

PD-ABC-989  
72500

A.I.D. EVALUATION SUMMARY - PART I

1. BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS.  
2. USE LETTER QUALITY TYPE, NOT "DOT MATRIX" TYPE.

IDENTIFICATION DATA

A. Reporting A.I.D. Unit: Mission or AID/W Office <u>S&amp;T/N</u> (ES# _____)		B. Was Evaluation Scheduled in Current FY Annual Evaluation Plan? Yes <input type="checkbox"/> Slipped <input checked="" type="checkbox"/> Ad Hoc <input type="checkbox"/> Evaluation Plan Submission Date: FY <u>89</u> Q <u>3</u>	C. Evaluation Timing Interim <input type="checkbox"/> Final <input checked="" type="checkbox"/> Ex Post <input type="checkbox"/> Other <input type="checkbox"/>
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D. Activity or Activities Evaluated (List the following information for project(s) or program(s) evaluated; if not applicable, list title and date of the evaluation report.)

Project No.	Project /Program Title	First PROAG or Equivalent (FY)	Most Recent PACD (Mo/Yr)	Planned LOP Cost (000)	Amount Obligated to Date (000)
931-1010	Improvement of the Maternal and Infant Diet Project		9/89		

ACTIONS

E. Action Decisions Approved By Mission or AID/W Office Director		Name of Officer Responsible for Action	Date Action to be Completed
Action(s) Required			
1. Design ten-year follow-on project based on lessons learned from the predecessor project (931-1010). Consolidate number of activities to four.		NPSchlossman	6/89
2. Continue Wellstart Project for lactation management.		NPSchlossman	9/89
3. Rebid the clearinghouse component of the umbrella project; develop bridge-year cooperative agreement (a) with APHA to continue to perform clearinghouse function until RFP developed.		NPSchlossman	7/89
4. Develop operations research activity to study adolescent women's nutrition.		NPSchlossman	6/89
5. Develop field support component for the Women's and Infants' Nutrition (WIN) Project (936-5117) - incorporate into project paper.		NPSchlossman	6/89

(Attach extra sheet if necessary)

APPROVALS

F. Date Of Mission Or AID/W Office Review Of Evaluation: \_\_\_\_\_ (Month) 5 (Day) (Year) 89

G. Approvals of Evaluation Summary And Action Decisions:

Name (Typed)	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission or AID/W Office Director
	Nina P. Schlossman	S&T/N	Fern Finley <i>2/17/91</i>	Norge W. Jerome
Signature	<i>Nina P. Schlossman</i>		<i>Fern Finley</i>	<i>N. Caldwell for signature</i>
Date				

**ABSTRACT**

**H. Evaluation Abstract (Do not exceed the space provided)**

The evaluation summarized in this PES was a final evaluation of the S&T Office of Nutrition ten year umbrella project 931-1010, "Improvement of the Maternal and Infant Diet Project. The evaluation was carried out in May 1989 in order to inform the development of the ten-year follow-on project, "Womens' and Infants' Nutrition (WIN): A Family Focus (936-5117). The evaluation team reviewed the project for lessons learned, approaches to be incorporated into the follow-on project and to ascertain whether or not the objectives of Project 931-1010 had been realized. The evaluation was an external evaluation which obtained information on the project through face-to-face interviews with A.I.D. and contractor/grantee staff as well as site visits to field mission and project sites and a review of project documents. Emphasis was placed on a review of activities since 1986, the date of the mid-term evaluation.

The evaluation concluded that the project had largely achieved its objectives and had developed several approaches to service delivery which would "be particularly appropriate for broader implementation in the years to come."

The five components of Project 931-1010 were evaluated: Lactation Management Education (Wellstart Project); the Weaning Project (Manoff Group Dietary Management of Diarrhea (Johns Hopkins University); the Clearinghouse on Infant Feeding and Maternal Nutrition (American Public Health Assoc.-APHA); and the Research on Maternal Nutrition and Health Care Program (International Center for Research on Women - ICRW).

The evaluation concluded that a ten-year follow-on project was indeed indicated on the basis of wide recognition of the usefulness of the evaluated project; that the follow-on should incorporate lessons learned and approaches developed in the areas of lactation management education and weaning and the dietary management of diarrhea in a comprehensive field support (service delivery, training, and technical assistance) activity to improve infant feeding and nutrition. In the area of information dissemination, it was recommended that an information dissemination/clearinghouse component be incorporated into the follow-on. An operations research component was also recommended in order to "constructively identify the next generation of nutrition interventions to be pursued . . . utilizing innovative methodologies and focussing on family nutrition patterns and practices". Strengthening the research capabilities of Third World research institutions and researchers was a successful approach which should be built into the operations research activities of the follow-on project.

**COSTS**

**I. Evaluation Costs**

1. Evaluation Team		Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (U.S. \$)	Source of Funds
Name	Affiliation			
David Pyle, PhD	John Snow, Inc.	PDC-0262-I-	\$45,733	Program
Ruth Berger, MPH, RD	"	00-7150-00		
Frank Falkner, MD	"			
Pamela Putney, MPH, RN	"			
Dana Raphael, PhD	"			

**2. Mission/Office Professional Staff**  
Person-Days (Estimate) \_\_\_\_\_

**3. Borrower/Grantee Professional**  
Staff Person-Days (Estimate) \_\_\_\_\_

- b -

## A.I.D. EVALUATION SUMMARY - PART II

### SUMMARY

**J. Summary of Evaluation Findings, Conclusions and Recommendations (Try not to exceed the three (3) pages provided)**

Address the following items:

- |                                                                                                                                                                                                        |                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Purpose of evaluation and methodology used</li> <li>• Purpose of activity(ies) evaluated</li> <li>• Findings and conclusions (relate to questions)</li> </ul> | <ul style="list-style-type: none"> <li>• Principal recommendations</li> <li>• Lessons learned</li> </ul> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|

Mission or Office:

S&T/N

Date This Summary Prepared:

Title And Date Of Full Evaluation Report:

Final Evaluation: Maternal and Infant Nutrition Project September, 1989

The A.I.D. Office of Nutrition, Bureau of Science and Technology (S&T/N) requested a team of specialists to evaluate the Improvement of the Maternal and Infant Diet Project (later called the Maternal and Infant Nutrition or MIN Project - no. 931-1010), concentrating on the past several years since the Interim Evaluation was completed in September of 1986. Based upon a review of project documents, discussions with project staff and involved A.I.D. officials, and site visits, the evaluation concludes that project objectives have largely been achieved with two exciting service delivery components being particularly appropriate for broader implementation in the years to come.

After being accused of displaying "a certain incoherence, largely because of the sheer diversity of activities" (Interim Evaluation, 1986), the MIN Project during the latter part of Phase II consisted of five components (contractors in parentheses):

- Lactation Management Education Project (Wellstart/San Diego Lactation Program);
- The Weaning Project (The Manoff Group);
- Dietary Management of Diarrhea (Johns Hopkins University);
- Research on Maternal Nutrition and Health Care Program (International Center for Research on Women - ICRW);
- Clearinghouse on Infant Feeding and Maternal Nutrition (American Public Health Association - APHA);

A summary of the findings relating to the individual components are as follows:

- Lactation Management Education Project (Wellstart) - This activity was found to be very successful. It has trained almost 200 professionals from 20 different developing countries, thereby establishing a core group in each that is capable and motivated to train others in the theoretical and practical aspects of lactation management. The project has great spread or "multiplier" effect with those trained having in turn trained an estimated 13,000 health practitioners in their countries. This insures that the progress achieved under the Wellstart initiative is both institutionalized and sustained. Wellstart also received high marks for the information and materials support it provides each team it trains, as well as exceptional follow-up support. The project has had quantifiable impact in terms of increased breastfeeding and decreased morbidity and mortality. In addition, there is evidence of significant economic savings as a result of the rooming-in/breastfeeding changes introduced in participating hospitals. Demand for Wellstart services is indicated by the level of buy-ins from A.I.D. regional bureaus and missions, and the number of requests to participate in the course which could not be satisfied within the current project timeframe.

- The Weaning Project (The Manoff Group) - Despite inadequate funding, the Weaning project has been able to exceed project objectives. Instead of providing technical assistance in four countries as originally specified, the project has fully developed activities in five (Cameroon, Ecuador, Ghana, Indonesia, Swaziland), while selected activities in an additional two (Peru and Zaire) had to be terminated for political and operational

reasons. The project's major accomplishment has been the development of a practical, field-oriented research methodology designed to identify the existing "knowledge of" and "attitudes toward" weaning. In turn, this helps to single out priority behaviors needing change to improve weaning habits. The approach utilizes formative evaluation techniques, including focus group interviews and household observations, to identify inappropriate behaviors, and then implements social marketing and multi/mass media techniques to change them. A distinguishing feature of the Weaning Project is its ability to work collaboratively with local counterparts, transferring skills and increasing the chances that the approach will be sustained. Much to its own credit the Weaning Project has been able to double its resources through buy-ins from missions and regional bureaus.

- Dietary Management of Diarrhea (Johns Hopkins University) - The contractor fulfilled the terms of its contract by carrying out multi-disciplinary research in two countries (Nigeria and Peru). JHU conducted surveys to determine local feeding habits when a child has diarrhea and catalogued the locally available foods and their preparation. This was followed by the design and testing of special diets in the laboratory and in the community. In Nigeria, a local weaning food (ogi) was fortified, increasing its caloric density more than three fold. In Peru, the project fortified a traditional recipe, Sanquito. It was observed that the project became more of a weaning effort, resembling the Weaning Project in some ways.

- Research on Maternal Nutrition and Health Care Program (ICRW) - This component was the direct result of the Interim Evaluation which pointed out that during the first seven years of the MIN Project, the maternal aspect had been neglected. The small grants competition under the MIN Project funded research projects that would help improve the health and nutritional status of mothers in developing countries. The response was greater than expected, with 128 proposals received. Of these, 15 were selected to be funded along with 5 unsolicited proposals. More than half of these 20 subprojects were from U.S. institutions and received almost three-quarters of the funding. However, each subproject had at least one principal Investigator from the country where the study took place. The ICRW provides limited technical assistance in research design and methodology and in journal writing for foreign researchers. Since none of the studies have been completed, it is not possible to evaluate the quality of the research. One issues paper (on the utilization of formal MCH services in the developing world) has been written and circulated; another is being prepared.

- Clearinghouse On Infant Feeding and Maternal Nutrition (AFHA) - This component has the longest history in the MIN Project, dating back to its first year. It has two primary functions: the information clearinghouse and the newsletter. In the former, the Clearinghouse has almost doubled the number of documents it contains in the last three years and responds to more than 100 requests per month for information. The second aspect is the Mothers and Children Bulletin which is produced and distributed three times a year in 3 languages. Circulation has been increased from less than 13,000 in 1985, to 29,000 at present with the number of French copies sent to Francophone West Africa more than tripling. The Clearinghouse has developed a regional association in Central America (INCAP) and in West Africa (ORANA) which have been only moderately successful.

