly slide sets and videotapes on LAM in at least three languages will assist the Division in improving dissemination of LAM and enable more personnel to adequately present this issue.

One hour-long slide set with a script exists in English and Spanish, focusing on LAM. The script for this set has been translated into French, but the slides are not yet available. Discussion has begun about a LAM videotape, and it was expected that conceptualization and production would begin during this reporting period. However, time constraints for personnel have necessitated the delay of this activity until the next reporting period, when IRH hopefully will be able to hire a Breastfeeding IEC Associate who will make this project a priority. In

addition, it is hoped that the person filling this position will be able to devote time to developing the slide sets, which have also been delayed because no IRH staff member has been able to devote time to developing these audiovisuals.

Planned Activities: During the next reporting period, Division staff will seek approval of a Breastfeeding IEC Associate position to begin to develop and implement a comprehensive strategic action plan that encompasses the Breastfeeding Division's audiovisuals. The proposed LAM videotape will be a priority, as well as the development and refinement of English, French, and Spanish slide sets for standard 30-minute and 15-minute presentations. The long slide set will be refined and formalized for use by Division staff as well as for second-level use by other Cooperating Agencies. In addition, Division staff plan to develop a "simplified LAM" slide set.

c. LAM: Technical Assistance

(1) Technical Assistance to Cooperating Agencies

The Breastfeeding Division has designed an organized program of technical assistance that includes presentations and workshops with selected Cooperating Agencies and a needs assessment and materials for a broader group. This approach was pretested in 1990 with a presentation at JSI for Enterprise, MotherCare, and other staff. It resulted in a second-level presentation by personnel in these projects.

The IRH relationship with CAs was formalized in a June 26, 1992, letter to CAs from Duff Gillespie, noting the recent research/activities in LAM, the contributions to the field of IRH and FHI, and the importance of IRH review of all materials developed by CAs and Missions relating to breastfeeding, family planning, and LAM.

The first technical presentation in the newly organized series was given during the last reporting period (December 1991) at CEDPA (described below).

During the reporting period, IRH Breastfeeding Division staff provided presentations to CARE and PCS. These activities are described below.

Institute staff continue to be actively involved in working groups with other Cooperating Agencies, including the Working Group on Perinatal Family Planning Education and Counseling Training, the Working Group on the Family Planning Training Materials Database, and the Working Group on Medical Barriers to Family Planning.

In addition, Institute staff continue to review Cooperating Agencies' breastfeeding materials and regularly review articles for peer reviewed journals.

(a) CEDPA

On December 12, 1991, all Breastfeeding Division staff met with CEDPA staff to provide a three-hour presentation on IRH, the Breastfeeding Division, and LAM. The last hour of the presentation was spent discussing CEDPA's programmatic and research needs and interests.

Following this technical presentation, individual Division staff met with interested CEDPA staff to refine project ideas. CEDPA staff also contacted Institute staff with requests for additional publications and with questions about specific materials development (such as research protocols and slide sets). This collaboration continued through the present reporting period, with CEDPA inviting IRH to attend the BIG Strategy Meeting on India as one of the possible sites in which we may work together. CEDPA staff have informed IRH that this project is not currently one of their priorities and will be put on hold for the present.

Planned Activities: During the next reporting period, IRH staff will continue to correspond with CEDPA to discuss specific project ideas and to begin to plan/implement one or two small technical assistance projects.

Project development discussions have been conducted with CEDPA's evaluation director with the aim of developing a LAM introduction project with operations research in one of CEDPA's projects in India. IRH would participate through materials development and technical assistance for programming and operations research.

(b) CARE

In July 1992, three Breastfeeding Division staff members met with CARE Population Unit staff in New York at CARE Headquarters. IRH provided a two-hour presentation followed by an hour of discussion with CARE staff about potential areas of collaboration. Heads of other divisions at CARE attended as well. Following the presentation, CARE requested that IRH provide packets on breastfeeding and LAM to distribute to sixty of their field staff worldwide. A letter was sent to each field staff member to introduce LAM and ask if the field representatives could see any potential projects with IRH in their particular sites. The project in Peru had already written LAM into their proposal. After the packets and letters were sent, IRH staff kept in touch by telephone to determine if any responses had been received from the field.

Planned Activities: CARE is expecting to receive responses from their field staff during the next reporting period. Depending on the level of interest, IRH may begin to develop some collaborative work with CARE. A follow-up meeting will be planned during the next reporting period as well.

(c) PCS

In September 1992, five Breastfeeding Division staff members made a presentation to approximately 20 staff members at PCS. After the presentation, IRH staff discussed with the Nigeria project staff the possibility of incorporating LAM into their materials. IRH staff also visited the PCS Library for ideas about how the IRH Resource Center might reorganize its collection. After this meeting, IRH staff began to discuss potential collaboration in Bolivia with Liza Nickerson of PCS. In addition, PCS and IRH have been working collaboratively on materials development in Ecuador with CEMOPLAF.

Planned Activities: During the next reporting period, the IRH Resource Center Coordinator plans to return to PCS to further explore their library and to discuss with the PCS library staff the incorporation of all IRH materials into their collection. In addition, IRH staff expect to begin working on materials development with PCS in Bolivia. An IRH visit to Bolivia to assist with this project is planned for February 1993. In addition, IRH staff will contact the Nigeria project staff to determine when activities will begin.

(d) Other Cooperating Agencies

Institute staff are also providing technical assistance to other CAs, as needed and requested. During this reporting period, Institute staff responded with materials, information, and some presentations, to verbal, written, and telephone requests from Wellstart, the Population Council, Family Health International, the Academy for Educational Development's Nutrition Communication Project, the APHA Clearinghouse, ISTI Health Nutrition Sustainability Project, and others.

Planned Activities: During the next reporting period, the Division has scheduled visits to the American College of Nurse-Midwives, the JSI/SEATS Project, and Development Associates. Other CAs will be contacted as well.

(2) Technical Assistance to Missions

IRH Breastfeeding Division staff provide a variety of technical assistance to Missions upon request, to identify needs, existing LDC resources/materials, and worthwhile activities, under all three Division program areas. After initial interest from various Missions during the last reporting period to A.I.D./Washington's cable informing Missions about the capabilities of the Institute, especially under its new and expanded mandate, no requests for further assistance were received after initial contacts were made. Technical assistance requests were received from Haiti, Jordan, and Peru. The activities conducted in Haiti and Jordan are described under the section on Projects in Preparation, above. Project staff visited Jordan and Haiti and have been active in developing the overall workplan for Peru.

Planned Activities: Planned technical assistance during the next reporting period, in addition to project monitoring visits, includes Bolivia (with PCS), Haiti, Jordan, Peru (depending on the political climate), and Rwanda (with SNAF). Project point persons for each of these countries will coordinate visits and project plans with the Senior Associate for Breastfeeding Field Projects. In addition, IRH will correspond further with Indonesia and other Missions on the technical assistance the Institute is able to provide.

(3) Technical Assistance to International Donors

IRH Breastfeeding Division staff continue to provide LAM-related technical assistance to international donors. Specifically, Breastfeeding Division staff continue to participate in WHO, UNICEF, UNFPA, World Bank, and other meetings related to MCH issues so that IRH may include LAM and breastfeeding for its fertility impact on the agendas.

Several meetings and projects of WHO included IRH technical assistance. One meeting on nomenclature included fertility considerations. Unfortunately, the WHO brief on breastfeeding and fertility fails to mention LAM per se, although the publication includes the IRH algorithm without citation. Presentations by the UNFPA have been increasingly positive towards the role of breastfeeding in pregnancy delay. IPPF literature is supportive of the three parameters of LAM although their policy continues to negate its usefulness. IRH staff were able to present LAM at the IPPF 40th Anniversary Meeting in Delhi. Breastfeeding Division staff met with both of these organizations during the reporting period. In addition, IRH staff presented LAM and Natural Family Planning at the SAC Meeting in Barcelona. The World Bank included LAM in its recent publication on available family planning methods. In spite of Breastfeeding Division staff work with World Bank staff to ensure that positive messages about LAM were conveyed, the final document includes technically incorrect statements on LAM. This was brought to the attention of the A.I.D./POP/Research Division before publication.

Planned Activities: IRH staff plan to continue their efforts, specifically with UNFPA, IPPF, and the World Bank to enhance acceptance of LAM. A brief White Paper will be prepared and circulated. Also, a plan for improved dialogue will be proposed.

(4) Technical Assistance to Other Programs

(a) Recife, Brazil

Under the INOPAL/CEMICAMP/IMIP operations research project, "Evaluation of a New Counseling Strategy in the Use of Lactational Amenorrhea Method to Prolong the Natural Postpartum Infertility," LARFPC provided assistance and support in the areas of training and educational materials development.

With technical support provided by LARFPC, a training module on breastfeeding and LAM was developed and incorporated into the CEMICAMP curriculum to train health professionals in family planning. Two trainings were conducted at IMIP, in Recife, Brazil, during October 1991. One training was directed toward physicians and nurses and the other was directed toward auxiliary and clerk personnel working at IMIP. The trainings were successful, participants' knowledge on LAM and counseling techniques was expanded, and an effective network was developed. The following breastfeeding and LAM educational materials were developed, field tested, reviewed, and printed:

- a promotional flyer on breastfeeding and LAM to be handed to all patients during the family planning orientation
- a simple LAM guide the size of a vaccination card, to be handed to breastfeeding women using LAM
- three additional pages on optimal breastfeeding techniques and LAM to add to the flipchart on contraception used at IMIP

These materials have been utilized during client educational sessions and distributed to patients at IMIP as part of the project.

During this reporting period, IRH staff visited the CEMICAMP staff who are carrying out the Institute-supported project to set up the framework for a follow-on project with CEMICAMP and the Institute-supported activities with IMIP in Recife, and to establish the monitoring procedures for the completion of current activities. Following the visit, a modification to the subagreement was prepared to accurately reflect the dates of the project.

INOPAL has presented findings from this project which include that LAM is not acceptable to professionals and women alike. IRH is contacting INOPAL requesting that the conclusion be reconsidered to appropriately reflect that the training in support of LAM was not successful, since, indeed, there are LAM acceptors.

Planned Activities: CEMICAMP has fulfilled their activities under the original letter of agreement. Future collaboration will be subject to an extension of the letter of agreement. CEMICAMP has not yet signed the modification that adjusts the dates of the project, but is expected to do so early in the next reporting period. INOPAL will be contacted concerning the interpretation and dissemination of findings.

2. **BF and Fertility: Optimal Breastfeeding for its Fertility Impact**

Activities are designed to create support for optimal breastfeeding for its fertility impact on populations. This support includes research, policy development, education, and technical assistance designed to address issues that may clarify the knowledge in this area and lead to increased acceptance of optimal breastfeeding in general, and optimal breastfeeding for its fertility impact specifically.

a. **BF and Fertility: Research and Pilots**

(1) **University of California at Davis: Effect of Introducing Complementary Foods on Breastmilk Intake and Maternal Fertility in Honduras**

This project is designed to provide key information regarding the optimal timing for introducing complementary feeding to breastfed infants. The World Health Organization currently recommends that complementary foods be given to infants between four and six months of age, but this message is criticized as being too vague, and some have argued that in developing country populations the risks of beginning foods before six months outweigh the potential benefits. A key unknown in this debate is whether complementary foods before six months actually augment total energy intake or merely displace breastmilk. The specific aims of this project are to (1) examine the effects on infant breastmilk and total nutrient intake of introducing complementary foods at 16 weeks versus continued exclusive breastfeeding until 26 weeks; and (2) determine if the duration of maternal postpartum amenorrhea is affected by the timing of the introduction of solid foods.

The Institute funded a pilot study for this project in 1991 and is now providing partial support for a study involving approximately 150 breastfeeding mothers in Honduras. The modified subagreement for Phase II funding was initiated on January 1, 1992.