The final section of the report presents future considerations and recommendations resulting from the evaluation exercise. These suggestions are provided as possible means of expanding the most positive components of the MIN Project, so that more infants and children in more developing countries can benefit from what has been learned and developed in it. The major points raised in this chapter are as follows:

### 1. Operations (Service Delivery and Training)

Based on the positive results of the MIN Project, it is recommended that a major effort be considered to expand upon the success of the two most effective and operational project-developed interventions, lactation management and weaning. More publicity on these two projects, and guidelines on how they are implemented would generate greater demand for the approaches. It is important that bridge funding be provided so that the current momentum is maintained. A new project should include a buy-in provision, while providing enough core funds (possibly 60% of the total) to help promote infant and child feeding activities. Specifically, this project should provide technical assistance to the missions, especially in the form of needs assessment and project identification and design. A greater emphasis on regionalization would help develop local capabilities and spread expertise in the breastfeeding and weaning strategies.

In any project activity that will follow the MIN Project, more French language capability would be useful to further infant/child feeding interventions in West Africa. Studies of the economic impact of infant/child feeding efforts would be very helpful in generating support for the approaches. The follow-on project would also be well advised to track nutritional impact of project activities more closely.

### 2. Research

A research component will serve as an important function in any future infant/child feeding project. It is suggested that research topics could constructively identify the next generation of nutrition interventions to be pursued. More research utilizing innovative methodologies and focusing on family nutritional patterns and practices is encouraged. As part of the effort, the capability of Third World research institutions should be developed and, to this end, technical assistance should be provided as part of the research component of the follow-on project.

### 3. Information

A follow-on infant/child feeding project can play a useful role by including an information collection and dissemination component. Additional ways to increase the cost-effectiveness of the newsletter distribution (including greater regionalization) would be helpful. As in the case of the research component, technical assistance should be included to facilitate capacity building in information collection and dissemination in the developing world. More should be done to collect/publish field-generated materials. Finally, income generation for the information collection and dissemination component should be explored in any new project to make the operation more self-sufficient.

## ATTACHMENTS

**K. Attachments** (List attachments submitted with this Evaluation Summary; always attach copy of full evaluation report, even if one was submitted earlier; attach studies, surveys, etc., from "on-going" evaluation, if relevant to the evaluation report.)

The complete evaluation report entitled: "Final Evaluation: Maternal and Infant Nutrition Project (Project No. 931-1010)" by Pyle DF, Berger R, Falkner F, Putney P, and Raphael D., May 1989.

## COMMENTS

**L. Comments By Mission, AID/W Office and Borrower/Grantee On Full Report**

The evaluation team was carefully selected to encompass the range of expertise required to assess an umbrella project dealing with the improvement of maternal and infant nutrition through service delivery, the provision of technical assistance, operations research and information dissemination. Site visits were made to countries where several components of the project were located so as to maximize the cost-effectiveness of the eval. Visits were possible only in Central America due to last minute cancellation of the site visits to Swaziland. Data gathering took place in a short time frame in order to be able to incorporate the findings of the evaluation into the final development of the Project Paper by end of June 1989. The initial submission of the evaluation report contained much of the information required for this purpose, but was hastily written. The report had to be rewritten and revised several times over the summer and was finally accepted in September, 1989. The contractor had to be requested repeatedly to substantiate any recommendations or conclusions with data and findings from the interviews, desk research or site visits. This is improved in the final document, but still the least satisfactory aspect of the report.

The report also focusses recommendations for future activities on the service oriented activities (lactation management and weaning/feeding activities) and in its section on "Future Considerations/Recommendations" provides a long list of considerations for future planning. A more consolidated presentation, with less individual detail and more conceptual coherence would have been more useful to the Office of Nutrition. Nonetheless, this evaluation revealed several important factors to be included in the design of the follow-on project. The interview, desk research, and site visit aspects were accomplished carefully and systematically. Overall the general conclusions can be supported and have proved useful in the design of the follow-on project.

XD-ABC-989-A

72531

FINAL EVALUATION  
MATERNAL AND INFANT NUTRITION PROJECT  
(Project No. 931-1010)

by

David F. Pyle, PhD., Team Leader  
Ruth Berger, MPH, RD  
Frank Falkner, MD  
Pamela Putney, MPH, RN  
Dana Raphael, PhD

May 1989

This evaluation was conducted for S&T/Nutrition,  
AID under contract number PDC-0262-I-00-7150-00.

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## Acknowledgments

Evaluating a project with such a long history (10 years) and so many components is a formidable task. It can only be completed with the cooperation of all those involved. In the case of the Improvement of the Maternal and Infant Diet Project (MIN), we were very fortunate to work with a group of dedicated professionals which made it possible to complete the review of project activities, as well as to brainstorm about the exciting and challenging possibilities for the future.

First and foremost we would like to express our appreciation to the staff from the Office of Nutrition. Its Director, Dr. Norge Jerome, not only provided the Evaluation Team with an overview of the Office of Nutrition's activities, but also the context and conceptual framework within which the MIN Project and any successor must operate. The long hours devoted by the MIN Project CTO, Dr. Nina Schlossman, gave the team the necessary background and support to complete the task. The A.I.D. staff in the field, especially Ms. Kate Jones-Patron in U.S.A.I.D./Ecuador, deserve special thanks for assisting the visiting evaluator and providing a picture of MIN. Thanks also goes to the project informants and project personnel we interviewed for their patience and willingness to cooperate, answering all our questions and providing us with all the materials we asked for. Only with everyone cooperation were we able to carry out this evaluation, including the formative aspect which we hope will be helpful in the design of what is to follow.

## Glossary

AED	- Academy for Educational Development
A.I.D.	- Agency for International Development
ANE	- Asia/Near East (Bureau)
APHA	- American Public Health Association
CTO	- Cognizant Technical Officer
DMD	- Dietary Management of Diarrhea
FHI	- Family Health International
FVA	- Food and Voluntary Assistance
ICORT	- International Council on Oral Rehydration Therapy
ICRW	- International Center for Research on Women
IISNFP	- Institute of International Studies in Natural Family Planning
INCAP	- Institute for Nutrition for Central America and Panama
INCS	- International Nutrition Communications Services
IVACG	- International Vitamin A Consulting Group
JSI	- John Snow, Inc.
LAC	- Latin America and Caribbean (Bureau)
LBW	- Low Birth Weight
LME	- Lactation Management Education
MIN	- Improvement of Maternal & Infant Diet (Project)
MOH	- Ministry of Health
NCIH	- National Council for International Health
NCP	- Nutrition Communications Project
ORANA	- Organization Regionale de l'Alimentation et Nutrition en Afrique
ORT	- Oral Rehydration Therapy
PRITECH	- Primary Health Care Technical Assistance Project
PVC	- Private and Voluntary Cooperation (Office)
PVO	- Private Voluntary Organization
S&T/H	- Science and Technology/Health
S&T/N	- Science and Technology/Nutrition
TAG	- Technical Advisory Group
UNICEF	- United Nations International Children Emergency Fund
WHO	- World Health Organization

## EXECUTIVE SUMMARY

The A.I.D. Office of Nutrition, Bureau of Science and Technology (S&T/N) requested a team of specialists to evaluate the Improvement of the Maternal and Infant Diet Project (later called the Maternal and Infant Nutrition or MIN Project - no. 931-1010), concentrating on the past several years since the Interim Evaluation was completed in September of 1986. Based upon a review of project documents, discussions with project staff and involved A.I.D. officials, and site visits, the evaluation concludes that project objectives have largely been achieved with two exciting service delivery components being particularly appropriate for broader implementation in the years to come.

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### 2. Research

A research component will serve as an important function in any future infant/child feeding project. It is suggested that research topics could constructively identify the next generation of nutrition interventions to be pursued. More research utilizing innovative methodologies and focusing on family nutritional patterns and practices is encouraged. As part of the effort, the capability of Third World research institutions should be developed and, to this end, technical assistance should be provided as part of the research component of the follow-on project.

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## I. INTRODUCTION

The Office of Nutrition, Bureau for Science and Technology (S&T/N)/AID requested JSI to conduct a final evaluation of the Maternal and Infant Nutrition Diet Project (931-1010). This project had five components which were reviewed in detail (contractors listed in parentheses):

- o Clearinghouse on Infant Feeding and Maternal Nutrition (American Public Health Association - APHA);
- o Research on Maternal Nutrition and Health Care Program (International Center for Research on Women - ICRW);
- o Dietary Management of Diarrhea or DMD (Johns Hopkins University);
- o The Weaning Project (Manoff Group); and
- o Lactation Management Education Project (Wellstart/San Diego Lactation Program).

As specified in the Statement of Work (Attachment I), the evaluation team was tasked with evaluating the progress and experience gained from the project to date, focusing on the two and a half year period since the Interim Evaluation was carried out (September 1986). The project design's suitability to achieve project objectives was to be determined. In addition, particularly successful project activities were to be identified and recommendations made for potential follow on activities.

A team of five consultants was selected and approved by S&T/Nutrition. The Office wanted to assure that all relevant views were included and that those who have contributed to the infant and child feeding field in its formative phase were represented. The team consisted of Ruth Berger, MPH, RD (nutritionist), Frank Falkner, MD (physician/MCH specialist), Pamela Putney, MPH, RN (midwife/lactation expert), Dana Raphael, PhD (anthropologist) and David Pyle, PhD (management specialist and team leader).

The team assembled in Washington for a week in late April. This was followed by field site visits by one member of the team<sup>1</sup>. In mid-May, the team reconvened to discuss findings and formulate recommendations.

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<sup>1</sup> Because the Interim Evaluation had spent considerable time in Asia and due to a desire by S&T/Nutrition to minimize the cost of the final evaluation, field visits were scheduled to take place only in Africa and Latin America. In an effort to be cost-effective, it was planned that the evaluators would visit countries where several project activities were being carried out. The one country with all four of the field projects represented, Peru, could not be visited due to political unrest. In Africa, Swaziland had three of the four projects, but because of the unscheduled absence of a key informant, the visit was cancelled. The same fate occurred in Nigeria where mission policy discourages short visits. This made it impossible to see the DMD project in the field since it had activities located only in Nigeria and Peru. Thus, site visits were made only in Mexico and Ecuador.

1

## 1. Methodology

The team reviewed project documents which included the Interim Evaluation, scopes of work from the contracts for each of the project components and project reports (e.g., quarterly and annual reports, trip reports, evaluations, state-of-the-art papers, and other publications). Attachment II provides a listing of the documents that were reviewed in the final evaluation exercise.

A number of people familiar with the project were interviewed (Attachment III - List of Persons Contacted). AID officials familiar with the Improvement of Maternal and Infant Nutrition Project were asked to provide background data, to comment on the performance of the contractors and to identify gaps which might be addressed in a follow-up project. The team discussed the project with the current, as well as former project managers and with officials connected to current projects which have related scopes of work (i.e., the Maternal and Neonatal Health and Nutrition Project and Nutrition Education and Social Marketing Project)<sup>2</sup>. Finally, professionals in the field were asked to evaluate project activities that had taken or were taking place in their countries.

Site visits, despite being limited by accessibility and resources, were important in providing the team with a sense of what the various project components had been able to achieve in the field. Only by interviewing involved parties who had actually been trained, had implemented project activities or used project materials was the team able to assess the effectiveness of the contractors' work and the potential for project activities to have an impact both at present and in the future. In addition to being explored during the site visits, the important aspects of sustainability and institutional development were reviewed and evaluated during the course of the investigation. Ideas about what future needs exist in regards to maternal and infant nutrition were also pursued.