Co-funders of the project are the Thrasher Research Fund, the WHO Diarrheal Disease Control Programme, and UNICEF/Honduras. Participating mothers are recruited from women exclusively breastfeeding their infants at four months of age and are randomly assigned to one of three study groups: (1) control, i.e., continue exclusive breastfeeding until 26 weeks; (2) introduction of complementary foods at 16 weeks, with ad libitum nursing; and (3) introduction of complementary foods at 16 weeks with encouragement to maintain nursing frequency. To minimize family disruption caused by the milk intake measurements, only primiparous mothers who are not employed outside the home are recruited. Pre-prepared complementary foods consisting of locally familiar fruits, vegetables, and rice and oat cereals with and without egg yolk are provided in jars to groups 2 and 3 to decrease confounding that is caused with contaminated complementary foods.

Prior to intervention, all subjects are visited in their homes at 1, 2, 6, 10, and 14 weeks postpartum to provide guidance in maintaining exclusive breastfeeding and to collect anthropometric and morbidity data. Infant intake and breastmilk composition are measured by 48-hour test weighing and 24-hour milk sampling in a central facility at weeks 15-16 (prior to beginning complementary foods in groups 2 and 3), weeks 20-21, and weeks 25-26. During this period (16 to 26 weeks) home visits are made weekly to collect anthropometric and morbidity data and check on compliance. At 19 and 24 weeks, 12-hour home observations including feeding patterns are conducted and at 25-26 weeks, infant blood samples are collected for assessment of iron and zinc status. After 26 weeks, subjects are visited monthly to monitor infant growth (to 12 months) and determine the duration of maternal amenorrhea. Analysis of co-variance will be used to compare outcomes among groups.

Two rounds of recruitment and data collection have been completed with 47 subjects. Results for these rounds supported the original hypotheses. Thus far, return of menses has been higher in subjects assigned to introduce solid foods at four months. Nursing frequency and duration have been somewhat reduced and breastmilk intake diminished. Neither infant energy intake nor weight gain were significantly different in the three groups. Attrition from early postpartum registration to four months postpartum has been greater than anticipated and modification is planned to support continuation of field work until August 1993 in order to obtain a sufficient sample size.

The results of this study will provide guidance to policy makers concerned with infant health in developing countries. If the study shows that breastmilk is displaced when solid foods are given, and there is no net increase in energy intake, this will provide strong evidence for modifications to the WHO recommendation for complementary feeding, particularly if maternal fertility is also affected.

Planned Activities: Field work will be completed during the next reporting period, with concurrent data entry.

(2) Other Symposium Preparation

(a) Neuroendocrine/ICMER

A symposium on the Neuroendocrine Basis of Lactational Infertility was held by ICIMER with co-sponsorship from WHO, FHI, IRH, and other organizations and individuals. The meeting, held on November 24-26, 1991, was attended by most of the major actors in this area of research. Discussion was both broad ranging and comprehensive on specific topics.

The conclusions of the meeting were that specific individuals, including Drs. Johannes Veldhuis, Soledad Diaz, and Alan McNeilly, would take responsibility to develop specific research agendas to answer questions that remain. In addition, a review article was prepared for publication to stimulate interest and response. During this reporting period ICIMER has carried out its obligation to present the findings at an international Endocrine meeting and has distributed the paper for review.

Planned Activities: ICIMER will submit the reviewed document for publication and follow up with those who accepted other responsibilities. ICIMER will be contacted to submit documentation of these activities.

(3) GU Clinical Studies

(a) Breastmilk Storage: Bacteriology and Stability of the Lipids and Proteins under Conditions of Non-refrigeration

This project was designed to assess breastmilk storage under "normal" conditions ("clean" containers of various composition and temperatures). The ability to express and store milk for later feeding when the mother is away from the infant can enable women who must return to work during the first six months postpartum to continue breastfeeding their infants. This study will assess the safety and nutritional value of human milk when stored under conditions which prevail in developing countries. The scope of work for Phase II of the project is a continuation of the first phase and consists of further assays of the constancy of fats, enzymes, and proteins in human milk samples stored for various time period up to 24 hours and at different temperatures. The subagreement for Phase II was completed by IRH staff in February 1992 and work began on July 1.

During this project period data were analyzed on bacterial growth and protein content and proteolysis of human milk during storage and the bacterial growth analyses revealed that human milk storage is safe for up to eight hours at 15 and 25 degrees C. The growth of microorganisms after 24 hours of storage at 15 degrees C. showed remarkably few organisms.

Studies of protein content and proteolysis showed that the protein content was slightly higher in early as compared to later lactation and proteins were highly stable during storage at 15 degrees and 25 degrees C. However, the proteolysis at 38 degrees C. was higher. Storage did not influence the amount of specific proteins.

Planned Activities: An article for peer review journal publication is expected during the next reporting period.

(b) Bone Density in Response to Breastfeeding and Weaning

Recent research findings reflect the possibility that the weaning period is a time of rapid redeposition of calcium in maternal bone. There is sound endocrinological explanation for this possibility. Since osteoporosis is a concern in maternal health, it is important to verify the impact of breastfeeding on bone density.

Georgetown University faculty have reviewed the results of published studies and have begun a protocol for a preliminary retrospective study which will permit pretesting of data collection instruments and will assess breastfeeding patterns among the Georgetown patient female population undergoing densitometry.

During the reporting period, the protocol was approved by the IRB and pretested.

Planned Activities: Work will begin concurrently on this protocol and on institutional arrangements for a complementary longitudinal research project. Telephone interviews with approximately 150 mothers will be completed and data entered. In addition, protocol data collection instruments and procedures will be developed for a longitudinal study of bone density and lactation. These will be submitted for IRB approval.

(c) Colostrum as an Anti-infective Agent

There is much interest in the role of colostrum as an anti-infective agent for use as a prophylactic and curative agent for the neonate among international and A.I.D. breastfeeding proponents. While colostrum is used in Third World settings for postpartum eye wash and treatment of stump infections, there is no laboratory or clinical basis for supporting these activities. A preliminary plan for in vitro research was designed in conjunction with Department faculty and a resident, Dr. Sanjeeta Pati. A proposal for IRB approval was drafted.

Planned Activities: The protocol will be redrafted based on further investigation of the question. Laboratory studies of effectiveness of colostrum against gonorrhea, chlamydia, and staphylococci are expected to begin.

(4) Data Analysis/Surveys

(a) DHS/IRD/Pittsburgh

Under the last project, DHS carried out a series of analyses in concert with the University of Pittsburgh. The final report was received and the contract with DHS was closed. A paper, co-authored by DHS and IRH staff, entitled *The Influence of Food Supplements on Duration of Lactational Amenorrhea*, was presented at the August meeting of the International Union of Nutritional Sciences and the International Society for Research on Human Milk and Lactation.

Planned Activities: Several of the final papers produced by DHS and Country Profiles remain to be reviewed and submitted for publication. During the next reporting period, two will be completed and submitted. In addition, a manuscript showing the importance of feeding pattern for maintenance of amenorrhea based on logistic regression analysis of DHS I data will be drafted.

(b) Field Pilots on Indicators/Surveillance

Indicators have been developed based on the definitional schema for describing breastfeeding patterns. These may be used to establish a surveillance approach to assess changes in breastfeeding patterns and the fertility impact. One possible site for this study is Thailand.

This task was not funded in this year's workplan. It will be necessary to coordinate this activity with WHO. In the interim, at least, two doctoral theses in the United States have utilized the schema as a basis for analysis of the literature.

Planned Activities: It is desirable that at least one field project be developed in the next 6-12 months that will address this area.

b. BF and Fertility: Education of Health Professionals and Policy Makers

(1) Textbooks

(a) Helping Mothers to Breastfeed

This text, which has been translated into seven languages and widely distributed, especially in Africa, has been revised and reprinted. Based on discussions held with IBFAN in August 1989, the Institute was approached by the author, Dr. Felicity Savage, to support this effort. Discussion included: (1) support for rewriting the section on breastfeeding and child spacing to include LAM; (2) including reference to this rewrite in the preface or foreword; (3) support for the initial printing; and (4) distribution of 200+ copies to key persons in Africa with a joint Institute-AMREF cover letter. Institute staff reviewed the final proofs of the book to ensure accuracy of the breastfeeding and fertility aspects of the text. This volume will also serve as a reference text for the IRH curriculum and will be widely distributed by WHO, TALC, ILCA, and other international organizations.

The first IRH subagreement with AMREF was completed in 1991, although copies of the book were not received until mid-1992. Under this first subagreement, the breastfeeding and child spacing section of the text was rewritten to include LAM and the textbook was printed. The amount of funding was insufficient to carry out distribution of the book in Africa. The second subagreement, which provided 2,000 copies of the text to IRH and allowed for 500 copies of the book to be distributed to key persons in Africa and in international organizations, was signed in June 1992. AMREF/Africa, the publisher, began to assist in the identification of these persons. The joint AMREF-IRH letter of transmittal was finalized for this distribution.

IRH received its shipment of 2,000 copies of the text and has reviewed one draft of the distribution list for Africa. Since AMREF was unable to complete its scope of work in the time allotted for the agreement, a no-cost extension was written at the end of the reporting period.

Planned Activities: During the next reporting period, the no-cost extension will be signed for AMREF to complete the distribution of the textbook under a joint AMREF-IRH letter, after the final mailing list has been agreed upon by both organizations.

(b) Lactancia Materna

This draft publication was developed in conjunction with a major breastfeeding support and research program in Chile and was disseminated at the Institute-sponsored conference on *Advances in Breastfeeding for Health and Child Spacing*, held in Chile in October 1990. (See I.A.1.).

The publication is undergoing review and expansion to include physiology of lactational amenorrhea and the complementary family planning methods. Co-funding of the proceedings has been provided by PAHO. This document will serve as a reference text for the Lactation Education curriculum outline and will be widely distributed, as it is designed to fill a gap in health professional level materials presently available in Spanish that have been developed in the region.

During this reporting period, the document was translated into English and review began.

Planned Activities: During the next reporting period, the English and Spanish translations will undergo extensive review by medical doctors. Final IRH and A.I.D. review and printing are planned thereafter, with a proposed printing date for the Spanish edition of April 1993.

(c) Text Review - World Health Organization (WHO)

The World Health Organization, in collaboration with the Infant Baby Food Action Network (IBFAN) evaluated the breastfeeding content of the most widely used pediatric and other textbooks dealing with infant nutrition. The review concerns texts in English, French, and Spanish.

IRH initiated a collaboration with WHO through a letter of agreement to the consultant to support this effort with the provision that obstetrics/gynecology textbooks be included and that fertility aspects be included in the review. The letter of agreement has been signed and preparatory communications have begun. Currently, both pediatric and obstetrics/gynecological textbooks are being examined in terms of their breastfeeding content generally and fertility aspects of breastfeeding in particular.

Draft correspondence has been developed to send to publishers and editors of these books. Based on a structured and detailed critique of the texts, outlines are being prepared as to the appropriate breastfeeding content of pediatric and obstetric texts.

Planned Activities: Follow-up to the original text review will include identification of obstetrics/gynecology texts, preparation of letters to editors, development of a prototype outline with references, and ongoing communication. This task will continue to be carried out under the letter of agreement with consultant Genevieve Courant, in coordination with WHO.

(2) Curricula

The Institute has developed curricula for training different levels of health and health-related personnel in breastfeeding support. All curricula have been developed in the context of an action program plan, designed to result in the immediate application of breastfeeding support activities. These curricular outlines include those for training-of-trainers (TOT), for educators of field health promoters, for program leadership, for hospital-based breastfeeding support (developed by a Wellstart graduate), and for training family planning care providers.

During this reporting period, the Resource Center gathered the existing curricula together so that they may be collated into a useful format.

Planned Activities: With the proposed addition of a Breastfeeding IEC Associate during the next reporting period, a plan of action will be developed based on perceived need and status of existing documents. Requests for reprinting *Lactation Education for Health Professionals* and translating it into French will be considered and additional funding will be sought, perhaps through the Wellstart Expanded Promotion of Breastfeeding Project.

(a) Lactation Education for Health Professionals - Case Studies

Lactation Education for Health Professionals, co-funded with PAHO, was developed in conjunction with a meeting of Latin American nursing educators. It includes a training module, teaching guidelines, and supporting articles which cover breastfeeding concepts--including fertility aspects--and educational concepts important to implementation of the curriculum. It is addressed to faculties of medicine, nursing, and other health professional schools. Prepared by Institute staff, it was published by the Pan American Health Organization, and distributed in English and Spanish by both organizations.

This is one of several IRH projects that has benefitted from the collaboration of the Institute with the Pan American Health Organization and from the contribution of nursing, medical, and other leaders from Central and South American universities and health services and others around the world.

Phase 1, the development of a core lactation curricular module for the teaching of breastfeeding, was completed and published in 1991. Phase 2 of this project consisted of testing the breastfeeding module. To achieve this goal, Institute staff provided technical assistance and support to health professionals during the testing process. Evaluation of the testing process included pre-post tests for students and mothers taught by students. The case studies from the sites where the curriculum was tested in university and hospital settings (Chile, Colombia, Costa Rica, Ecuador, Honduras, Mexico, and Peru) were never collated nor analyzed. During the last reporting period a letter of agreement was developed with Rosalia Rodriguez-Garcia to complete this work.

During this reporting period, Rodriguez-Garcia worked with Lois Schaefer to collate and analyze the case studies according to a standardized format for full presentation of the case studies. Standard points of analysis for comparison of the individual studies were established, and the studies were compared and analyzed, focusing on facilitating factors and barriers, identifying lessons learned, and making general recommendations. The first draft was received and reviewed by IRH staff, and Rodriguez-Garcia was asked to make several revisions. She was also provided with additional materials she needed to complete the revisions.

Planned Activities: Rodriguez-Garcia and Schaefer are expected to complete their scope of work during the next reporting period. The final document will be reviewed to assess possible roles of this document in IRH projects, and IRH will explore publication possibilities.

(b) *Lactation Education for Health Professionals - Annotated Curricular Outline*

The Breastfeeding Division plans to annotate the curricular outline from the book *Lactation Education for Health Professionals* through the subagreement with ACNM. Many of the groups with whom we collaborate have expressed a need for reference materials so that each of the elements of the outline may be taught on scientifically based, correct content and up-to-date information. The subagreement with ACNM has been signed.

Planned Activities: Work will begin on this task early in the next reporting period.

(3) Other Texts

Training needs in breastfeeding and LAM are increasing rapidly. We are currently developing curricula at program and organizational levels. In addition, the development of a current state-of-the-art LAM reference manual is being considered. The purpose of this book on the fertility aspects of breastfeeding and LAM is to build momentum for the expansion of the introduction of LAM into family planning and child survival programs, and will specifically address the needs of program planners and managers. Preliminary meetings have been held to discuss the logical format for the proposed book.

Planned Activities: Depending on strategic planning outcomes, a series of texts will be planned. Staff will continue to develop the LAM reference manual.

(a) *Breastfeeding: Protecting a Natural Resource*

This document is a glossy and informative presentation of breastfeeding and its benefits that was developed with IMPACT/PRB. The booklet is targeted to policy makers, health professionals, and breastfeeding advocates, and is available in English, French, and Spanish.

This booklet has been widely disseminated worldwide. Since it was published, approximately 15,000 English, 5,000 French, and 6,200 Spanish copies have been distributed to groups such as A.I.D and A.I.D. Cooperating Agencies, USAID Missions, Schools of Public Health, WHO, UNICEF, UNFPA, JHPIEGO, SIDA, AED, La Leche League International, Wellstart, PAHO, and many others.

During this reporting period, the booklet was distributed at several major conferences: APHA, the LLLI Regional Conference in Guatemala, the IFFLP Panafrican Seminar in Yaoundé, Cameroon, the International Congress of Pediatrics in Rio de Janeiro, the IPPF 40th Anniversary Meeting in Delhi, the SAC Meeting in Barcelona, the Population Council Meeting on Postpartum Family Planning Strategies, and the Vatican Meeting on Natural Fertility Regulation.

The booklet has also been translated into Nepali. The Resource Center responds to frequent requests for the booklet in all languages, and has obtained the original boards in preparation for a possible reprint of the document.

Planned Activities: Dissemination of this document will continue, generally in a project or policy related context to maximize its usefulness. Since the number of requests remains high and all French will be distributed shortly, consideration will be given to reprinting and/or updating the document in all languages.

(b) Breastfeeding Division Fact Sheet

This one-page, front-and-back document describes the Institute's focus on breastfeeding for child spacing and LAM, and the support that the Breastfeeding Division can provide to family planning and child survival programs in developing countries.

The original Fact Sheet was disseminated widely worldwide. The updated Fact Sheet has been available since October 1991 in English and is distributed regularly during project visits, project development visits, at technical assistance visits and presentations, and at major conferences. The French translation has been completed and is being reviewed.

Planned Activities: The French translation will be finalized in February 1993, and the Spanish translation will be completed shortly thereafter. IRH plans to update the document in 1993.

(c) Journal Of Tropical Pediatrics Supplement - *Breastfeeding and Borderline Malnutrition in Women*

IRH sponsored a panel entitled *Breastfeeding and Borderline Malnutrition in Women* at the 17th Annual National Council For International Health Meeting in Washington, DC, in June

1990. The focus of this panel was on lactation in situations of poor maternal nutritional status. Policy recommendations to improve the likelihood of successful lactation, from the point of view of the mother-infant dyad, were discussed.

The interest generated by this panel was overwhelming, reflecting the great need for information on the effects of breastfeeding not only on infant health and nutrition, but also on the mother herself. Therefore, IRH decided to publish the complete panel presentation where it would be widely available to a broad audience in the international health field. This volume of the *Journal of Tropical Pediatrics* provides valuable guidance for program personnel and researchers alike. To date, IRH has distributed approximately 250 copies of the document, and French and Spanish translations have been completed. IRH continues to distribute copies of the supplement as requests are received. The draft French translation was distributed at the IFFLP Panafrican Seminar in Yaoundé, Cameroon, in August; however, wider distribution was not possible until the translation had been reviewed.

Planned Activities: During the next reporting period, the English version of the document will remain available for distribution. The French translation review will be completed in February 1993. The review of the Spanish translation is also expected to be completed in early 1993.

(d) WHO Proceedings: *Breastfeeding in the 1990s: The Technical Basis for Global Action*

WHO supported IRH's preparation of these proceedings from the Technical Meeting leading to the Innocenti Declaration. The volume is designed to (1) inform and educate health decision makers concerning the technical issues in the protection, promotion, and support of breastfeeding; (2) update the state of the art for all concerned with breastfeeding; and (3) provide a proceedings of the Technical Meeting that was both a culmination of the five years of technical coordination of the Interagency Group for Action on Breastfeeding and a technical background for the Policy Makers Meeting in Innocenti, Italy, July 29-August 1, 1990. The technical papers in this volume, written by IRH and WHO personnel based on the presentations at the meeting, bring positive aspects of breastfeeding to the attention of decision makers. The papers present breastfeeding as an essential part of child survival and development including child nutrition, control of diarrheal diseases, birth spacing, and mother's health and well being.

During this reporting period, IRH and WHO staff reviewed galleys of the volume. In-house, A.I.D., and WHO publications board reviews were completed and publication is now planned for 1993.

Planned Activities: The document is expected to be published by WHO.

(e) *Breastfeeding Saves Lives: The Impact of Breastfeeding on Infant Survival*

This booklet and a companion article were prepared by the Center to Prevent Childhood Malnutrition (NURTURE) in conjunction with IRH as one of the Center's Policy Series Volumes. Unfortunately, the article was not accepted for publication on two submissions. The booklet was created to illustrate the profound effect of optimal breastfeeding practices on infant health and child survival throughout the world. Noteworthy in this document is a page that presents a comparison of breastfeeding to other child survival interventions. IRH received 100 copies of the booklet to distribute from NURTURE, which is now part of the new Wellstart project. During this reporting period, no major distribution took place due to errors in the booklet. A reprinting of the publication is being considered; however, several changes must be made to the original version.

Planned Activities: IRH will try to coordinate with the new Wellstart Expanded Promotion of Breastfeeding Project on revision and broad distribution of the booklet.

(4) Audiovisuals

(a) Videotape: *Breastfeeding: Protecting a Natural Resource*

This fifteen-minute, nine-projector slide show originally was produced with A.I.D. Population, Health, and Nutrition funds for the WHO/UNICEF meeting *Breastfeeding in the 1990s: A Global Initiative*, held July 30-August 1, 1990, in Florence, Italy, at the Innocenti Center. The slide show's primary intended audience was a group of approximately 150 ministers of health and other international policy makers as well as representatives of various donor and UN agencies. The show depicts breastfeeding as a vital natural resource and includes current knowledge and understanding of the importance of breastfeeding--not only for mothers and children, but for society as a whole. The show further emphasizes that policy makers and program planners have a primary role to play in determining the most appropriate actions to take to promote and support breastfeeding. Priorities for action are presented to the decision maker/viewer, emphasizing the importance of changing hospital and health care practices; improving information, education, and communication campaigns; supporting working women to breastfeed successfully; and building family, community, and political support for breastfeeding.

Following the meeting in Florence, the slide show was transferred to videotape for distribution to individual policy makers and various organizations working in international health. The Institute produced the videotape of the slide show in French and Spanish with additional support from AED, PAHO, and Wellstart/San Diego. In Indonesia, the video has been dubbed in Bahasa Indonesia. Distribution of the video to policy makers around the world is being accomplished through a variety of channels including A.I.D., WHO, UNICEF, PAHO, SIDA, and A.I.D. Cooperating Agencies such as AED and Wellstart/San Diego.

The video has received wide recognition and acclaim. Colleagues at both WHO and UNICEF stress how timely and popular the video is among their field staff, with emphasis on the fact that the production quality lends additional respect and credibility to the subject matter. The A.I.D. Health Sector Council recognized the video as the best A.I.D.-produced health video of 1990. In addition, the video recently was recognized and won an honorable mention in the National Association of Government Communicators Gold Screen Award Competition.

During this reporting period, UNICEF/Mexico received a master of the videotape, from which they made 300+ copies to distribute countrywide. The French version of the video was distributed at the IFFLP Panafrican Seminar in Yaoundé, Cameroon. At the 20th International Congress of Pediatrics in Rio de Janeiro, the videotape was screened in English and Spanish two times daily and on the day of the UNICEF-sponsored Breastfeeding Symposium. After that Congress, UNICEF/Brasilia requested the video for their use in all of their programs. In addition, PCS has requested that they be able to use a five- to seven-minute excerpt of the video in a video that they are producing for the Latin American region.

To date, approximately 750 English, 300 French, and 1,000 Spanish versions of the video have been distributed worldwide. The Institute continues to receive requests for the videotape on a daily basis.

Planned Activities: During the next reporting period, IRH plans to edit the video to reflect the new Institute name and logo, since this work was not accomplished during this reporting period. Replication and distribution will continue worldwide.

(b) Slide Set

Institute staff are frequently asked to give presentations not only on LAM but on the fertility aspects of breastfeeding and general breastfeeding benefits. To be responsive to these requests, as well as requests from A.I.D. Cooperating Agencies for slide sets they can use in their programs, IRH has given considerable attention to the development of several types of slide sets.

In addition to the existing one-hour slide set that focuses on LAM and the *Guidelines for Breastfeeding in Family Planning and Child Survival Programs*, and incorporating LAM into programs, IRH staff are conceptualizing two to three other sets. One set, which remains in draft form, is a lengthy (two- to three-hour) modular set which discusses the general benefits of breastfeeding, the physiology of lactation, complementary family planning methods, programmatic aspects of breastfeeding, and plans for action. The various modules can be added, subtracted, and modified to suit the needs of the various audiences.

In addition, IRH is discussing the development of a 30-minute slide presentation as well as a 15- to 20-minute set. During this reporting period, no staff members were able to devote time to this activity.

Planned Activities: As with the other slide sets under discussion, IRH hopes that the addition of a Breastfeeding IEC Associate during the next reporting period will result in increased productivity under this activity. We receive frequent requests for these types of slide sets, especially after our technical assistance presentations, and we plan to be able to be responsive to these requests in the future.

(5) Other Projects

(a) Cusco

A two-year program, the Mass Media Demonstration Project for Breastfeeding Promotion, has been completed. It focused on promoting breastfeeding for child spacing and child survival through a series of radio programs developed by Comunicación Andina. Twenty-five minute programs including breastfeeding messages and community health news were broadcast daily over a six-month period. The project enhanced the availability and quality of breastfeeding support services by establishing a small education center in the community, and by providing training and technical support in breastfeeding through training programs in other health service delivery groups. During the radio programs, women were referred and encouraged to use the Comunicación Andina breastfeeding education center. The center's staff referred women to the MOH service for family planning and other services.