To permit a thorough study of the five project components, each member of the team was matched through his/her speciality with a particular project activity. This permitted a more extensive review of project-related documents and additional interactions with those working in a specific activity. Each member of the evaluation team wrote up his or her findings in a report for the team leader who was responsible for drafting the evaluation report from the collective findings. Each member then reviewed the draft, making corrections, additions, deletions, modifications which they considered essential to reflect the team's findings as accurately and fairly as possible.

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<sup>2</sup> The current Cognizant Technical Officer (CTO) for the MIN Project participated in many of these meetings.

## 2. Report

The Evaluation Report consists of three chapters in addition to the Introduction. Chapter II reviews project background, focusing on the first seven years of the MIN Project, thus setting the stage for the last several years upon which this evaluation concentrates. Chapter III summarizes the evaluation teams' findings. This chapter is divided into separate sections on the various project components. This is the summative part of the evaluation exercise, reviewing what has taken place, the results, achievements and constraints. The last chapter, Future Considerations/Recommendations shifts attention to the formative issues of what remains to be done and how best that might be achieved. Based on what was learned in the evaluation, this chapter includes a number of recommendations as to how the vulnerable target group in the developing world, especially the infants and their mothers, might benefit most from a follow-on project.

## II. BACKGROUND

The project, originally entitled the Improvement of the Maternal and Infant Diet Project, has been known as the Maternal and Infant Nutrition (MIN) Project. It began in 1979 and had a budget of slightly less than \$20 million over its 10-year life. Project activities were designed based on the underlying assumption that the project would lead to improved maternal nutrition and adequate infant nutrition in developing countries during the critical first years of life. It was anticipated that this would significantly reduce infant and child mortality and malnutrition. The project was implemented in two phases.

### A. Phase I

Approximately \$7.8 million was expended over the initial four-year period (1979-83). The MIN Project supported four major activities during this phase: establishing and sustaining an information clearinghouse, conducting studies on the role of infant formula, providing coordination and consultation services and developing nutrition education and training approaches. During Phase I, the project provided such services as:

- Using mass media to reach target populations with educational messages;
- Incorporating appropriate messages into primary and secondary school curricula;
- Training outreach workers from other sectors;
- Recruiting medical personnel;
- Disseminating a newsletter by means of an information clearinghouse; and
- Conducting studies of infant feeding trends and their determinants to identify policy options to improve feeding practices.

Phase I laid the foundation for testing successful and innovative approaches on a broader pilot basis. A series of sensitization and planning workshops were held in 17 countries and research on problems and determinants of infant feeding practices were carried out in 14 countries. Training curricula were developed in 20 countries. Eight countries designed or launched national-scale, multi-component programs with project assistance. The circulation of the Mother and Children Bulletin produced with project funds reached 12,000.

Phase I can be described as primarily exploratory in nature. A wide assortment of small contracts, grants and cooperative agreements funded research, field trials and technical assistance which set the stage for later activities. As can be seen in Table I (from the mid-term evaluation), 19 different activities were involved at different times during the MIN Project. Those interested in details concerning the individual activities should refer to the Interim Evaluation (September 1986).

## B. Phase II

In mid-1983, the MIN Project was extended until the end of 1989 and total life-of-project funding increased to \$19,977,000. While the overall goal of the project remained the same, the focus of Phase II was to reduce infant mortality by shifting the emphasis of the project toward the mother who had been neglected during the first part of the MIN Project.

By improving the mother's nutritional status, infants would be stronger at birth and could be better nourished through breastfeeding. Project activities continued to concentrate on education, training and information dissemination with an increased emphasis on field studies on maternal/infant nutrition and low birthweight determinants and interventions. Phase II concentrated funds in five major contracts - the four activities which were part of the MIN Project prior to the Interim Evaluation and a new maternal research component. These five will be reviewed at length in Chapter III (Findings of the Final Evaluation), but it is useful to summarize the status of the four activities as of the Interim Evaluation.

o The Lactation Management Education Project - In August 1983, the San Diego Lactation Program began the Lactation Specialist Training Program with funds from a MIN Project component (the International Nutrition Communications Service - INCS - for which the Education Development Center - EDC - was the contractor). The objective was to assist in the promotion of breastfeeding in developing countries by improving the knowledge and practice of lactation management by current and future health care providers. This was to be achieved by training teams of physicians and nurses from teaching hospitals in developing countries to be lactation specialists; by assisting these teams to develop a model of service delivery and teaching appropriate to their local conditions; by helping the teams design in-service training activities for their colleagues in support of breastfeeding; and by selecting and developing appropriate teaching materials for the teams' programs in-country.

Between August 1983 and early 1985, four training sessions had been held for 20 physicians, 12 nurses and 3 nutritionists who, in turn, developed similar programs for their associates when they returned home. This gave the project significant "multiplier effect", spreading the benefits of proper lactation management in their countries. In 1985, the San Diego Lactation Program (Wellstart) was given a direct grant by S&T/N to continue to refine the training program on their own.

o The Weaning Project - A competitively-bid contract was awarded to Manoff International (became the Mannoff Group in 1989) in 1985 to support research and provide technical assistance services to improve weaning practices and weaning behavior in developing countries using a social marketing approach. A major component of the Weaning Project was research to assess the various factors which contribute to weaning behavior, identifying beneficial and harmful practices as to their effects on nutritional status of infants and young children. The second element was technical assistance to help host countries and PVOs to take actions to ensure that weaning practices in their respective countries are nutritionally sound.

As originally conceived, the major task of the project was to provide technical assistance to four countries (one in each of the A.I.D. geographic regions)<sup>3</sup> to promote healthful weaning practices. Emphasis was placed on heavy, "up front" work in-country, to analyze determinants of infant feeding before training and materials development began. Several years into the project, the scope of work was amended to expand its operations sequentially to a total of eight countries, although the full package of project services were not to be available to the additional four countries. At the time of the Interim Evaluation, the eight countries where project activities were to take place were Cameroon, Ecuador, Ghana, Indonesia, Peru, Swaziland and Zaire as well as one in the Caribbean Region to be identified later.

The major outcomes of the Weaning Project were expected to be:

- A description of current weaning practices in project countries
- An action strategy for their improvement;
- An assessment protocol (ie., research methodology) to utilize and analyze the situation in other countries and share with them;
- Trained people in-country who could utilize the qualitative research methodology and other skills necessary for project implementation and evaluation; and
- Four implemented and evaluated projects from which to learn about improving weaning practices.

o The Dietary Management of Diarrhea (DMD) - In September 1985, the Department of International Health at Johns Hopkins University was competitively awarded a three-year cooperative agreement to implement the DMD Project. The objective of the project was to integrate safe and effective intervention strategies for improving the dietary management of acute childhood diarrhea into ongoing diarrheal disease control, nutrition, and/or primary health care programs in two developing countries. This was a logical outgrowth of the funding and program development in ORT (oral rehydration therapy) that was taking place at the time. It capitalized on the international interest in diarrheal disease and provided an opportunity to demonstrate the importance of feeding and nutrition to child survival programs.

The countries selected were Nigeria and Peru. The first phase of the project consisted of conducting sample surveys to collect data on current feeding practices during an episode of diarrhea and to catalogue locally available foods and how they are prepared. At the same time, ethnographic studies were conducted to identify cultural factors associated with feeding during a diarrhea case.

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<sup>3</sup> In 1987 AID combined the Asia and Near East regions into one (Asia/Near East or ANE) so that at present there are only three geographical regions represented.

o Clearinghouse on Infant Feeding and Maternal Nutrition - This component of the MIN Project is the oldest activity having been established in the first year of the project in 1979. APHA was awarded the contract twice based on a competitive bidding process and has been the contractor ever since. The purpose of the Clearinghouse is twofold:

- To improve access to information and materials in child and maternal nutrition for developing country health and nutrition practitioners and policy makers; and
- To help them implement more effective programs and policies to improve maternal and child nutrition.

To achieve these objectives, the Clearinghouse was to establish a repository for information, publications, materials on the technical and programmatic aspects of breastfeeding, infant and child feeding, maternal nutrition, training and legislation, as well as publishing and distributing a newsletter on these topics (3 times a year in English, French and Spanish).

The Mothers and Children Bulletin was begun in the early 1980s to provide information to nutritionists, health practitioners, policymakers, and project personnel working in developing countries. By the time of the Interim Evaluation, circulation was approaching 13,000, 85 percent of whom resided in developing countries.

The Clearinghouse has grown in importance since the early days of the effort. In 1986, when the Interim Evaluation took place, approximately 5,400 documents, books and education materials were catalogued. The information service attached to the Clearinghouse provides a variety of services to the field, including photocopies of articles, bibliographies, referrals and workshops/conference information packets, at no cost to those requesting them.

### C. Summary of Interim Evaluation Findings

A number of important findings resulted from the Interim Evaluation. For example, research revealed that attitudes and practices of health care providers were important factors affecting initiation and duration of breastfeeding in hospitals. As a result, training courses for hospital staff in lactation management were designed and carried out.

The review also pointed out that although maternal nutrition was supposed to be a targeted focus throughout the life of the project, very little attention had been paid to this important aspect.

Concern was raised that the infant feeding studies which had been conducted in six countries had not been translated into any programs which had broader impact beyond the original sites of the research. According to the Interim Evaluation, this is explained in part by the concentration of the international health community on ORT and immunization interventions, the "twin engines" of the Child Survival focus.

The overall assessment of the early phase of the MIN Project was that even though some of the separate sub-projects achieved significant results, the project as a whole displayed "a certain incoherence, largely because of the sheer diversity of activities". The complex matrix of activities was too difficult to manage from an organizational viewpoint--"too many players, too much content". Despite this, the early stage permitted field needs to be assessed, allowing real problems to be filtered out and worthwhile approaches and interventions identified.

The recommendations from the mid-term evaluation have guided project activities over the last three years of the MIN Project. Most importantly, the reviewers stressed the need to focus project attention, efforts and resources on a more limited set of activities. In addition, the institutionalization and replicability of project activities were to receive greater emphasis. Sustainability of the breastfeeding component was thought to be very important, stressing the spread effect to be gained by the trained trainers returning to their homelands and training colleagues in lactation management. Finally, weaning food activities were to be developed and maternal nutrition issues were to receive the attention they had not been accorded in the first phase of the MIN Project. It was with these recommendations in mind that the final evaluation team began its review of the last three years of the MIN Project.

### III. FINDINGS

During the last three years of the MIN Project, activities have focused on several of the most important components as identified in Plan I of the project. As recommended in the Interim Evaluation, special attention has been paid to breastfeeding (the Wellstart Lactation Management Project). In addition, the Weaning Project has continued its research and provided technical assistance to improve weaning practices in a selected number of developing countries. Closely associated with the latter effort has been the Dietary Management of Diarrhea Program which addresses feeding during an episode of diarrhea, one of the most serious problems facing young child development. The fourth component of the latter phase of the MIN Project has been the Research in Maternal Nutrition and Health Care which was initiated in late 1986. This activity was initiated as a direct response to the Interim Evaluation's recommendation that more work was required on the maternal-related nutrition issues which had been neglected during the first seven years of the project. Finally, the Clearinghouse on Maternal and Infant Nutrition continued as a vital support element of the MIN Project. In this section, the achievement of each of the five components over the past three years are provided as the basis upon which to determine what might follow when the MIN Project concludes on 31 December 1989. This is detailed in Section IV of this report.