Applied qualitative (focus group interviews) and quantitative (survey) research techniques were used to determine whether this intervention increased people's knowledge about breastfeeding and lead to the acceptance by the target population of optimal breastfeeding practices for child survival and child spacing. A pre-intervention survey of 25 mothers provided baseline data on current breastfeeding beliefs, myths, and practices of the Quéchua-speaking population in the Cusco area. Project staff submitted a draft final report on the program and the pre/post surveys in 1991 to IRH/GU.

Due to a lack of interpretable survey results, a local Peruvian NGO (PRISMA) was contracted to travel to Cusco in the fall of 1992 and to begin to evaluate the project. Based on an approved action plan, PRISMA will assist project staff in analyzing the data and writing a useful final report. PRISMA was to have completed the evaluation of the project and assisted the project staff in analyzing the data and writing the final report during the reporting period. However, the work has been delayed due to the poor state of the data and a no-cost extension has been processed.

Planned Activities: The work of PRISMA is expected to be completed and a final report to be submitted to IRH in early 1993.

(b) Jesuit Universities and Catholic Organizations

- Meetings were held at Georgetown with the Secretary of the Association of Jesuit Universities of Latin America (AUSJAL) during the last reporting period to plan a seminar on LAM and the fertility aspects of breastfeeding to be held at the Javeriana University in Bogota. During this reporting period, unfortunately, plans have had to be reconsidered due to travel restrictions to Colombia.

Planned Activities: A new site for the seminar will be explored with the Jesuit Association.

- Institute representatives attended the Summit Meeting on Natural Fertility Regulation of the Pontifical Council on the Family in Rome and the Vatican City, and made presentations on LAM and NFP. Of interest to the breastfeeding community is that the resulting Vatican statement offers a clear endorsement of breastfeeding for its child spacing benefits. The draft Rome Declaration on NFP (12/11/92), *The Natural Regulation of Fertility: The Authentic Alternative*, as stated by the representatives attending the meeting held by the Pontifical Council on the Family, in addition to many supportive statements of the Church's role in natural family planning, 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."

Planned Activities: IRH will disseminate the policy statement that resulted from this meeting and will continue to be involved in future activities related to the topic.

(c) Nomenclature/Indices

A variety of activities have resulted from the original IRH work with IGAB on breastfeeding definitions. In addition to the several publications on the topic, IRH has been invited to participate in WHO meetings, as reviewers, and in other fora to present expertise in this area. During this reporting period IRH participated in a WHO meeting on this subject and finished draft nomenclature for consideration by ILCA in coordination with Georgetown's National Capital Lactation Center.

Planned Activities: IRH plans to continue to provide technical assistance to any group using the definitions in articles for publication or, as in the case of WHO and ILCA, in the development of indices and nomenclature. We plan to work with the PVO-Child Survival group in this regard and to provide input in DHS and Rand survey instrument development.

c. BF and Fertility: Technical Assistance

(1) Technical Assistance to Cooperating Agencies

IRH continues to publish and disseminate scientifically sound articles as well as to provide technical assistance to Cooperating Agencies and their projects on the fertility aspects of breastfeeding. This assistance includes review of materials and peer review articles. Under this area, the Breastfeeding Division is emphasizing agency-level technical assistance for policy change, including continued information updates, visits to key organizations during country visits, provision of key documents and materials as requested, and other activities.

During this reporting period, Breastfeeding Division staff and the Resource Center responded to numerous requests for information, materials, and presentations on the fertility aspects of breastfeeding.

Planned Activities: This assistance will continue during the life of the project. During the next reporting period, in addition to IRH responding to requests as needed, several organizations have scheduled specialized assistance on the fertility aspects of breastfeeding, including the Association for Voluntary Surgical Contraception.

(2) Technical Assistance to Missions

As mentioned in section B.1.c., Institute staff continue to correspond with Missions who responded to the cable sent by A.I.D./W that emphasized the expanded mandate and capabilities of the project under its new funding agreement. IRH staff have provided these Missions with additional information and materials about the activities of the Breastfeeding Division.

During the previous reporting period, two Breastfeeding Division staff members traveled to Jordan to assist the Mission in evaluating the Save the Children (SC) child survival project for its demographic impact. While the SC project originally was designed to reduce infant and child mortality, the greater impact seems to have been on increasing breastfeeding and contraceptive use. This led the Mission to seek IRH technical assistance while in country to make two presentations on LAM to interested MOH staff and other health, nutrition, and family planning specialists, as well as to provide technical assistance to the MOH. As a result of this visit, Jordan expressed interest in further programming on LAM and requested an additional IRH visit. This visit is described in the section on Projects in Preparation, above.

For other assistance to Missions, see the description of Haiti (section III.B.1.a.5), a project which also stemmed from an initial Mission request for technical assistance.

Planned Activities: Breastfeeding Division staff will participate in BIG Country Strategy Plans as appropriate and will plan a series of visits for the coming year. IRH will send an

additional solicitation for interest on the part of Missions and continue to correspond with Missions regarding proposed technical assistance.

(3) Technical Assistance to International Donors

(a) WHO

- Simplified Methodology for Assessing Breastfeeding: In the early 1980s, WHO developed an assessment tool designed to identify fertility return in populations in order to advise family planning programs concerning the appropriate time for the introduction of contraceptives. This module has been used in more than ten countries. However, events have surpassed the original goal; with the development of LAM, each individual person may now assess the proper time for complementary family planning rather than relying on national norms.

At the request of WHO, IRH reviewed the findings of the Simplified Methodology Surveys and developed recommendations for modifications of the module and for future actions. These recommendations included the following:

- Further analysis of existing data in specified directions incorporating LAM;
- A consensus development meeting of current and potential future users of the data;
- Development of additional survey modules;
- Improved user instructions;
- Pilot tests with monitoring;
- Development of an on-line version of the instrument.

Planned Activities: During the next reporting period, WHO staff will be encouraged to complete their review of the document. IRH staff will discuss with WHO staff the publication and dissemination of the document and the role IRH might play in the implementation of the recommendations.

- International Breastfeeding Collaborating Centre (WHO Collaborating Centre on Breastfeeding): Over the last four years, the Breastfeeding Division personnel have experienced increasing collaboration with and financial support from a variety of divisions within PAHO and WHO. In February 1991, IRH was asked to prepare an application to serve as a WHO Collaborating Centre. The application presented a center comprised of the Breastfeeding Division and selected other University faculty. The application was developed under the title "International Breastfeeding Collaborating Centre," internally reviewed, and submitted. After a site visit from PAHO and further revisions in August 1991, the International Breastfeeding Collaborating Centre (IBCC) has been named a

WHO Collaborating Centre on Breastfeeding. The IRH Breastfeeding Division's designation as the IBCC was officially announced at a reception at Georgetown following a March 9, 1992, press conference in the Leavey Center at Georgetown which announced the launch of the UNICEF Baby Friendly Hospital Initiative in the United States.

Documentation of this designation was received in this reporting period. The IBCC is under the direction of the Breastfeeding Division of the IRH. Projects considered IBCC projects have included past and future work on the Code of Marketing of Infant Feeding Substitutes and all other general breastfeeding work carried out with WHO and PAHO. Meetings were held with PAHO and WHO to plan the annual list of activities. In addition, the IRH has co-funded projects with WHO-supported IBCC projects (see sections B.2.c.3.a., B.2.b.3.d., and B.2.b.5.c., Simplified Methodology, WHO Technical Proceedings, Nomenclature/Indices). IRH/PAHO interaction has been quite productive, resulting in at least four collaborative, co-funded efforts (curriculum, regional planning, videotapes, Lactancia Materna).

Planned Activities: Annual plans will be developed and reviewed.

(b) Interagency Coordination

In October 1991, representatives of IRH, WHO/HRP, FHI, Population Council, and A.I.D. met at Georgetown University to discuss each organization's ongoing work and plan of action related to breastfeeding and fertility, to identify other agencies that should be involved in coordination efforts, and to develop a concrete plan of action for a working group that includes specific meetings and processes. Discussions were held at the Task Force meeting reflecting little interest to maintain this effort, so no further meeting of this group has occurred.

Planned Activities: The entire group will not be reconvened due to lack of interest and overlap with other functions; however, efforts will continue to ensure communication and exchange under our technical assistance efforts.

(c) UNICEF

IRH has been an active partner in the WHO/UNICEF breastfeeding promotion efforts. The UNICEF efforts in the Baby Friendly Hospital Initiative (BFHI) have achieved special attention with a press conference held at Georgetown to launch the BFHI conception in the United States. IRH continues its interest in this area through co-sponsorship of activities with the Georgetown National Capital Lactation Center.

WABA will focus the 1993 World Breastfeeding Week on Working Women. IRH will cooperate with and endorse this effort.

In addition, during this reporting period IRH staff were invited by UNICEF to participate in two activities at the IPA/UNICEF/WHO 20th World Congress of Pediatrics in Rio de Janeiro, Brazil: to provide a speaker at the UNICEF Symposium and Colloquium, *Human Milk Insufficiency: An Iatrogenic Disorder?* and to coordinate the screening of the Institute for Reproductive Health videotape, *Breastfeeding: Protecting a Natural Resource*. Prior to the symposium, IRH staff participated in the UNICEF exhibit at the Congress, publicizing the upcoming symposium, networking, and responding to requests for information on our topic. IRH materials were featured at the UNICEF Breastfeeding Exhibit throughout the Congress. The UNICEF Exhibit made a strong stand on breastfeeding and baby friendly hospitals to an audience--primarily pediatricians--that needs to be better informed about the importance of breastfeeding.

Planned Activities: In addition to ongoing work with WABA and the United States effort in BFHI, IRH will continue to emphasize optimal breastfeeding for its fertility impact at all international fora. There will be a Georgetown Baby Friendly Hospital Initiative meeting on February 8, under primary sponsorship of the Nursing Division.

(4) Technical Assistance to Other Programs

(a) Presentations

Several organizations were contacted during this reporting period because they had expressed interest in having IRH make presentations to them. Several of these organizations asked that we contact them at a later date.

Planned Activities: The organizations who have requested presentations during the next reporting period include World Vision, Project Concern International, and a local social marketing firm, Porter/Novelli. IRH will try to schedule all of these presentations during the next reporting period.

(b) Mailing List

The Institute maintains a mailing list of approximately 3,000 names which is constantly growing. This list is divided in 25-30 categories under the major subheadings of breastfeeding, natural family planning, and administration. Under breastfeeding, the categories are based on attendance at meetings; professional interests; organizational affiliation; region of world; relationship to the Institute; and so forth. The list is cross-referenced by language and other categories in which names are included. This mailing list must be constantly updated and maintained to facilitate its use in-house and in coordination with other A.I.D. collaborating

agencies to facilitate the distribution of their materials to the appropriate audiences and create linkages between the Institute and these other organizations. During this reporting period, the Resource Center began to update the list and enter it into a DBase IV program. This activity was delayed by the length of time it took for IRH to receive new and additional computers, as well as the absence of a student assistant to the Resource Center Coordinator.

Planned Activities: During the next reporting period, the mailing list entry on the database will be continued and regular updates will occur. Once the list is functional, IRH plans to share the list with other A.I.D. Cooperating Agencies.

(c) Searches

The Resource Center of the Institute has maintained literature on NFP, breastfeeding, and LAM. The Breastfeeding Division needs to have an ongoing update of the published literature available to the staff for both publication and technical assistance purposes.

Planned Activities: A subagreement will be developed or in-house capability will be developed to meet this need.

(d) Domestic

In order to ensure United States backing for concepts IRH supports abroad, every effort is made to ensure that domestic efforts include our input. Therefore, IRH participates in the USDA Consortium on Breastfeeding, the DHHS-supported United States Approach to the Baby Friendly Hospital Initiative, and other WIH, DHHS, and other panels as invited.

Planned Activities: Technical assistance to the national DHHS-funded effort as well as the other programs mentioned above will continue.

3. BF and NFP Interface

Activities under this area are collaborative with the NFP Division and are designed to enhance their efforts improving guidelines for NFP use during lactation. It also includes introducing LAM into NFP programs.

a. BF/NFP: Research and Pilots

The Breastfeeding Division, in conjunction with the NFP Division and IFFLP, has begun to discuss and formulate guidelines for LAM use in an NFP program and will test these

guidelines in a project site or sites. Research will be conducted on NFP method introduction during breastfeeding and modification of rules for improved efficacy will continue.

Planned Activities: During the next reporting period, some of the project sites will be identified and discussed at the various IFFLP Zonal/Subzonal meetings and Breastfeeding/LAM Expert Meetings. It is planned that two sites will be identified per region.

b. BF/NFP: Education of Health Professionals and Policy Makers

(1) NFP Conference Proceedings: *Current Knowledge and New Strategies for the 1990s*

Approximately one-quarter of this supplement to AJOG specifically focuses on the LAM/NFP interface. In addition, Breastfeeding Division staff provided one article among those published in the companion supplement.

The LAM/NFP Interface section of the AJOG supplement explores the use of natural family planning during breastfeeding and the operationalization of the research findings related to the breastfeeding/natural family planning interface. Worldwide, the vast majority of women breastfeed their infants--in many countries for several months. Studies show that women learning natural family planning during lactation, particularly those whose menses have returned, have an increased risk of unplanned pregnancy. Altered hormonal levels may make interpretation of the signs of fertility return (such as mucus) difficult during this time. Therefore, LAM may be a useful adjunct to natural family planning training during lactation.

The LAM/NFP Interface section was translated into French and Spanish during this reporting period, and a limited distribution of the French version took place at the IFFLP Panafrican Seminar in Yaoundé, Cameroon. However, neither the French nor the Spanish versions had undergone review by the end of this reporting period.

Planned Activities: During the next reporting period, the review and revision of the French and Spanish translations will be completed. The Division expects to continue to respond to many requests for reprints of the conference. The proceedings will continue to serve as a basis for discussion in IFFLP Zonal conferences over the next 12 months, aiding in their refinement of policy and programs on breastfeeding and LAM.

(2) Other Materials

In addition to these proceedings, the Breastfeeding Division is developing, with IFFLP, materials concerning LAM for NFP programs. At the Zonal/Subzonal Meeting and LAM/NFP Experts Meeting in Sydney, Australia, during the last reporting period, as well as the IFFLP Panafrican Seminar in Yaoundé, Cameroon, during this reporting period, participants focused

on developing and refining implementation strategies and teaching guidelines which will continue to be refined at subsequent meetings and by the IFFLP Breastfeeding Consultant in coordination with IRH staff. A reading list on breastfeeding, LAM, and the LAM/NFP Interface has been developed, reviewed by IRH, and distributed to IFFLP affiliates.

Planned Activities: IRH staff will attend the IFFLP meeting in Paraguay during the next reporting period to continue to assist in the work on these materials. In addition, the IFFLP Breastfeeding Consultant will work with IRH staff in February 1993 on the refinement of the teaching protocol for the LAM/NFP Interface.

c. **BF/NFP: Technical Assistance**

(1) **IFFLP: Policy/Guidelines/Testing**

IRH's work with IFFLP focuses on developing an IFFLP breastfeeding promotion and LAM/NFP policy and strategy and to develop sets of method use guidelines for each NFP method that can be adopted by IFFLP's members and programs worldwide. These method protocols, guidelines, and training materials will be developed, field tested, translated, and disseminated.

To assist in accomplishing these activities, IFFLP contracted with a consultant, Dr. Suzanne Parenteau-Carreau, who is assisting the organization and its members, as well as its supported pilot projects, to develop breastfeeding and LAM supportive policies and strategies. This consultant is assisting with the development of the protocols mentioned above, as well as with the development of teaching materials and curricula at all levels for the introduction of these protocols into ongoing programs.

IRH Breastfeeding Division staff traveled to Sydney, Australia, in March 1992, to participate in and lead sessions at the IFFLP Breastfeeding and LAM Experts Meeting. In addition, IRH staff and the IFFLP Breastfeeding Consultant presented a LAM panel at the IFFLP Natural Family Planning and Family Life Education Workshop for Pacific Island Nations. Concurrent with the above meetings, the IFFLP Board and Zonal Council held meetings to discuss, among other topics, the IFFLP Policy on Breastfeeding, LAM, and the LAM/NFP Interface. The policy was passed by both the Board and the Zonal Council, and was endorsed by the participants in the Pacific Island Nations Workshop. The policy change is being disseminated to all IFFLP members and zones for feedback and implementation and is expected to be adopted formally at the IFFLP Congress in 1994.

During the breastfeeding and LAM Experts Meeting, participants worked on drafting/refining IFFLP guidelines for teaching LAM and introducing NFP methods when LAM criteria are no longer met. Working groups further defined draft method protocols for the NFP Method interface with LAM according to the various NFP methods.

After the Sydney meeting, IFFLP, the IFFLP Breastfeeding consultant, and IRH staff developed a breastfeeding/LAM reading list; and refinement of the teaching guidelines and training protocols began. This process continued during this reporting period as a result of the work accomplished at the August 1992 Yaoundé meeting.

In Yaoundé, IRH staff and the IFFLP Breastfeeding Consultant participated in and served as faculty for the IFFLP Panafriean Seminar and preseminar sessions. A one-day preseminar session on Breastfeeding, LAM, and NFP took place in English and French. A scientific Breastfeeding, LAM, and NFP session took place on the opening day of the Seminar; and a four-day intensive training of trainers in Breastfeeding, LAM, and NFP took place during the Seminar. During this four-day session, participants were trained in lactation management, LAM, and the LAM/NFP Interface. During working sessions, participants spent a great deal of time working on protocols and guidelines for teaching during the transition from LAM to NFP. All participants in the seminar were provided with daily summaries of the workshop, as well as a large packet of informational materials to take back to their respective countries. One interesting feature of the training session was that English and French groups were taught concurrently, then brought together to share experiences between Francophone and Anglophone African countries. This provided for stimulating exchange regarding regional and country differences and the greatest number of possibilities in developing protocols and guidelines for the LAM/NFP interface. The work produced at this seminar was further refined by Dr. Parenteau-Carreau and submitted to IRH and others for review.

These meetings in Yaoundé greatly assisted IRH and IFFLP in identifying potential LAM/NFP pilot sites. In addition, participants learned of the Rwanda SNAF Project, under the direction of Father Henri Hoser, which is using an extended LAM for nine months (the French acronym, MAMA-9). While at the Vatican for the Summit Meeting on Natural Fertility Regulation, IRH staff were able to discuss this project with Father Hoser and to make tentative plans to assess the project in the near future.

Planned Activities: During the next reporting period, the IFFLP Breastfeeding Consultant will work with IRH staff to refine the teaching guidelines and training protocols. The consultant and IRH staff will begin to prepare for the IFFLP meeting in Paraguay as well. In addition, IRH expects to begin to receive proposals from IFFLP on pilot sites for the LAM/NFP Interface. IRH expects an invitation from SNAF and the USAID Mission in Kigali, Rwanda, to visit that country to assess the SNAF MAMA-9 project.

C. ADMINISTRATION/EVALUATION

1. Division Functional Support

a. Personnel

During this reporting period, Miriam Labbok, MD, MPH, continued as Division Director and Kristin Cooney, MA, continued as Deputy Director. Virginia Laukaran, DrPH, continued as the Senior Associate for Research. Clifford Sanders continued as the Senior Associate for Field Programs. Monica Diggle has been promoted to Administrative Assistant, and Cate Harrington joined the staff as a trilingual Division Secretary in November. The Resource Center position was filled by Paula Correa, who had been working for several months in a consultant capacity. During the next reporting period, the Breastfeeding Division will write up job descriptions and advertise to fill two to three new positions (Breastfeeding IEC and Training Associates and a Program Assistant).

Also during this reporting period, Division Personnel participated in a staff retreat and follow-up activities to the retreat. The retreat and subsequent follow-up were useful team building exercises and have resulted in the implementation of several new systems. Also as a result of the retreat, several Division members began taking professional development courses at Georgetown, including courses to improve management, mentoring, meeting management, decision making and problem solving, and presentation skills. In addition, the Division Director has implemented quarterly performance reviews, Strategic Action Plan development, and other issue meetings with all faculty and staff.

b. Logistics

Institute staff have devoted considerable time during the reporting period to standardizing operating procedures and forms for both in-house and A.I.D. procedures. This process is continuing. The Division has presented and/or shared all processes developed and in development with the NFP Division for their consideration in order to ensure consistent and compatible approaches to standardizing reporting and processes. In addition, as our staff grows, individual personnel responsibilities have been and continue to be redefined and a listing of secretarial functions disseminated.

c. Budget and Workplan

The project fiscal year ends in June 1993. The budget and workplan were presented at A.I.D. in August 1992, and requested revisions were completed within two weeks and submitted to the IRH Administrator to be coordinated with those of the NFP Division. We hope to have A.I.D. approval of the budget and workplan before the end of the fiscal year.

As part of planning for the next three to four years of the project (A.I.D. FY 93-96, GU FY 94-96), IRH plans a series of in-house evaluation and strategic meetings, the result of which will be Strategic Action Plans in Research, Policy and Professional Development, and Country Programs, to be developed in concert with the three Division outcome objectives and strategic plan as outlined in the Cooperative Agreement. In addition, Strategic Action Plans will be developed for three support functions: IEC, Training, and Evaluation. An ad hoc TAG will be developed and a meeting is planned for May 1993 to precede finalization of the workplan for FY 1994.

2. Division Evaluation

As described in our proposal to A.I.D. for the current Cooperative Agreement, IRH will monitor and evaluate activities that are carried out within the Institute and through formal subcontracts. The Division has instituted an annual in-house workplan review and evaluation. The Strategic Action Plan Evaluation will address self-monitoring and evaluation plans for all projects and the Division as a whole. To date, we have developed and implemented mechanisms for monitoring processes (e.g., annual in-house workplan review and evaluation meetings, Technical Assistance recording forms).

Planned Activities: This year the Evaluation Associate, who is devoting 15 percent of her time to the Breastfeeding Division, will develop the approach for the in-house workplan review/evaluation and will be finalizing the strategic action workplan in this area.

IV. RESOURCE CENTER

A. GENERAL INFORMATION

The Resource Center of the Institute for Reproductive Health is an information center established to support and contribute to education, training, and research in fertility awareness and NFP, the fertility aspects of breastfeeding, and the Lactational Amenorrhea Method (LAM), through the collection and dissemination of materials. The Resource Center staff assist in all Institute publications, including copy editing, reference work, style conformity, and publication production, as well as manage the translation of these publications.

B. DISSEMINATION/MAILING LIST

1. Dissemination

The Resource Center received approximately 600 requests for Institute publications and/or information on NFP and Breastfeeding. Institute publications frequently requested in this reporting period were *Lactation Education for Health Professionals*, published with PAHO; and Part II of the special supplement of the proceedings of *Natural Family Planning: Current Knowledge and New Strategies for the 1990s*, published by IRH/Georgetown University. Both the booklet and the video *Breastfeeding: Protecting a Natural Resource* continue to be requested frequently in all available languages, as is *NFP: A Good Option* and the *Guide for Natural Family Planning Trainers*. An inventory is ongoing to assess current backlog and total number of materials disseminated, and to maintain an accurate account of materials held.

2. Mailing List

The Institute's mailing list is presently being updated and entered into a DBase IV program. Due to lack of availability of computers and the lack of a Resource Center assistant during this reporting period, the Resource Center has been delayed in getting the mailing list created. Since IRH is starting the new reporting period with both new computers and a part-time assistant, we hope to have the mailing list operational within the next four months. The Resource Center is carefully designing its mailing list in a way in which it will be easily shared with other A.I.D. Cooperating Agencies.

C. LITERATURE AND MATERIALS COLLECTION

The Resource Center continues to strengthen and expand its collection of materials, with continued attention being given to determining which Breastfeeding, NFP, and Maternal and Child Health journals are needed to complement and support the Institute's programs and research. The Resource Center is also undertaking ongoing bibliographic database searches

(Medline, Popline, etc.) to collect scientific information on these and other related topics, which are being housed in our own bibliographic database (Procite) and has been meeting to attempt coordination with an in-house resource, the NCEMCH.