#### A. Lactation Management Education Project (Wellstart)

1. Background: The San Diego Lactation Program was initially funded in 1983 to establish the Lactation Specialist Training Program under the INCS component of the MIN Project. The goal of the project is effective clinical management of lactation and breastfeeding. As outlined in the previous chapter of this report, the project was to train teams from hospitals as lactation specialist and develop teaching materials. The project was designed with a built-in "multiplier effect" - those trained in the program would return to their respective countries and train their colleagues, both in their own hospitals and in other hospitals which had a large number of maternity cases.

In 1985, the San Diego Lactation Program (or Wellstart) was given a direct grant from A.I.D., S&T/N, under the MIN Project to continue their work for an additional 18 months. This was followed in 1987 by another two-year grant.

2. Course Description: The standard Lactation Management Education (LME) course given by Wellstart lasts four weeks (course description, Attachment IV) and is given at Wellstart facilities in San Diego. A modified course of three weeks has been developed in Spanish. The courses have in-depth theoretical content, as well as an extensive clinical component. Course content is up-dated constantly and is adapted to meet the special needs of each group. As the course has progressed, additional emphasis has been placed on multidisciplinary curriculum development, program planning and evaluation and interdisciplinary team dynamics. The courses are taught by the eleven full-time and two part-time staff members of Wellstart plus

guest lecturers, including well known experts in the field of lactation management and promotion. Since the beginning of the course, a nutritionist has been part of the Wellstart staff.

Nutrition is an integral part of the Wellstart course. While the course covers numerous aspects of breastfeeding, nutrition is interwoven throughout the course. As the course description (Attachment IV) illustrates, considerable time is devoted to various aspects of nutrition. Sessions include maternal nutrition, infant nutrition, and the nutritional composition of human milk (e.g., protein and amino acids, calories, carbohydrates, fatty acids, micronutrients). The superiority of human milk over cow's milk is demonstrated. Under infant nutrition, a number of different topics are covered, including slow growth, insufficient milk syndrome, low birth weight babies, treatment of malnourished infants, weaning and growth monitoring. For example, the course includes the nutritional needs of pre-term babies and how the nutrient content of human milk meets those needs.

Considerable time is also spent on training the course participants on proper nutrition counselling, both in terms of content and techniques. Nutrition counselling is an important element of lactation management. Every woman utilizing the clinic undergoes nutrition counselling and if nutritional problems are identified, the woman is sent to a specialist. The students observe nutrition counselling sessions at the lactation management center itself or at the associated hospital (the University of California at San Diego Medical Center). The participants in the course have the opportunity to see how proper nutrition counselling for newly delivered mothers is done. The trainees also observe the training of resident pediatricians and nurses, thereby acquiring improved teaching methodologies. Finally, trainees visit a clinic in Tijuana (Mexico) which has developed a very strong breastfeeding program. This gives the trainees an experience in a developing country environment, similar to what they might find at home.

Another important part of the Lactation Management Course is the promotion of rooming-in. Experience has demonstrated that rooming-in is vital for proper breastfeeding (i.e., early initiation and mother-child bonding).

The decision to conduct the course in San Diego instead of on-site in the program participants' countries is based on the following rationale:

- Participants will be better able to "focus" on learning if they are removed from their day-to-day responsibilities;
- The environment in the U.S. will foster the breakdown of traditional barriers between physicians, nurses and nutritionists (when they participate) and encourages "team building";
- The program participants will be able to share valuable experiences and develop working relationships with professionals from other

countries, thereby helping to establish regional or sub-regional lactation management networks in the developing world;

- The critical clinical experience component of the LME course will be provided better at the clinical facilities in San Diego where the environment can be controlled; and
- A working "model" of proper lactation management will help the participants learn and give them something they can adapt to their institutions.

Table I summarizes the number of courses conducted, number of health professionals trained and number of countries represented:

TABLE I

<u>Phase</u>	<u>No. of Sessions</u>	<u>No. of Teams</u>	<u>No. of Physicians</u>	<u>No. of Non-Physicians</u>	<u>Total Trained</u>	<u>No. of LDCs Represented</u>
Phase I (1983-5)	4*	15	21	15	36	10
Phase II (1986-89)	13*	39	87	76	163	10**
Total	17	54	108	91	199	20

\* In Phase I, 3 sessions were in English, 1 in Spanish; Phase II, 8 in English and 5 in Spanish.

\*\* This does not include one doctor from Poland who attended one of the sessions under UNFPA funding. This number represents only new countries (teams from 6 countries already having Wellstart-trained professionals were also trained).

The number of medical and para-medicals trained directly by Wellstart is only the beginning. Those trained in lactation management represent 38 teaching hospitals. Based on reports from Wellstart graduates, their training plans and Wellstart projections, an estimated 13,000 health professionals in 20 countries<sup>4</sup> will have been trained as a result of the Wellstart Program by 1993. This estimate includes those directly trained by Wellstart, those trained in-country by the Lactation Management course graduates and those trained by the local trainers.

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<sup>4</sup> The 20 countries are: Kenya, Nigeria, Sierra Leone, Swaziland and Uganda in Africa; Indonesia, Philippines and Thailand in Asia; Bolivia, Brazil, Chile, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico and Peru in Latin America; and Egypt in the Middle East.

The majority of professionals who attend the Wellstart course have major teaching responsibilities in their respective countries. This has resulted in a strong, built-in "multiplier effect" of the LME program. The majority of graduates return to their countries and are responsible for the design and implementation of extensive educational/training/in-service programs in lactation promotion and management, often on a national level. In addition to teaching physicians, nurses, midwives, nutritionists, social workers and other health professionals, the graduates have initiated programs to train other institutional and community-based health workers as well as community leaders. For example, traditional birth attendants have been trained in Indonesia and mothers as lactation counselors/promoters in their communities (in Thailand) have been trained.

Only a few professionals designated as "nutritionists" have been trained as part of the Wellstart program. This lack of nutritionists is explained by the fact that, typically, hospitals in developing countries do not have nutritionists on their staff. Rather, it is the physicians and nurses who are called upon to do the work of a nutritionist, despite the fact that they receive little or no nutrition training in the medical or nursing schools. Thus, Wellstart provides very practical training and clinical experience in nutrition, as it relates to lactation.

3. Information Support: Wellstart not only provides a strong training program in lactation management, it also offers those participating in the program comprehensive information and materials support. To begin with, the trainees have access to a large collection of resource materials related to breastfeeding in both English and Spanish. These include videos, slides, slide-tape sets, books, reprints, and educational and training materials. Upon graduation, each team receives a library of 900 articles on selected aspects of lactation, infant feeding, and maternal child health, in addition to teaching materials which the participant teams select themselves. This mini-resource center permits each team to function effectively as a training unit upon return to their respective countries. To date, a total of 8,169 teaching slides, 37 slide-tape sets, 37 videos, 229 textbooks, 12,395 reprints and 101 miscellaneous audio-visual and teaching aides have been selected and distributed to participant teams.

Wellstart has established a close relationship with the APHA Clearinghouse, another of the components supported under the MIN Project. There is considerable sharing of information in both directions. Wellstart has taken the responsibility for developing and maintaining a repository of information on breastfeeding and currently has one of the world's best collections on breastfeeding. The Clearinghouse relies on it for such materials, rather than duplicating such an in-depth, comprehensive collection on its own. This division of labor is appropriate and takes advantage of Wellstart's comparative advantage in the breastfeeding field. This arrangement works well because Wellstart and the Clearinghouse have coordinated and collaborated on the computerization of their collections. After discussions with APHA, Wellstart adopted the same Sci-Mate program for cataloguing materials, thus making the respective systems totally compatible. Another example of the close working relationship between Wellstart and the APHA facility is the supplying of Clearinghouse materials

(e.g., calendars and copies of the "Information Packet: Growth Monitoring") to Wellstart trainees. Wellstart has expressed its appreciation to S&T/N for all the support the Clearinghouse has provided over the years (letter to Dr. Sam Kahn, dated 26 October 1988).

One of the strengths of the Wellstart Project is that support does not end at the conclusion of the course. The LME program believes in and provides strong follow-up for its graduates. To begin with, there is a newsletter which is circulated to those who have attended the course and to other interested individuals and nutritionists. To date three newsletters have been published and distributed by Wellstart. Volume 3 (Autumn 1988) of the newsletter is provided as Attachment V. In addition, six relevant reprints of recent articles on various breastfeeding-related issues are selected, duplicated, and mailed out to all past program participants each month to add to their local resource centers and to keep the graduates up-to-date on what is happening in the breastfeeding field. Moreover, continuing education and support visits by Wellstart staff have been made to seven countries (Indonesia, Thailand, the Philippines, Egypt, Kenya, Honduras, and Bolivia).

The Wellstart program has also responded to a number of requests from A.I.D. Missions and past participants. These include:

- Assistance in implementing the Baseline Evaluation for Maternal and Child Health Care with Emphasis on Breastfeeding (Honduras);
- In-country teaching programs (Indonesia and Kenya);
- Development of a plan for a clinical research proposal (Thailand);
- Provision of a clinical and institutional observation experience for a physician interested in establishing a milk bank (Philippines);
- Organization of an Asian Regional Lactation Management Workshop for program participants and MOH representatives (Indonesia); and
- Assistance in developing breastfeeding and child survival activities and production of supporting video tape for UNICEF (Pakistan).

Wellstart has done a great deal to create awareness and support for breastfeeding through such things as holding a Child Survival Open House in their San Diego headquarters (in collaboration with the U.S. Committee for UNICEF's Campaign for Child Survival), publicity through a Cable News Network (CNN) feature on the Wellstart Program, and a "Child Survival Week" proclaimed by the mayor of San Diego on behalf of Wellstart.

4. Impact: The Wellstart Program has brought about extensive changes in the hospitals of the teams who have undergone the LME course. As Attachment VI shows, data from three countries (Indonesia, Philippines, Thailand) where teams from 15 hospitals had undergone training indicate

significant improvements. Almost 100,000 babies are born annually in these facilities, and routine bottle-feeding of breastfed infants dropped from 79% to 14% after the staffs of these hospitals completed the Wellstart training. The average time between delivery and first breastfeeding fell from 7.9 hours to 1.2 hours. None of the hospitals gave a bottle feeding before the first breastfeeding took place. In these 15 hospitals, exclusive breastfeeding at discharge in the 15 hospitals went from 63% to 91%. Over half the medical and nursing curricula at the participating hospitals had been changed to include Wellstart information and materials. In addition, to date, 47% of the perinatal nursing staff have received formal training in lactation management by Wellstart graduates.