D. BIBLIOGRAPHIC DATABASE

The major goal of designing an in-house bibliographic database has been accomplished. Presently, the Resource Center staff is entering these materials into the database, and physically developing a document "library" on NFP, the fertility impact of Breastfeeding, the Lactational Amenorrhea Method, and other related topics. This process will be ongoing as new materials come in, and once the database begins to take form, it will aid in retrieving materials and providing bibliographic data as needed by faculty, staff, and others.

The Resource Center continues to collect audiovisual materials, which it hopes to classify and house as part of its prototype materials collection. This collection also includes posters, stickers, pamphlets, T-shirts, slides, videotapes, and various other IEC materials in NFP, Breastfeeding, and other related topics.

E. CONFERENCES/EXHIBITS

During this reporting period, the Resource Center has been responsible for exhibiting the work of IRH at several conferences, including the annual APHA meeting and the SNE meeting. At these conferences, we were able to collect a great deal of valuable information about other projects for our organizational files, and in turn, were able to disseminate many of our materials to interested colleagues. Each of these conference exhibits resulted in numerous additional requests for materials. These requests are generally filled following each conference, and the names of the appropriate attendees are then added to our mailing list.

The Resource Center is in the process of looking into the possibility of improving and updating some of its exhibit materials (i.e., the display, mounted photographic and graphics, etc.).

F. OTHER

As part of its ongoing role in supporting IRH faculty and staff, the Resource Center is developing Country and Organizational files. The Organizational files will contain general information on organizations dealing with related topics (family planning, maternal and child health, women in development, etc.), and the Country files will contain a variety of information (i.e., historical, language, currency, customs, ongoing projects, possible contacts, statistics, and so forth) on A.I.D.-assisted countries. These files will serve as background information for members of our staff.

APENDICES

APENDICES

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APPENDIX 1
TRAVEL PLANS

BREASTFEEDING DIVISION TRAVEL PLAN
 STAFF AND CONSULTANTS
 JULY 1, 1992 - JUNE 30, 1993

AS OF 2/5/93

TRAVELER	SITE	PURPOSE	DATE	STATUS
JULY 1, 1992 - DECEMBER 31, 1992				
<u>Staff</u>				
Miriam Labbok	LLLI/Colorado	Presentation, Physicians Seminar	7/15-19/92	Completed
Miriam Labbok	Chile	Project Monitoring	7/20-26/92	Completed
Kristin Cooney	New York, NY (CARE)	TA to CA	7/28/92	Completed
Miriam Labbok	New York, NY (CARE)	TA to CA	7/28/92	Completed
Clifford Sanders	New York, NY (CARE)	TA to CA	7/28/92	Completed
Kristin Cooney	Cameroon	IFFLP LAM Workshops/Conference	8/6-20/92	Completed
Virginia Laukaran	Sweden/Finland	Presentation ISRHML	8/8-17/92	Completed
Kristin Cooney	Rio de Janeiro Sao Paulo, Brazil	20th UNICEF World Congress of Pediatrics Meet-Anibal Faundes, MD, CEMICAMP	8/30-9/11/92 8/31-9/1/92	Completed
Clifford Sanders	Ecuador	Project Monitoring	9/14-16/92	Completed
Virginia Laukaran	Ecuador	Project Monitoring	9/14-16/92	Completed
Miriam Labbok	Jordan	Project Development	10/12-20/92	Completed
Virginia Laukaran	Jordan	Project Development	10/10-21/92	Completed
Miriam Labbok	India	IPPF Conference	10/22-26/92	Completed
Miriam Labbok	Spain	SAC Conference	10/26-30/92	Completed

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TRAVELER	SITE	PURPOSE	DATE	STATUS
Clifford Sanders	Guatemala	Project Monitoring, Presentations	11/1-8/92	Completed
Clifford Sanders	Mexico	LA Symposium on Family Planning	11/29-12/5/92	Completed
Kristin Cooney	Haiti	Project Development	11/30-12/12/92	Completed
Miriam Labbok	Rome	ICN and Vatican Meetings	12/4-12/92	Completed
<u>Consultants and Subcontractors</u>				
Judy Canahuati	Honduras	Project Monitoring	8/92-9/92	Completed
Peggy Koniz-Booher	Brazil	20th UNICEF World Congress of Pediatrics	8/30-9/11/92	Complete
Peggy Koniz-Booher	Guatemala	Project Monitoring, Presentations	11/1-8/92	Completed
Francisco Sevilla	Guatemala	Project Monitoring, Presentations	11/3-7/92	Completed
Peggy Koniz-Booher	Mexico	LA Symposium on Family Planning	11/29-12/5/92	Completed
Alfredo Perez	Argentina	Perinatal International Symposium	11/13 - 11/17/92	Completed
Alfredo Perez	Italy	Vatican Meeting	12/09 - 12/11/92	Completed

JANUARY 1, 1993 - JUNE 30, 1993

Staff

Kristin Cooney	NY,NY	TA - AVSC/CARE; Work Group - AVSC	1/4-7/93	Completed
Cooney,Labbok,Laukaran	NY,NY	TA to CA - AVSC	2/93	Scheduled
Kristin Cooney	Los Angeles/San Diego	TA to CA (World Vision & Proj. Concern Int'l)	2/93	Tentative
Kristin Cooney	Africa	Project Development/Monitoring	2-3/93	Tentative
Clifford Sanders	Ecuador	Project Monitoring	3/93	Scheduled
Miriam Labbok	Mexico	WHO Meeting	3/93	Tentative
Kristin Cooney	Haiti	Project Start-up	3/93	Tentative

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TRAVELER	SITE	PURPOSE	DATE	STATUS
Kristin Cooney	Kenya/Uganda/Zambia/ Tanzania	TA/Project Development	3-4/93	Tentative
Clifford Sanders	Guatemala	LAM Workshop	4/93	Tentative
Miriam Labbok	Chile	Presentation and Site Visit	4/93	Tentative
Clifford Sanders	Brazil	Project Monitoring	4/93	Tentative
Virginia Laukaran	Jordan	Technical Assistance	5/93	Tentative
Kristin Cooney	Rwanda	LAM-9 Evaluation	5/93	Tentative
<u>Consultants and Subcontractors</u>				
Alfredo Perez	Argentina	Regional Meeting	5/93	Tentative
Mary Ann Stone Jimenez	Latin America	LLLI/LAM Meetings	5/93	Tentative
TBD x 5	Washington D.C.	Multicenter LAM Study	5/93	Tentative
TBD x 2	Washington D.C.	AD/HOC Evaluation	6/93	Tentative



**NATURAL FAMILY DIVISION TRAVEL PLAN
STAFF AND CONSULTANTS
JULY 1, 1992 - JUNE 30, 1993**

TRAVELER	SITE	PURPOSE	DATE	STATUS
JULY 1, 1992 - DECEMBER 31, 1992				
V.Lamprecht	Ireland	Discuss Project Implementation	7/17/92	Completed
C.Ugarte	New York	Project Development	7/14	Completed
C.Ugarte	Guatemala	Project Development	7/26-31	Completed
M.Seidman	Cameroon	IFFLP Zonal Meeting	8/3-15	Completed
R.Sevigny	Cameroon, Ivory Coast Ghana and Senegal	IFFLP Zonal Meeting (Cameroon); Projects Monitoring	8/3-22	Completed
C.Lanctot	Cameroon, Kenya, Rwanda	IFFLP Zonal Meeting (Cameroon); Discuss Projects Implementation	8/3-22	Completed
B.Kambic	Cameroon	IFFLP Zonal Meeting	8/6-20	Completed
C.Norman/Wales	Cameroon	IFFLP Zonal Meeting	8/6-20	Completed
V.Lamprecht	Cameroon, Switzerland, England	IFFLP Zonal Meeting (Cameroon); Discuss Project Implementation (Switzerland); Meeting with Unipath (England)	8/8-17	Completed
G.Barnard/England	Israel	Meeting with Weizmann Inst. of Science	9/2-9	Completed
V.Lamprecht	Los Angeles	Clinical Devices Workshop	9/15-21	Completed
C.Ugarte	Guatemala	Project Monitoring, TA	10/12-17	Completed
V.Jennings	Spain, Italy	SAC Meeting (Spain); Italian NFP Consortium	10/20-31	Completed
C.Norman/Wales	India	IPPF Conference/Panel	10/23-27	Completed
R.Sevigny	Zambia, Mauritius	Project Monitoring and Development	10/25-12/12	Completed
J.T.Queenan	Spain	SAC Meeting	10/27-28	Completed
J.Simpson	Spain	SAC Meeting	10/27-28	Completed

TRAVELER	SITE	PURPOSE	DATE	STATUS
C.Ugarte	Bolivia	Project Monitoring, TA	11/3-11	Completed
S.Horna, G. Tabliabue V. Villavicencio/Peru	Washington, D.C.	ATLF's Project Review and Re-design	11/17-24	Completed
M.Seidman	Mauritius, Zambia	Management Training Workshop, Project Monitoring and MIS	11/30-12/18	Completed
C.Godinez	Guatemala	Project Planning and Workshops	12/6-13	Completed
V.Jennings	Italy	Vatican Conference; Meetings with NFP Research Center & Inst. Naturale Fertilty	12/9-11	Completed
JANUARY 1, 1993 - JUNE 30, 1993				
W.Pruzensky	Mexico	Discuss MIS	1/20-24/93	Scheduled
V.Jennings	Philippines	Experts Meeting on Technology Training	1/24-2/4	Scheduled
C.Godinez	Guatemala	Project Monitoring, TA	1/30-2/12	Scheduled
B.Pruzensky	Philippines	Project Monitoring, MIS	3/17-21	Scheduled
V.Lamprecht	Dominican Republic	Workshop on Barrier Contraceptives	3/21-25	Scheduled
V.Lamprecht	Ireland	Investigators Meeting Calendar Study	4/5-15	Tentative
B.Pruzensky	Brazil and Peru	Project Monitoring	5/16-6/01	Tentative
R.Sevigny	Ghana, Ivory Coast, Senegal	MIS, TA	5/17-6/15	Tentative
M.Seidman	Kenya	Site Visit/Project Monitoring	6/1-11	Tentative
C.Lanctot	Madagascar	MIS, TA	5 or 6/93	Tentative
B.Pruzensky	S.Korea, Bagladesh, Sri Lanka, Papua New Guinea	MIS, TA	5/ or 6/93	Tentative

APPENDIX 2
PUBLICATIONS

APPENDIX #2

PUBLICATIONS

July 1, 1992 - December 31, 1992

Labbok M, Breastfeeding and Fertility Regulation: The Impact of Sustained Breastfeeding and the Lactational Amenorrhea Method (LAM) on the Nutrition of Mothers and Children. Institute Occasional Paper #7, December 1992.

Labbok M, Breastfeeding and Natural Family Planning. Institute Occasional Paper #6, December 1992.

Labbok M, The Lactational Amenorrhea Method: A New Hormonal Family Planning Method. Institute Occasional Paper #5, October 1992, and Abstract, SAC Barcelona, Spain, November 1992.

Jennings V, Priorities in Natural Family Planning Research. Occasional Paper, and Abstract, SAC Barcelona, Spain, November 1992.

Jennings V, New Issues in Natural Family Planning Research. Proceedings, Conference on the Natural Regulation of Fertility, Bologna, Italy, November 1992.

Labbok M, Colie C, Puerperium and breastfeeding, *Current Opinion in Obstetrics and Gynecology*, 1992, 4:818-825.

Wade K, Assisting Working Women Towards Optimal Breastfeeding, Institute Monograph Paper, December 1992.

Queenan JT, Labbok M, Periodic Abstinence: The "Natural Family Planning" Methods. The Best of Dialogue in Contraception, 1992, 72-74.

Labbok M, Perez A, Klaus H, A profile of successful vs. unsuccessful OM users: Factors associated with unplanned pregnancy and non-adherence to the rules. In *NFP: Current Knowledge and New Strategies for the 1990s*, Part II. Queenan J, Jennings V, Spieler J, von Hertzen H (eds), 1992, 121-123.

Jennings V, *Natural Family Planning: What Health Workers Need to Know*. WHO, Geneva, 1992.