More impressive than these intermediate indicators of coverage are the data on impact, i.e., how the trainees who have completed the Lactation Management Course have instituted policies and practices in the respective institutions that decreased morbidity and mortality figures. Table II presents data concerning changes that took place in Indonesia once the Wellstart trainees introduced the practice of rooming-in.

TABLE II

		6-Months before Rooming-in (#1612)	6-Months after Rooming-in(#1733)	Percentage Replication
<u>Morbidity</u>	-Acute Otitis Media	205(11.1%)	17(0.9%)	91.9
	-Diarrhea	77(4.2%)	11(0.6%)	85.7
	-Neonatal Sepsis	61(3.3%)	17(0.9%)	72.7
	-Meningitis	25(1.3%)	4(0.2%)	84.6
<u>Mortality</u>	-Infection	41(2.2%)	16(0.8%)	63.6
	-Noninfection	58(3.1%)	51(5.2%)	16.1

Another important benefit from the Wellstart Program would be the cost savings realized by the hospitals adopting the lactation management approach. To date, no study of the cost savings has been conducted. But there are indications that financial savings derived from the adoption of a rooming-in/breastfeeding policy are considerable. A hospital in Honduras which delivers approximately 1,000 babies a month estimated their direct cost savings as at least \$14,500 per year (the indirect cost savings due to a reduced morbidity were not calculated). A hospital in Denpasar, Indonesia also mentions financial savings after the rooming-in/breastfeeding promotion policy was introduced, but they have not quantified the amount. One of the biggest hospitals in the Philippines which delivers between 80 and 100 babies daily calculated that it saves over \$100,000 a year in infant formula (an 80 percent reduction), bottles, nipples, water and power for sterilization and manpower since starting the rooming-in/breastfeeding policy. The number of formula feedings decreased from an average of 45,758 to 9,101 per month. Based on this and other experiences, a number of additional significant savings resulted from the changes instituted by the Wellstart trainees in Lactation Management, including:

- o Drugs
  - Use of pitocin (\$1 per dose) is reduced, since the immediate initiation of breastfeeding reduced post-partum blood loss;
  - Use of medicines to fight infections is reduced due to fewer infections with rooming-in;
- o More Efficient Use of Space
  - Vacated nursery, using the space for other purposes (e.g., room for women convalescing from D&Cs who previously had been forced to stay in the corridors);
- o Personnel Productivity
  - Nursing staff relieved of some duties as mothers assume more responsibility with rooming-in;
  - Less special attention to low birth weight (LBW) babies as rooming-in standard is reduced from 2500 grams to 1700 grams;
- o Earlier Recuperation
  - Hospital stay of C-section mothers reduced from 7 to 5 days and of regular deliveries from 3 to 1.0 - 1.5 days.

Among the hard to verify and monetize benefits are the reports that rooming-in results in fewer incidents of infant abandonment and abuse. When considering Wellstart's reasonable cost per total number of trainees (direct as well as indirect) and the considerable savings that have been demonstrated, this appears to be a very cost-effective effort.

A few individuals, especially those with experience in Africa, point out correctly that a hospital-based program encouraging breastfeeding will have little impact on the situation in Africa since the vast majority of births are not delivered in hospitals. Many not fully conversant with Wellstart, incorrectly perceive it as an exclusively hospital-based approach. The Project Director is quick to correct this impression. She points out that the program is set up in such a way to encourage the training of paramedics in the developing countries. In fact, the trained teams have returned home and established training programs for non-physicians, community health workers, and primary care providers. The basic course is deliberately structured to be adapted by the trainers to local situations and conditions. The Wellstart Project's lack of French language capability has prevented it from carrying out any training activities of health personnel from Francophone Africa.

5. Demand Generation: The Wellstart Program has generated considerable demand for services. In the words of an official in the ANE Bureau, "The Wellstart Program is one of the most successful programs ever funded by A.I.D.. Their major problem has been how to respond to the enormous numbers of requests for technical assistance and program participation." This is substantiated by the fact that in the latter part of 1988, letters from 117 individuals in 45 countries inquiring about course participation were received and were on file. In addition, A.I.D. regional bureaus and missions indicated interest in more extensive programs from Wellstart in both the planning and implementation of major national breastfeeding

promotion projects and provision of health professional training (e.g., Belize, Bolivia, Ecuador, Pakistan, Philippines, Zaire). Because of the limited resources, the Wellstart Program was able to fulfill only a portion of the demands made upon its services.

Another indicator of the demand for the program are the buy-ins that Wellstart received from regional bureaus and missions. Out of the \$3,261,559 allocated to the Wellstart Program, the San Diego operation received over a half million dollars (or 15 percent of the total) in the form of buy-ins from the Asia/Near East Bureau and Bolivia, Ecuador, the Population Council, and the Institute for International Studies in Natural Family Planning (IISNFP) at Georgetown University.

Wellstart has also served as resource of breastfeeding and lactation management for a number of projects and groups involved in Child Survival activities. Over the last five years, they have collaborated with AED (Academy for Educational Development), APHA, the DMD Project, FHI (Family Health International), ICRW, NCIH (National Council for International Health), PRITECH (Primary Health Care Technical Assistance), UNICEF, the Weaning Project and WHO. Such collaboration has increased the project's spread effect and enhanced its impact.

6. Future Consideration: In any future extension of the Lactation Management program, a greater effort should be made to demonstrate the effectiveness of the approach in the African context and rural environment.

Despite the very impressive performance of the Wellstart Program over the last three years, several concerns were identified during the course of the evaluation. One was language capability. While Wellstart has trained a number of groups in Spanish and course materials have been translated into Spanish, Wellstart's overall Spanish capability is limited. This forces Wellstart to reduce the length of the training course (from four to three weeks) as well as subsequent follow-up activities. The Program as yet has no French capability, which has precluded the training of any teams from Francophone Africa.

Other problems involve the program's inability to respond to all the demands for training and technical assistance they receive due to their current structure and funding level. In addition, no study has been carried out to quantify the savings derived from breastfeeding promotion and the rooming-in approach. Moreover, "spread-effect" activities of those who have received the Wellstart training are limited and/or slowed due to a lack of resources in the project to train others and promote the breastfeeding/rooming-in strategy in their home countries. Any future Lactation Management Project should include funds for the support of in-country training once the trainees return home. Finally, project administrators at Wellstart mentioned difficulties in planning due to uncertain funding.

## B. The Weaning Project (The Manoff Group, formerly Manoff International)

1. Background: When the Interim Evaluation of the MIN Project took place in the latter half of 1986, the Weaning Project was still in its early developmental stage. As a result, there was little information on the effort in the report. However, concerns were raised in the early days of

the Project that the scope of work in the contract was "undoable" and internally inconsistent based on limitations of time and budget. The Project CTO from 1985 until 1988 described the contract as "unrealistic," expecting too much in too short a time with too little money (\$1,300,000 to work in four countries over a 5-year period).

According to the original contract, one principal site was to be located in each of the four geographical regions. Although the original contract called only for country assessments of weaning practices, it was clear that countries as well as the Office of Nutrition, wanted projects to be carried out. Adjustments occurred based on world political conditions, A.I.D. pressures and in-country political problems. For example, a site in the Near East region was dropped. Of the four original sites (Cameroon, Indonesia, Peru, Zaire), two had to be closed (Peru due to political unrest, Zaire due to lack of local cooperation). Ecuador replaced Peru and Swaziland took the place of Zaire. Despite reservations on the part of the Weaning Project's Advisory Board and its Director, a fifth country, Ghana, was added with the Africa Bureau's early financial support.

2. Approach: The Weaning Project was a social marketing approach, consisting of 5 distinct activities - research, training, strategy formulation, implementation, and evaluation.

The first activity component of the Weaning Project approach is to carry out research identifying knowledge levels and practices of weaning habits. This formative research fulfilled the terms of the contract, producing country assessments of weaning practices. The results serve as a basis for selecting specific project priorities and necessary and feasible behavioral changes. From this point, messages for interpersonal and mass media communications are developed and tested. A research protocol, based on the first step, has been developed by the Manoff Group and is adaptable to country-specific use. Research is complete in Ecuador, Indonesia, Cameroon, and Zaire (even though a program was never developed there) and is close to completion in Swaziland and Ghana.

The research protocol which has been developed by the Manoff Group consists of:

- A Literature Review - on country-specific situations in child nutrition (nutritional status, child feeding practices - breastfeeding and weaning, and existing country programs);
- Initial Focus Group Discussions - childfeeding practices explored with small *homogeneous* sub-groups of the target population (e.g., young mothers, "experienced mothers", grandmothers, fathers);
- Ethnography - in-depth household interviews and observations of in-home practices in such things as weaning food preparation and preservation, feeding schedules, feeding methods, beliefs about child feeding and women's time use;
- Household Intervention Mini-Trials - one or two changes appropriate to the child's age are recommended in the child's feeding practices to obtain mother's reactions and determine feasibility; and

- Final Focus Group Discussions - new concepts tested with people who have not participated in steps 2, 3 and 4 above to get the "top of the mind" reaction and select the most acceptable messages.

Problems and resistance points which prevent or retard behavioral change are identified and addressed directly. The results of this formative research inform those involved in the project about the content of training and intervention strategies that must be developed in order to improve the nutritional status of the young child (0-2 or 0-3 years of age) population through local weaning practices.

In terms of strategy formulation, the Weaning Project strategies have placed heavy emphasis on the use of interpersonal communications, as well as mass media. The media mix is tailored to the specific country, determined by its characteristics and needs. The messages are integrated with existing programs: CARE's program in Cameroon, Agriculture Extension and Primary Health Care programs in Swaziland, the Ministry of Health's National Child Survival Program in Ecuador, and Family Health Improvement (or UPGK) Project in Indonesia.

In every country, a strategy formulation workshop was held by local counterparts, during which the results of the research were discussed and a strategy agreed upon. While communication was always one of the elements in this strategy, other common elements included were training and the need for a product (such as a bowl to teach mothers about food quantities).

An important element of the communications strategy developed by the Weaning Project is a set of counselling cards which health workers are trained to use in connection with their growth monitoring responsibilities. The front of the card illustrates the message which is printed on the back of the card for the health worker to use as references. Concise, focused messages for each target group (mothers of each age subgroup, mothers of sick/convalescing children) are provided. The counselling cards address the most common deficiency in growth monitoring programs, the lack of any appropriate training for the mothers.

The complete social marketing approach was implemented in four countries (Cameroon, Ecuador, Indonesia, Swaziland), following the steps mentioned above. Formative research exercises were conducted in each of the countries. A variety of young child feeding problems were identified. In Cameroon, for example, exclusive breastfeeding was prolonged (as much as eight months) so the messages developed promoted the earlier introduction of nutritious supplementary weaning foods. In Indonesia and Swaziland, the formative research found the opposite problem, i.e., that supplementary foods were introduced too early. Thus, the Weaning Project messages were tailored to emphasize the proper initiation and longer duration of exclusive breastfeeding.

Based on the research results, the communication messages are developed. The messages are tested, modified and tested again to ensure that the desired results are obtained. The resulting messages are used both for interpersonal education and mass media (such as radio spots and posters), one reinforcing the other. Messages are always designed to be positive and supportive to the mother, with the intension of building her self-confidence in her role as care-giver.

After developing the messages, attention is directed at identifying the most effective media strategies. A variety of different options exist and specific ones were found appropriate for particular countries participating in the Weaning Project (see Table III).

Table III

<u>Media Options</u>	<u>Cameroon</u>	<u>Ecuador</u>	<u>Indonesia</u>	<u>Swaziland</u>
<u>Media</u>				
television		X		
radio		X	X	X
<u>Counselling</u>				
health center		X	X	X
community worker	X	X	X	X
<u>Other</u>				
posters	X	X	X	
local shopkeepers			X	
hospital education		X		
medical personnel		X		
traditional healers/ leaders				X

Of the five countries where the Weaning Project has concentrated its efforts, Indonesia is the most developed. Here the nutrition/weaning promotion campaign is built around Ibu Gizi (Mrs. Nutrition). This wise, mature, modern mother figure gives the messages credibility and acceptability. Her picture appears on all printed material and her voice on all radio spots. The spots are broadcast in the local dialects and can be modified according to local customs. Songs and jingles with short infant feeding messages have also been developed. Posters carrying one short concise message (e.g., colostrum, breastfeeding, weaning food, increasing quantity of child's food intake as it grows older) are also developed as part of the Weaning Project with Ibu Gizi on each. The posters reinforce what is being said in other media. Local community leaders and shopkeepers, as well as health workers, are trained in the content of the messages and materials. In an effort to saturate the area with the nutrition concepts, the educational effort has recently been expanded to cover the entire provinces where it was initiated, and there are plans to expand to new provinces.

Another example is in Swaziland where formative research identified the problem of diluted weaning foods. This indicated a need to develop and promote a nutrient dense weaning food. Accordingly, the Weaning Project has experimented with the use of malt (amylase). In this way, the project has been able to produce a "liquid" (soft) weaning food of high nutrient value and density. To assure that the mother feeds the child enough of the weaning food, the Manoff Group has designed a plastic bowl calibrated to show portion size according to the child's age. The project is negotiating with a company to produce the bowls in Swaziland.

Evaluation of the effectiveness of the formative research and the resulting weaning education and training is an integral part of the social marketing approach developed in the Weaning Project. In order to know whether the intervention is having the desired effect, the project must

track several things, including changes in the knowledge and attitudes among the target population, in improved feeding/weaning practices, and in increased consumption/nutrient intake. The most convincing indicator of whether the Weaning Project is achieving its objective is improved nutritional status among the target group. This, however, is difficult to determine and is included in only two of the project's "impact" evaluations. The findings, whether intermediate (e.g., improvements in knowledge, attitude, practices) or impact (nutritional status), enable project managers to make mid-course corrections, plan future strategies and develop appropriate materials.

2. Preliminary Results: Although the experience varies greatly in each country in which the Weaning Project has worked, it has identified common young child feeding practices and deviations from the proper pattern. These include:

- Resistance to giving colostrum to infants;
- Extensive prelacteal feeding;
- Early supplementation with liquids (sometimes mixed with solid foods), even in the first month of life;
- Early and abrupt cessation of breastfeeding (after two or three months);
- Lack of awareness about the quantity of food a child requires on a given day, the frequency of feeding, and the amounts actually consumed;
- Dilution of young children's food up to the age of two in the belief that children are unable to digest "solid" foods;
- Inability to evaluate whether a child is growing satisfactorily and to recognize the relationship between feeding practices and health status; and
- Lack of knowledge about infant and child feeding during, but particularly after, diarrhea episodes (i.e., there is no concept of recuperative feeding).

Evaluation activities are currently being carried out in Indonesia and Cameroon. While specific quantitative data, demonstrating improvements in knowledge, feeding practices, nutrient intake and nutritional status are not yet available, some preliminary qualitative findings indicate that positive changes are taking place in both knowledge and practice among the target populations (i.e., mothers and community level volunteers) in these two countries. Based on a mid-term evaluation carried out by the Weaning Project in Indonesia, there is an impression that positive behavioral changes are taking place. For example, in early breastfeeding behavior, mothers now report giving colostrum to their infants. In addition, the mothers apparently have made positive changes in what and when to feed their young children (e.g., introducing adult food later, preparing the prescribed weaning food, increasing the frequency of feeding). In

Cameroon, there is also qualitative evidence that mothers are following the message developed by the Weaning Project and are now feeding the enriched porridge to their infants and children. We must await the data that is now being collected in the evaluation component of the project to verify these impressions and quantify the extent of the behavior modification.

3. Training/Local Capacity Building: The Weaning Project, from the research phase through implementation and evaluation phases, stresses the development of in-country counterparts. It is this dedication and capacity to institutionalize the process which makes the Weaning Project unique, effective and sustainable. Thus, high priority is placed on training, and considerable time and resources are expended to develop training agendas and materials giving the in-country personnel the skills necessary to implement each step of the process with consistency in performance and product.

The Weaning Project has trained local counterparts and colleagues (ranging from central Ministry of Health personnel to local service delivery workers) in many subjects, including:

- Designing research protocols, conducting research and analyzing findings;
- Writing proposals;
- Orienting in social marketing techniques;
- Developing communications capabilities - counselling skills and use of counselling cards;
- Monitoring effectiveness and impact using objective criteria;
- Evaluating design and implementation; and
- Strengthening basic nutrition, breastfeeding and weaning instruction.

Training in the Weaning Project takes place on three levels. At the central level, the project develops capacity in the social marketing approach by involving local health (or other implementing agency) officials in the development and implementation of all project activities. At the implementation level, the Weaning Project has trained local health service delivery personnel in basic nutrition, and young child feeding and counselling skills. The third level of training involves more formal training in child feeding for doctors, nurses and other para-medical workers. An important element of this training aspect is the development of a quality curriculum in weaning habits and nutrition.

4. Sustainability: A distinguishing feature of the Weaning Project which is mentioned by all who have had an opportunity to observe its field operation is its ability to work in close collaboration with in-country staff. The Project Director makes the local counterparts full participants in the process. While this requires additional time, it has greatly increased local capabilities and the chances for sustainability. The site visit to Ecuador found that the technical assistance provided by the project had consistently been of top quality with a high level of sensitivity and respect for MOH priorities and in-country professionals. While difficult political situations arose, they were handled by the Project Director in a professional and diplomatic manner.

The Project's history of training local counterparts in the social marketing methodology has resulted in the transfer of skills which are imperative to the survival of this approach. All who know the project are confident that the approach will continue. Effective institution building has apparently taken place, an all too rare occurrence in the development field.

The efforts to improve young child feeding practices in all five countries are continuing with as much intensity as ever and making plans for the future, even as the Weaning Project itself winds down. This is the result of not only the demonstrated effectiveness of the approach, but also the partnerships that the Manoff Group were built during the project with local implementing agencies and international donors. Alliances were formed early, involving everyone in the development and implementation of the young child feeding activities. Continued funding has been arranged in all cases which greatly increases the chances that the efforts initiated by A.I.D. funding will not conclude with the end of the Weaning Project. In Indonesia, the local U.S.A.I.D. mission and UNICEF have made a commitment to continue funding for the Weaning Project-developed activities in the UPGK Program. CARE will continue its activities in Cameroon. UNICEF will be supporting the effort in Swaziland and Ghana, while the new A.I.D.-funded Child Survival Project will do so in Ecuador.

5. Strengths: Although the Weaning Project is still carrying out the evaluation of its activities and impact data is not yet available, the project has made several valuable contributions. Of primary importance is the process or social marketing approach developed during the course of the project. The procedures that one should use in determining the nature and extent of young child feeding problems and strategies to improve those practices have now been well established, tested and documented. Nutrition planners and programmers now have tools available to them that can be utilized in any country to develop culturally sensitive educational strategies to improve young child feeding practices.

The Weaning Project also deserves high marks not only for the development and implementation of the research and service delivery activities, but also for its generation of resources. As mentioned, the original scope of work was seriously underfunded. However, the contractor was able to almost double resources by attracting financial support from regional bureaus and missions. The buy-ins include:

Africa Bureau	\$400,000
Asia/Near East Bureau	\$100,000
Ecuador Mission	\$145,000
REDSO	\$100,000
Local Resources <sup>5</sup>	\$350,000

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<sup>5</sup> This amount went directly to in-country counterparts. Sources included U.S.A.I.D./Jakarta, UNICEF-Swaziland, CARE-Cameroon, Organization for Rehabilitation and Training (ORT)-Zaire, and U.S.A.I.D./Quito.

With its limited resources, the project has carried out activities in five countries (one more than originally mandated) and preliminary work in two more (Peru and Zaire), before deciding to reduce their losses and abandon the latter efforts, as described above.

6. Weaknesses: The greatest concern raised about the Weaning Project was that technical assistance was not always available when required. The primary reason for this was a lack of staffing. With limited project funds, most of the responsibility fell on the Project Director, a capable and committed individual who did as much as she could, but had limits. However, it should be noted that Manoff's inability to respond to all requests for assistance from project had an inherent advantage. It forced in-country personnel to play a more substantive role in the design and implementation of project activities. Another weakness is that the scope of the project precluded broader coverage, as it was restricted to programming in four countries. This, together with the limited staffing, prevented the Weaning Project from responding to expressions of interest for technical assistance from additional countries (Bolivia, Colombia, Guatemala, Haiti, Kenya, Pakistan). Obviously, more demand for the Weaning Project exists than could be met.

### C. The Dietary Management of Diarrhea Project

1. Background: The Department of International Health at Johns Hopkins University was awarded a three-year Cooperative Agreement in 1985 to improve the dietary management of acute childhood diarrhea. The scope of work for the project specified that project activities would be carried out in two developing countries. Nigeria and Peru were selected.

DMD Project activities are divided into two phases. The first consists of sample surveys to collect data on current feeding practices during diarrhea episodes and to catalogue how locally available foods are prepared. Ethnographic evaluations identified cultural factors associated with feeding during a case of diarrhea. Based on information derived from the research, dietary regimens are designed in Phase II which are pretested in the laboratory and during pilot field studies. If acceptable and a positive nutritional impact is observed, the information is disseminated to the target population and health workers for promotion among the target population.

2. Peru: DMD Project activities in Peru were carried out in close collaboration with the Instituto de Investigacion Nutricional. After a sample survey of breastfeeding and weaning practices, dietary and anthropological studies of child feeding practices during diarrhea episodes were conducted. A market survey identified nutritionally appropriate, low cost foods to determine the "best buys" (i.e., cost per unit of energy and selected nutrients). Prototype recipes were developed from locally available, low cost ingredients and tested for acceptability. The recipe that was found to be most acceptable was a traditional one referred to in Peru as Sanco. The DMD staff fortified the local recipe by adding either toasted pea or toasted fava bean flour and grated carrot to wheat flour. The recipe which the project staff call "Sanquito" could be prepared in less than 10 minutes. It had an energy density of more than 200Kcal/100

grams (see Table IV for the nutrient content). Field trials indicated that the recipe was also highly acceptable to infants and children suffering from diarrhea.