The following sheets are a listing of Institute articles published in *Natural Family Planning: Current Knowledge and New Strategies for the 1990s*, Proceedings of a conference, Part II, Georgetown University, Washington, DC, December 10-14, 1990:

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NATURAL FAMILY PLANNING: CURRENT KNOWLEDGE AND NEW STRATEGIES FOR THE 1990s

- Introduction: Commitment to natural family planning and the need for action** 1
Victoria H. Jennings, Chair
- Victoria H. Jennings, PhD
Washington, DC
- Unique aspects of this conference include its breadth of topics, diversity of participants, forward-looking approach, and exploration of new ideas.
- John Griffith, MD
Washington, DC 2
- Better knowledge of human reproduction inspires safer pregnancies, healthier babies, and more responsible parenting.
- Duff Gillespie, PhD
Washington, DC 3
- Natural family planning is critical to the implementation of the US Agency for International Development's principles of voluntarism and informed choice.
- John T. Queenan, MD
Washington, DC 4
- The multipartner agreement establishing the Institute for International Studies in Natural Family Planning has reached the five-year milestone.
- Robert Knouss, MD
Washington, DC 5
- The Pan American Health Organization and the World Health Organization are working to promote closer coordination within government services and specialized natural family planning organizations.
- Introduction: Institutional activities** 6
Victoria H. Jennings, Chair
- US Agency for International Development: Support for NFP
Jeffrey Spieler, MSc
Washington, DC
- The Agency spends \$5 million to \$6 million per year to support natural family planning activities and the natural family planning components of multimethod family planning activities.

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- The Program of the Institute for International Studies in Natural Family Planning** 8
Victoria H. Jennings, PhD
Washington, DC
The Institute has worked with dozens of institutions around the world on biomedical and social science research, education and communication, training, and service delivery support.
- The World Health Organization's NFP activities** 9
Helena von Hertzen, MD
Geneva, Switzerland
A task force on the natural regulation of fertility has three main research areas: lactation, indices of the fertile period, and natural family planning.
- International Federation for Family Life Promotion: A developmental approach** 10
Claude Lanctôt, MD
Washington, DC
The Federation is conducting a twenty-five-year Africa Development Plan and a comprehensive natural family planning services development program.
- Family Health International: A perspective on NFP and family planning programs** 11
Nancy Williamson, PhD
Research Triangle Park, NC
An analysis of natural family planning and family planning programs shows that the strengths of one tend to be the weaknesses of the other.

SESSION I. NFP TRAINING ISSUES AND STRATEGIES FOR THE 1990s

Kimberly Aumack, Chair
Mary Catherine Martin, Co-Chair
Bonnie Pederson, Rapporteur

- Introduction and overview of natural family planning training programs** 13
Diane Vogelsang, BA
Los Angeles, CA
Although there is considerable diversity among natural family planning training programs, a core component is always quality instruction.
- An experiential approach to training natural family planning trainers** 15
Kimberly Aumack, BA
Los Angeles, CA
Adults bring to the learning process years of personal experience and previous knowledge.
- Competency-based approach to training and natural family planning instructor standards** 17
Mary Catherine Martin, PhD
St. Louis, MO
Training programs should correctly demonstrate the knowledge, skills, and attitudes of instructors.

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Preparing instructors to educate diverse client populations: The impact of culture, religion, socioeconomic status, and educational levels 18

Marie M. Mascarenhas, MD
Bangalore, India

Existing abstinence practices in India can be incorporated into natural family planning instruction.

Training and supervision: From small natural family planning programs to national service delivery systems 19

Sabina Mwaulu, RN
Nairobi, Kenya

The continuing success of natural family planning services largely depends on the supervision teachers receive.

Training evaluation: Its impact on future instructor training, client education, and natural family planning services 21

George Walter, MD
Santa Cruz, CA

Multilevel natural family planning evaluation incorporates instructor training, client education, and service delivery.

Discussion and recommendations 23

SESSION II. EXPERIENCES AND TRENDS IN NFP EDUCATION AND OUTREACH

Rosalia Rodriguez-Garcia, Chair
Leila Mehra, Co-Chair
Earle Lawrence, Rapporteur

New directions for education and outreach in the 1990s 24

Rosalia Rodriguez-Garcia, MSc
Washington, DC

Education and outreach play a crucial role in promoting natural family planning.

Reaching new populations with natural family planning education 26

Leila Mehra, MD
Geneva, Switzerland

The poor and underprivileged remain the most difficult group to reach, yet they are the ones who would benefit most from family planning.

Innovative approaches from Population Communication Services: Implications for natural family planning 28

Benjamin V. Lozare, PhD
Baltimore, MD

To educate people about natural family planning, personal, popular, pervasive, and persuasive communication strategies can be used.

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Ravi K. Sharma, PhD <i>Pittsburgh, PA</i>	
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Seeking opportunities for natural family planning expansion: The Serena experience	30
Suzanne Parenteau-Carreau, MD <i>Québec, Canada</i>	
Serena's international sphere of influence has contributed to the expansion of natural family planning.	
Lessons learned from a mass media campaign in Lima, Peru	32
Guillermo Tagliabue, MD <i>Lima, Peru</i>	
As a result of an aggressive media campaign, natural family planning registrants increased substantially; mass media resulted in higher levels of interest, but actual users were generated by person-to-person contact.	
Creating a demand for scientific natural family planning: The Zambian experience	33
Lubinda M. Tafira <i>Lusaka, Zambia</i>	
Despite numerous obstacles for natural family planning in Zambia, the demand for natural methods is ever-increasing; the best advertisement is a satisfied user.	
Centre for Research, Education, Service, and Training's fertility education program for youth	34
Marie M. Mascarenhas, MD <i>Bangalore, India</i>	
Rarely are young people encouraged to believe that raising the quality of their lives is the primary aim of family planning	
Teen STAR (Sexuality Teaching In the context of Adult Responsibility): Experiential learning of fertility delays teens' sexual debut	35
Hanna Klaus, MD, and David Kardatzke, BS <i>Bethesda, MD, and Pittsburgh, PA</i>	
Experiential learning of fertility delays teens' first sexual intercourse and reduces the number who continue being sexually active	
Fertility education for young men	39
Stephen A. Burke, MSW <i>Cranston, RI</i>	
For the sake of both young men and women, more balance is needed in the content of fertility awareness programs provided to each gender	
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Lois A. Schaefer, Chair
Margot L. Zimmerman, Co-Chair
Ron Magarick, Rapporteur

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Lois A. Schaefer, MPH
Washington, DC

Distribution of education and training materials, particularly those intended for worldwide or regional audiences, is a complex process.

Materials development, testing, and evaluation: An overview 43

Margot L. Zimmerman, BA, and Premila Bartlett, MPH
Washington, DC

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Materials translation: Is that really what you want to say? 47

David Bowen, PhD, and Margareta Bowen, PhD
Washington, DC

Providing natural family planning materials to many audiences with different languages and cultures is a complicated, costly undertaking.

Introduction of natural family planning information into multimethod materials for trainers 49

James Lea, PhD, and Catherine Murphy, MEd
Chapel Hill, NC

Fertility awareness is taught as the basis for all family planning methods, including natural family planning.

Experiences in the field: Confederação Nacional de Centros de Planejamento Natural da Família, Brazil 51

Maria J. Sogayar, MAB
São Paulo, Brazil

Natural family planning materials do not need to be complicated or highly sophisticated to be effective.

Materials development in Zambia: Concept versus reality 52

Lubinda M. Tafira
Lusaka, Zambia

By involving the teachers in the evaluation of the teaching aids, natural family planning materials became more practical and useful.

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Mary Catherine Martin, PhD <i>St. Louis, MO</i>	
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Creating a trainers' guide for international use	55
Kimberly Aumack, BA <i>Los Angeles, CA</i>	
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Materials for the modified mucus method	56
Kathleen Dorairaj, MD <i>Ghaziabad District, Uttar Pradesh, India</i>	
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Client teaching materials for francophone Africa	57
Isabelle Ecochard, MD <i>Irigny, France</i>	
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Carmen Minervini, BA <i>Los Angeles, CA</i>	
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Gloria Mejia, Chair
Antonio Solis, Co-Chair
Richard Sevigny, Rapporteur

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Gloria Mejia, MD, and Antonio Solis, MD <i>Los Angeles, CA, and Washington, DC</i>	
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Natural family planning in a family planning program	61
Thomas Kring, BD/MTH <i>Los Angeles, CA</i>	
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New approaches to expanding natural family planning	63
David F. Skipp, BA <i>Alexandria, VA</i>	
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Natural family planning: National program development in Kenya	65
Rose Wahome, RN, and Sabina Mwaulu, RN <i>Nairobi, Kenya</i>	
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Natural family planning through the health sector in India	67
Marie M. Mascarenhas, MD <i>Bangalore, India</i>	
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Natural family planning through the health sector in Brazil	68
Maria J. Sogayar, MAB <i>São Paulo, Brazil</i>	
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Rosalía Rodríguez-García, MSc <i>Washington, DC</i>	
A successful outreach strategy reaches new audiences and gains national visibility for natural family planning.	
An American national experience: Natural family planning services under the auspices of the Roman Catholic church	71
Theresa Notare, MA <i>Washington, DC</i>	
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Shelagh O'Rourke, Co-Chair
Richard Sevigny, Rapporteur

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Victoria H. Jennings, PhD, and Shelagh O'Rourke, PhD
Washington, DC

The US Agency for International Development has identified five principles to improve the quality and availability of family planning services; these can be applied to natural family planning.

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Darryl N. Pedersen, BA
Alexandria, VA

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Targeting quality of care: A strategy for successful natural family planning services 76
Zoe Kopp, MPH
New York, NY

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The effect of supervision on program development and quality of services 78
Richard St. Mart, BSc
Rose-Hill, Mauritius

A strong supervisory system is a wise investment in long-term natural family planning program success.

Automated management information systems 80
James Nesbitt, PhD
Pittsburgh, PA

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Lilia I. Cuervo, MA
New York, NY

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In search of the perfect system** 84

Darryl N. Pedersen, BA
Alexandria, VA

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SESSION VI. POLICY ISSUES IN NFP

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Leila Mehra, Co-Chair
Paul Gross, Rapporteur

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Victoria H. Jennings, PhD
Washington, DC

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Natural family planning: US Agency for International Development policy considerations 88

Sarah Clark, PhD, and Jeffrey Spieler, MSc
Washington, DC

The underlying principles of US assistance for family planning are volunteerism and informed choice.

Policies and support for natural family planning: Rationale and future plans 91

Jose Donayre, MD
New York, NY

The fertility and reproductive knowledge that natural family planning provides can empower women in their life courses.

International Planned Parenthood Federation's policy and support for periodic abstinence: Rationale and future plans 93

Zoe Kopp, MPH
New York, NY

International Planned Parenthood Federation recognizes the importance of offering periodic abstinence as one of the range of family planning methods available to the public.

World Health Organization's policy considerations in natural family planning 94

Leila Mehra, MD
Geneva, Switzerland

Although family planning is now considered a basic human right, individual countries have different degrees of commitment to it for a variety of reasons.

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Rosalia Rodriguez-Garcia, MSc <i>Washington, DC</i>	
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Elaine Murphy, PhD <i>Washington, DC</i>	
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David F. Skipp, BA <i>Alexandria, VA</i>	
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SESSION VII. SOCIAL SCIENCE NFP ISSUES

Ravi K. Sharma, Co-Chair
Jeffrey Spieler, Co-Chair
Nancy Williamson, Rapporteur
Rochelle Shain, Rapporteur

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Ravi K. Sharma, PhD, and Jeffrey Spieler, MSc <i>Pittsburgh, PA, and Washington, DC</i>	
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Martin Vaessen, PhD <i>Columbia, MD</i>	
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Ravi K. Sharma, PhD <i>Pittsburgh, PA</i>	
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Miriam H. Labbok, MD, MPH, Alfredo Perez, MD, and Hanna Klaus, MD <i>Washington, DC, Santiago, Chile, and Bethesda, MD</i>	
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Ed Ricci, PhD, and Myrna Seidman, MPH <i>Pittsburgh, PA, and Washington, DC</i>	
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Don Kramer, MST, Paul Tix, MS, James Cleary, MA, Mark Rucinski, BA, and Linda Grummer, MS, RN <i>Minneapolis, MN</i>	
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Elizabeth M. Clubb, MD, Cecilia M. Pyper, MD, and Jane Knight, RN
London, England

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- Evaluation of natural family planning programs in Liberia and Zambia** 133
Robert T. Kambic, MSH, Ronald H. Gray, MD, Claude A. Lanctôt, MD, Mary Catherine Martin, PhD, Roselind Wesley, and Richard Cremins, SJ
Baltimore, MD, Washington, DC, St. Louis, MO, Monrovia, Liberia, and Lusaka, Zambia

Studies show that African women can be successful natural family planning users, and that services can be delivered in a cost-effective manner.