Having identified an acceptable food that could be fed to the young child with diarrhea, the DMD Project in Peru turned its attention to developing a communication strategy to promote the product and to train the mothers in its use. The Sanquito, with its increased caloric and protein value, was sold as a "diarrhea food". This label presented a problem later when the project attempted to broaden the use of Sanquito as a generalized weaning food. It had become associated with only diarrhea. In the end, the DMD activities in Peru were truncated on account of political unrest in the country and around the project site.

Table IV  
Composition of "Sanquito"

<u>FOOD</u>	<u>HOUSEHOLD MEASUREMENT</u>	<u>WEIGHT (g)</u>	<u>ENERGY (kcal)</u>	<u>PROTEIN (g)</u>	<u>VITAMIN A (mg retinol equivalent)</u>
Toasted wheat flour	1 cup	180	635	19.6	0
Toasted pea flour	1/2 cup	90	312	20.1	0
Vegetable oil	6 tbsp	40	352	---	0
Brown sugar	to taste (+ 1/2 cup)	140	352	---	0
Carrot	1 medium	65	27	0.4	693
Water	1 cup	200	---	---	0
		+ 180	1858	40.1	693
Energy Density:		221	kcal/100g		
% Protein Calories:		8.6			
1 cup contains approximately 250g:		550	kcal		
			11.9 g protein		
			206 ug RE equivalent		

3. Nigeria: In Nigeria, a multi- and inter-disciplinary team including nutritionists, epidemiologists and anthropologists was formed to carry out the research. A pap, called ogi (a fermented sorghum-maize), was the first food introduced to infants in the community. According to a survey, 40% of the 6-11 month olds were receiving pap, in addition to breast milk. There was a strong belief against introducing semi-solids before 12 months since it made infants "heavy" which was considered undesirable. In order to feed the ogi by hand, it required dilution, thereby decreasing its energy



and Decision Makers." It serves as a "how-to" guide for any program manager responsible for developing a DMD intervention.

The Peruvian and Nigerian efforts both carried out intensive studies of feeding practices during diarrhea episodes. In both countries, the DMD Project found in both countries that mothers continued to try to feed the sick child, but the child rejected the food. This is an important finding in that it counters the traditionally held belief that mothers do not attempt to feed a child with diarrhea. This finding has very significant implications for nutrition education and oral rehydration therapy projects.

5. Weaknesses: The MIN evaluation team raised several concerns about the DMD Project. One of these concerns involves the fact that the project concentrated more on weaning nutrition than on the feeding during and after diarrhea. A number of similarities can be identified between the DMD and Weaning Projects, particularly in terms of the methodologies and strategies. While the weaning food focus was especially strong in the Nigerian effort, it was also evident in Peru. Here, the DMD project devoted significant time and effort to the identification and promotion of a food that provided high density nutrition and was acceptable to weaning-age children. Although the product, Sanquito, was promoted as a "diarrhea food" in the beginning, efforts were made later on to broaden its image so that it was perceived as a weaning food. The evaluation team supports the need to emphasize the importance of feeding during and after an episode of diarrhea. But it also believes that in practice this can and should be done as a part of a young child feeding effort and included in the case management approach of ORT programs. It should not be viewed or handled as a separate issue.

Another concern is that there is little evidence that the findings of the DMD Project found their way into A.I.D.'s broader Oral Rehydration Therapy effort or the PRITECH Project, the Agency's principal source of technical assistance in ORT. To date, little attention has been given to the vitally important nutritional component of the therapy.

While a number of journal articles were published on the findings of the DMD Project, it is unfortunate that the Johns Hopkins team did not evaluate the nutritional impact of the DMD interaction. The project director blames this on time constraints.

#### D. Research on Maternal Nutrition and Health Care Program (ICRW)

1. Background: The ICRW project was awarded a contract to fund research on maternal nutrition and is the most recently established of the five activities in the MIN Project. It was established in late 1987 as a result of the Interim Evaluation finding that the maternal nutrition element of the project had been neglected. In an effort to rectify this situation, A.I.D. signed a Cooperative Agreement for two million dollars with the ICRW. It should be emphasized that at the time of this evaluation the ICRW effort was in mid-course, with only one of its funded projects completed. For this reason, it is impossible to address anything more than the

appropriateness of the research topics selected, their study designs, the process review mechanism and the administration/management of the effort.

The ICRW was to focus on ways to improve the health and nutritional status of mothers in developing countries, especially during the perinatal period. The objective of the project was to identify ways to reduce morbidity and mortality, before and after pregnancy. At the same time, it was hoped to prevent infant deaths resulting from low birth weights, short birth intervals and poor lactation. These objectives were to be achieved through a two-year program of operational studies and secondary data analysis, prior to the design and implementation of service programs. While infant feeding programs had already completed the research and pilot field testing stages and were ready for large-scale programming, maternal-related interventions were only beginning the first stage of problem identification and the development of possible interventions to rectify them.

The ICRW was to achieve project objectives by means of administering a research grants competition. The first solicitation for proposals was held in late 1987, issued in December for submission in January. The request for proposals was publicized through various means, including the Commerce Business Daily, newsletters, mailings, cables and word-of-mouth. Complaints were raised that not enough time was provided for the preparation of research proposals. The deadline was extended to March 1988. The number of proposals received (128) was considerably more than had been expected. Fifteen proposals were selected for funding, based on the quality of the proposal, the subject, and the region. Five proposals, already on hand were the first to be funded and served as a major stimulus for this project. These consisted of efforts by U.S. institutions to process data sets that had been collected in the early 1980s and parts of which had not yet been analyzed. These five efforts consumed a considerable portion (57 percent) of the funds available for supporting research. ICRW explains that these commitments were made before the response from the request for proposals was known, and at a time when A.I.D. and the ICRW were not confident that they would receive enough proposals to be able to allocate all the funds.

A Technical Advisory Group (TAG) had the responsibility of reviewing the proposals submitted to the competition. Some of the areas that the contract expected to elicit proposals include studies of low birth weight; maternal depletion; examinations of tools and standards for measuring maternal outcomes of pregnancy; investigations into the use of antibiotics to control infections during pregnancy and post-partum; and the effects of the drugs on infants and mothers. Attachment VII is a matrix of the ICRW-funded research projects.

2. Implementation: The request for proposals generated a surprisingly large number of responses. Many of the 128 proposals were of a high quality and could have qualified for funding, had the resources not already been allocated. The 20 studies that received support were broadly distributed geographically - 12 countries (Bangladesh, Benin, Guatemala, Jamaica, Malawi, Mexico, Peru, Philippines, Sri Lanka, Swaziland, Thailand, Zaire). More than half of the institutions receiving grants were American

and accounted for over three-quarters of the funding allocated for research. Attachment VIII lists the 20 institutions receiving grants and the amounts of these grants. The first five were funded non-competitively, as inferred above.

It is difficult to comment on the findings of the research and the quality of the work, since the studies will not be completed until the end of 1989. Site visits to ICRW-assisted studies in Mexico indicated that the studies were appropriate, useful, and timely. The results of the study in Tijuana, for example, was expected to improve the outcome of pregnancies in this city which currently has one of the highest infant and maternal mortality rates in the country. Of equal importance was the transfer of research skills and technologies to the local university involved in the ICRW-assisted study.

The study in Mexico City is researching the health-seeking behavior of pregnant adolescents and the social, cultural, and economic factors which influence their nutritional intake during pregnancy. The findings are expected to enable health workers and organizations, working with adolescents, to provide improved nutrition education and services to this high risk group.

The third ICRW-funded project visited in Mexico was a disappointment. It was the smallest grant (\$5,000) awarded by ICRW to fund the development of a video tape on breastfeeding. The video lacked a coherent script, creativity and did not present the message promoting breastfeeding effectively. It is unfair to concentrate too much attention on this effort, merely because it is the only activity to date completed under the ICRW-managed research component. This effort is also unique and unrepresentative among the ICRW-funded activities. It was the only video supported and reflected only the efforts of local researchers.

The project from Zaire, on the other hand, made an important contribution. This study compared two birthing alternatives and found that where no biomedical services are available, other than a trained caretaker, symphysiotomy (a procedure to separate the symphysis pubis to increase internal pelvic diameter thereby permitting vaginal delivery) for most obstructed deliveries can be a safe alternative to cesarean section.

The agencies which have received ICRW support compliment the organization for providing consistently excellent and appropriate administrative support, technical advice, and feedback throughout the life of the project. One concern, however, is the limited amount of technical assistance that the ICRW can provide. The group does not have funds available that would permit them to visit collaborating institutions and assist them in improving their research capabilities as much as they would like. This limits the funding group's institutional capacity-building role to long-distance feedback on research design and editorial help with their articles.

As part of their contract, each grantee must produce an article for submission to a peer review journal (national or international) based on their ICRW-funded research. Again, because the vast majority of the

research projects are in the process of writing their final reports, not many of the articles have been completed. The ones that have been submitted to the ICRW for review come primarily from the U.S. institutions. However, researchers in Guatemala and Sri Lanka have identified parts of their final reports as articles to be submitted for publication. ICRW has commented on these efforts, offering suggestions (as appropriate) on how they could be improved. ICRW has informed recipients that project files will not be closed until they submit articles for review, giving confidence that this aspect will be fulfilled.

The ICRW Cooperative Agreement also calls for at least two background/issues papers based on a review of the state of the art, technical literature and field programs. Suggested topics include determinants of demand for services during pregnancy and community and household approaches to provision of nutrition and health care during pregnancy. To date, the ICRW has published one such paper entitled, "Utilization of Formal Services for Maternal Nutrition and Health Care in the Third World" (by J. Leslie and G. R. Gupta, March 1989). Under-utilization is explained by the lack of sensitivity by the care givers to the emotional needs and cultural demands of the women. It has been well received by those the MIN Project evaluation team interviewed. A second research paper on "Household and Community Beliefs and Practices that Influence Maternal Health and Nutrition" will be published before the end of the project in September. Finally, the project will sponsor a conference in the fall of this year to which many of the grantees will be invited to discuss their research efforts.

#### E. Clearinghouse on Infant Feeding and Maternal Nutrition

1. Background: The Clearinghouse is the oldest activity in the Maternal and Infant Nutrition Project having been awarded to the American Public Health Association (APHA) through the competitive bidding process in 1979. The contractor is responsible for two specific, well-defined activities:
  - To establish a clearinghouse of materials on both technical and programmatic aspects of breastfeeding, infant and child feeding, maternal nutrition, training and legislation; and
  - to publish a newsletter in related topics three times a year in three languages (English, French, Spanish).

The contract to continue the Clearinghouse and information functions was rebid in 1985 and was once again awarded to APHA. The scope of work in the 1985 contract with APHA was written with the underlying intention of continuing the activities that had been established. The word which was used repeatedly was "maintain." No new or innovative departures were introduced either in the clearinghouse or the newsletter activities. Judged against the terms of contract, APHA has done a very good job in operating the information component of the MIN Project. It is useful to review in greater detail the two functions, first the Clearinghouse operation, followed by a look at the Mothers and Children Bulletin.

2. Clearinghouse - According to APHA's's contract, they were expected to maintain the Clearinghouse collection of approximately 4,300 volumes of assorted journals, reports, and educational materials. The Interim Evaluation of late 1986 reported that the Clearinghouse contained over 5,400 catalogued documents. APHA now reports that the Clearinghouse has over 9,000 documents and is fully automated.