- Using operations research to improve natural family planning program services, management, and policy** 135
Maria Wawer, MD, Therese McGinn, MPH, and Regina McNamara, DrPH
New York, NY

Operations research can be useful to natural family planning programs by providing systematic data collection and assessment applications.

- Political and practical issues in the implementation of operations research studies in natural family planning** 138
John Townsend, PhD, and Ricardo Vernon, PhD
Mexico City, Mexico

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- Discussion and recommendations** 141

SESSION IX. ROUND TABLE DISCUSSIONS

Diane Vogelsang, Chair

- Introduction to the round table discussions** 142
Diane Vogelsang, BA
Los Angeles, CA

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- The missing link: Why NFP is still "the best-kept secret"** 143
Kay Ek, BA
St. Cloud, MN

Scientific data and more positive terminology and approaches can be used to gain wider acceptance of natural family planning

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Pittsburgh, PA
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- The fertility awareness method: Extent of use, potential, and research needs** 145
Nancy Williamson, PhD
Research Triangle Park, NC
Research questions and priorities were proposed for the fertility awareness method.
- Towards better marriages through NFP** 146
Irene Osmund-Ruiz, MD
Hong Kong
Common objections to natural family planning and positive responses to them were outlined.
- Providing NFP counseling within a family planning clinic** 147
Carmen Minervini, BA
Los Angeles, CA
Whether the contraceptive mentality in family planning clinics makes teaching natural family planning in such a setting ineffective was discussed.
- A pilot study on teaching NFP in general practice** 148
Elizabeth M. Clubb, MD, Cecilia Pyper, MD, and Jane Knight, RN
Oxford, England
An operations research pilot study was described and the group asked to explore the concept of offering natural methods of family planning within a government health service.
- At what stage is NFP service delivery?** 150
Hanna Klaus, MD
Bethesda, MD
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- Various forms of financial support for NFP teachers** 151
Claude Lanctôt, MD
Washington, DC
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- The promotion of exclusive breastfeeding and the lactational amenorrhea method in NFP programs** 152
Kathy Kennedy, MS
Research Triangle Park, NC
Although there are obstacles to including the lactational amenorrhea method in natural family planning programs, potential benefits also exist.

APPENDIX 3
PRESENTATIONS

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APPENDIX #3

PRESENTATIONS

INSTITUTE SPONSORED PRESENTATIONS

July 1, 1992 - December 31, 1992

Title	Meeting	Presenter(s)
Lactational Amenorrhea Method for Family Planning	APHA Resource Exchange, Washington, DC, July 1992	Sanders C
Applying International Breastfeeding Policy to the United States: Communication Strategies	International Nutrition Education Conference, <i>Communication Strategies to Support Infant and Young Child Nutrition</i> , Washington, DC, July 1992	Cooney K
Resource Center Presentation	APHA Resource Exchange, Washington, DC, July 1992	Correa P
Fertility and Breastfeeding	La Leche League International Physicians Seminar, Colorado, July 1992	Labbok M
Field Studies of LAM and LAM Programs of the IRH: Results and Ongoing Activities	IFFLP 7th Panafrican NFP/FLE Seminar Scientific Session, Mvolye, Yaoundé, Cameroon, August 1992	Cooney K
Optimal Breastfeeding Practices in Support of the Lactational Amenorrhea Method and Child Survival	IFFLP 7th Panafrican NFP/FLE Seminar Scientific Session, Mvolye, Yaoundé, Cameroon, August 1992	Cooney K
Introduction to a Management Information System for NFP Program	IFFLP 7th Panafrican NFP/FLE Seminar Scientific Session, Mvolye, Yaoundé, Cameroon, August 1992	Seidman M
Using Indicators for Program Evaluation	IFFLP 7th Panafrican NFP/FLE Seminar Scientific Session, Mvolye, Yaoundé, Cameroon, August 1992	Seidman M
AIDS and Natural Family Planning in Africa	IFFLP 7th Panafrican NFP/FLE Seminar Scientific Session, Mvolye, Yaoundé, Cameroon, August 1992	Lamprecht V
AIDS/HIV Infection and the Implications for Family Life Education	IFFLP 7th Panafrican NFP/FLE Seminar Scientific Session, Mvolye, Yaoundé, Cameroon, August 1992	Lamprecht V
Influence of Infant Food Supplements on Duration of Lactational Amenorrhea	International Society for Research on Human Milk and Lactation, Stockholm, August 1992	Laukaran V
Lactational Amenorrhea Method for Family Planning	La Leche League of Ecuador, Meeting, September 1992	Sanders C
Resource Center Presentation	Breastfeeding Division Technical Assistance on LAM to PCS, Baltimore, MD, September 1992	Correa P

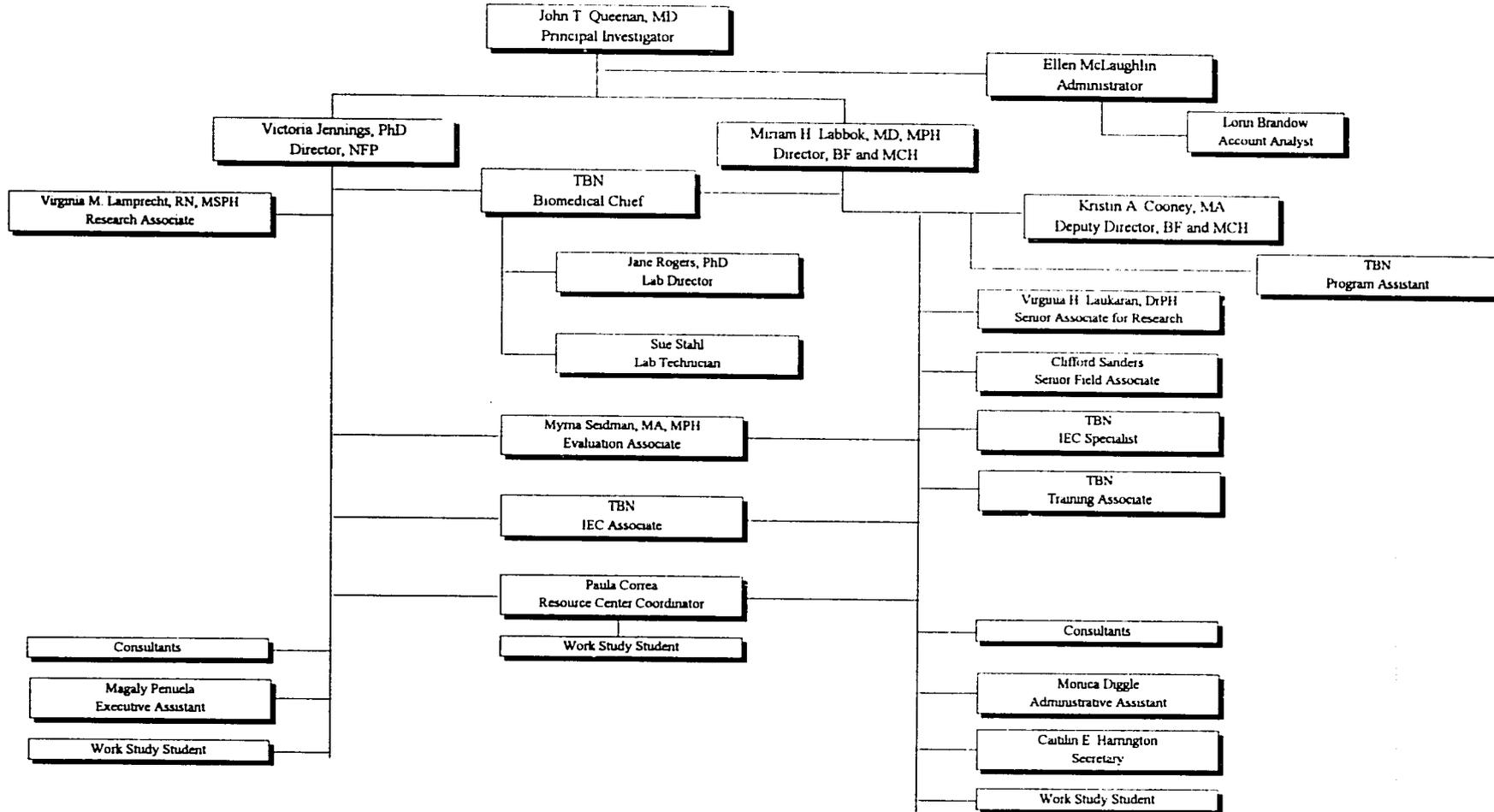
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Title	Meeting	Presenter(s)
How Can Hospitals and Pediatricians Promote Optimal Breastfeeding Practices in Support of the Lactational Amenorrhea Method, Child Survival, and Successful Breastfeeding?	UNICEF-sponsored Symposium and Colloquium, <i>Human Milk Insufficiency: An Iatrogenic Disorder?</i> IPA/UNICEF/WHO XXth World Congress of Pediatrics, Rio de Janeiro, Brazil, September 1992	Cooney K
Lactational Amenorrhea Method: A New Hormonal Contraceptive	SAC Meeting, Barcelona, October 1992	Labbok M
Lactational Amenorrhea Method	IPPF 40th Annual Meeting, New Delhi, India, October 1992	Labbok M
Lactational Amenorrhea Method for Family Planning	La Leche League International, Rockville, MD, Meeting, October 1992	Sanders C
Natural Family Planning: New Developments in Research	Genetics Division - Department of Obstetrics and Gynecology, Georgetown University, Washington, DC, October 1992	Lamprecht V
Utilization of DHS Data to Inform Breastfeeding Programs and Policy Development: Results of Illustrative Analysis	Seminar, Wellstart EPB, Washington, DC, November 1992	Laukaran V
Evaluation of Breastfeeding Promotion in the Context of Postpartum Strategies	APHA Annual Meeting, Washington, DC, November 1992	Laukaran V
LAM: Why Bother? Clinical Data to Policy Change	APHA Annual Meeting, Washington, DC, November 1992	Labbok M
Strategies for the Development of Breastfeeding Policy to Promote Child Spacing	APHA Annual Meeting, Washington, DC, November 1992	Cooney K
Using MIS and Program Indicators for Evaluation	Management Training Program for NFP, Mauritius, November 1992	Seidman M
An Ovulation Prediction Device: Why is it Needed?	District of Columbia General Hospital, Washington, DC, November 1992	Lamprecht V
Promotion of Exclusive Breastfeeding and its Effect on Fertility	<i>Formalizing the Role of Mother to Mother Support in Breastfeeding Promotion</i> , Latin American Regional Conference, Antigua, Guatemala, November 1992	Sanders C Koniz-Booher P
The Ecuador Experience in Using the Lactational Amenorrhea Method for Birth Spacing with Implications for Future Research Priorities	Seminar on <i>Rethinking Postpartum Health Care</i> , Population Council, New York, December 1992	Laukaran V
Lactational Amenorrhea as a Method for Family Planning	Latin American Symposium on Family Planning, Mexico City, December 1992	Sanders C Koniz-Booher P
Breastfeeding and Natural Family Planning	Summit Meeting on Natural Fertility Regulation, Vatican City, December 1992	Labbok M
Breastfeeding and Fertility Regulation: The Impact of Sustained Breastfeeding and the Lactational Amenorrhea Method on the Nutrition of Mothers and Children	International Congress on Nutrition, Rome, December 1992	Labbok M

APPENDIX 4
ORGANIZATION CHART/STAFF LISTING

APPENDIX #4

ORGANIZATION CHART/STAFF LISTING
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