The Clearinghouse staff report that they responded to 1,330 requests for information during 1988. Almost 40% of these requests were from the U.S. (see breakdown by region, Attachment IX). The facility is used by a variety of people, including students and contractors. One person stated that she could not function without the Clearinghouse with its broad range of topics and materials on MCH/PHC issues (see Thesaurus, Attachment X). The Clearinghouse has a file full of letters from grateful users of the facility - contractors who have used the repository, recipients of the newsletter, U.S.A.I.D. missions and PVOs who have received copies of materials or references that they had requested. Almost without exception, they mention the rapid, efficient and pleasant response from the Clearinghouse.

It has a particularly outstanding collection of relevant periodicals (405, with at least 25% being from abroad). The Clearinghouse also serves as a mechanism to collect and store materials developed and produced by the different actors in the MIN Project. While these are available through A.I.D., many people find it more convenient and quicker to get the documents they require through the Clearinghouse. In addition, the Clearinghouse provides special services to MIN Project contractors such as Wellstart which receives a weekly printout on breastfeeding materials from the APHA operation. In one year (January to December 1988), the clearinghouse responded to a large volume of information requests from A.I.D. (missions, regional bureaus and S&T offices) as well as from contractors - 12 from ICRW, 13 from Manoff, 15 from Johns Hopkins, 23 from AED, 14 from PRITECH, 25 from the Office of Nutrition and 45 from others in A.I.D.

3. Newsletter: The Mothers and Children Bulletin was begun to provide information to nutritionists, health practitioners, policy makers and project personnel working in developing countries. The objective of the publication is to promote better understanding of infant feeding and maternal nutrition. The content of each issue is to be divided evenly among the topics of breastfeeding, child feeding, weaning, maternal nutrition, and related topics.

The Bulletin began with a circulation of approximately 6,000 which was more than doubled in 1985 when 12,800 copies of each issue were distributed - 85 % of them to people in developing countries. As of April 1989, circulation was 29,000. Responding to a point raised in the Interim Evaluation about deficient circulation of the French version of the Bulletin, APHA has tripled the circulation of the French edition of the Bulletin in West Africa. A breakdown by region and by language edition is provided in Attachment XI and XII, respectively.

APHA uses a variety of ways to distribute the Bulletin so as to reduce costs. In addition to direct mailing to individuals and institutions, APHA also mails in bulk or pre-addressed envelopes for distribution by A.I.D. (in five countries where the A.I.D. mission has agreed to do so - Barbados, Botswana, India, Indonesia, Swaziland). In Pakistan, APHA mails over 2000 copies of the publication by bulk. They also use a regional facility, INCAP (Institute of Nutrition for Central America and Panama), in Guatemala to distribute the newsletter. APHA sends approximately 8,000 copies to INCAP by air freight which enables them to save 85% of the cost of pre-addressed bulk mailing and 93% of the cost of direct mail. In absolute terms, over \$8,000 is saved every issue by this cost-effective means of distribution. Through such cost savings measures, APHA has been able to operate the Bulletin on virtually the same budget as in 1986, despite a 250% increase in circulation. Unfortunately, however, problems arise in regional distribution efforts over such things as clearance through customs. For example, the last two issues still lay in the customs warehouse in Guatemala because INCAP refuses to agree to unreasonable demands on the part of customs. A regional arrangement was also considered through ORANA (Organization Regionale de l'Alimentation et Nutrition en Afrique) in Senegal but proved infeasible since envelopes could not be procured in Dakar.

While several readership surveys were conducted during the first half of the 1980s, none have been carried out under the most recent contract. Generally, the Bulletin is well-received. A review of the articles appearing in the last three issues indicates that few articles written by professionals in the developing countries appear in the Bulletin.<sup>6</sup> In addition to presenting articles on MIN Project activities (e.g., "Dietary Management of Diarrhea" in Vol. 7, No. 3, 1989; breastfeeding in Vol. 6, No. 1, 1987), the newsletter gives a short description of new publications and materials in the maternal and infant nutrition field. These summaries can be helpful to health workers overseas who otherwise would not learn about such things in a timely fashion. Articles from the Bulletin have also been reproduced in other publications (e.g., article in UNICEF's Asian Women and Children Bulletin, Attachment XIII) which means that the newsletter is having a broader impact and that other professional groups value the information that it presents.

4. Other Projects: In addition to the Mothers and Children Bulletin, APHA has also produced a 3-language calendar each year for the last three years. This calendar describes the Clearinghouse and the Bulletin and is illustrated with pictures of healthy maternal activities. The Clearinghouse also produces Information Packets on subjects of general interest (e.g., Growth Monitoring) in which recent articles on various aspects of the topic are reproduced. Finally, APHA and the Clearinghouse publish an annual update on "Government Legislation and Policies to

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<sup>6</sup> In an effort to generate more articles from abroad, the APHA has prepared a writers' guideline which it plans to send to potential contributors of articles. These articles would be included in a 2-page section in each issue to be called "From the Field".

**Support Breastfeeding, Improved Maternal and Infant Nutrition and Implement a Code of Marketing of Breastmilk Substitutes".**

**5. Future Considerations:** The constraints identified in the Clearinghouse operation are, in most cases, attributable to a lack of funding. In general terms, the APHA has done a commendable job with the \$1.4 million it had to work with over the last four years. Only three individuals staff the project, and it is difficult to conceive of them doing more than they are at present. They split their time fairly evenly between responding to information requests and producing/distributing the newsletter.

Any future information support element that might be included in a nutrition project aimed at mothers and infants needs to concentrate on areas such as, effective regionalization, resources to provide technical assistance (i.e. to develop institutional capacities in information gathering and dissemination in developing countries) and to generate more inputs from the field. It was mentioned that more involvement of the CTO in the selection of Bulletin articles would be appropriate. In addition, articles might be shortened and more topics covered. Little is being done at present to synthesize the large volume of materials on specific, high-demand topics. An improved information system that would allow those interested to access the Clearinghouse database directly through PC computers and modems could also be helpful, cost-effective, while freeing-up staff time that would otherwise be spent in computer searches.

A critical issue is income generation. At present, the contractor does not charge for any service it provides other than a small subscription fee for a limited number (241 or less than 1%) of recipients of the newsletter who reside in developed/industrialized countries. At a \$5 per year subscription rate, no one can be optimistic that this will produce much revenue for the Clearinghouse. More recently, an agreement has been set up by which the MotherCare Project (a centrally funded S&T/Health project) may utilize the Clearinghouse facilities and reimburse it for services rendered (e.g., the cost of photocopying). Possibly this can serve as an example of how the Clearinghouse can generate some of its own resources, and in the process, reduce its dependence on A.I.D. Other possibilities for income generation might involve seeking other sources of complementary funding (e.g., foundations and United Nations agencies). By the end of the next effort, a target for self-sufficiency of between 10 percent and 20 percent would seem reasonable.

#### IV. Future Considerations/Recommendations

The scope of work for the Maternal and Infant Nutrition Project's Final Evaluation asks that the team make recommendations which might be taken into consideration when designing follow-on activities. Based on a thorough review of accomplishments in Phase II of the MIN Project and after discussions with A.I.D. officials and contractors, regarding needs in the field, the team is enthusiastic about future developments to improve maternal and infant nutritional practices and status in the developing world. The MIN Project has laid an impressive foundation upon which successful nutrition programs can be built. The only factor limiting a broader impact of the successful aspects of the MIN Project has been insufficient funding.

Concern was raised during the evaluation that activities and strategies, which were developed during the MIN Project and which would, appropriately, serve as the centerpiece of any follow-up project (i.e., lactation management and weaning) may also fall into the scope of several other projects. Two such projects are the Maternal and Neonatal Health and Nutrition Project and the Nutrition Education and Social Marketing Project or the so-called Nutrition Communications Project (NCP). Not only do breastfeeding and weaning overlap with their project scopes, but some of the same techniques are used as well (e.g., the weaning project as carried out by Manoff relies heavily on the social marketing strategy which is the primary approach to be utilized in the NCP). The possibility exists that such a situation could lead to confusion and even competition.

While this issue is a matter of concern, it need not be a serious constraint to any follow-up effort of the MIN Project. To begin with, there is more work to be done in the developing world at this time than any one, two, or even three projects could possibly do. Secondly, the Maternal and Neonatal Project only addresses a small fraction of what an Women's and Infant Nutrition Project would be concerned with. Moreover, the strengths of one contractor (AED - in communications) do not challenge or compete with that of the other (Manoff - in formative evaluation). What is most important to the overall success of all three initiatives is that they work closely together, standardizing, as much as possible, their strategies and techniques, learning from one another so that duplication of effort is eliminated and progress is accelerated.

The recommendations offered by the MIN Project Evaluation Team are divided into three categories - operations (service delivery and training), research, and information. They are based on a thorough review of project activities and findings as presented in the preceding section.

##### A. Operations (Service Delivery and Training)

To a large extent, the MIN Project has concentrated on identifying nutrition-related problems which adversely affect mothers and infants and on testing innovative approaches and strategies to improve the situation. The Evaluation Team concluded that one of the support projects, the

Clearinghouse, has successfully achieved its objectives and should be continued. While data on impact is not available in the case of the field projects (Wellstart and the Weaning Project), the team feels confident that they are now ready to be graduated from the testing phase into broad-based operational programs which will reach and benefit larger populations.

The biggest advantage of these particular strategies is that they are clearly defined and operationalized. In the past, those responsible for designing and implementing nutrition programs did not have interventions that were easy to conceptualize or had well developed guidelines on how they should be carried out; the strategies available remained either very ambiguous and amorphous (e.g., nutrition education) or so cumbersome, costly, and labor intensive (e.g., supplementary feeding and growth monitoring) that there was little incentive to attempt to implement them. Moreover, impact directly related to the existing nutrition interventions has been difficult to determine. In contrast, the health-related "twin engines" of Child Survival, namely ORT and immunization which were popularized in the early and mid-1980's, have been more appealing because they are clearly defined and conceptualized while being relatively easy to implement, with results that are easy to see and measure (e.g., number of packets distributed, percentage of children immunized). What nutrition needs to be "competative" are a few interventions that have been well developed, are relatively easy to conceptualize and implement and have tangible outcomes.

In the view of the MIN Project Evaluation Team, S&T/Nutrition now has two such interventions. Both the Lactation Management Education and Weaning Projects are seen as well developed and proven interventions with well described and documented strategies. Both approaches have been broken down into well defined steps and procedures to which a program officer in the field should be able to relate. This means that these strategies which can have a significant effect of the vulnerable populations in the developing world not only have a good chance of being implemented but also have a good chance of being institutionalized and sustained in the developing world. What makes the strategies as developed in the Wellstart and Weaning Projects under the MIN Project particularly valuable is that they can be adapted to specific environments to resolve what have been considered to be extremely difficult if not intractable problems in the past.

Several steps must be carried out before the identified interventions can be broadly implemented. First, those responsible for designing health/nutrition projects must be fully aware of the nature of the project, what it consists of, and what results can be achieved. For this to happen, more can be done to publicize and promote the interventions. One method is to produce attractive, professional, easy-to-read and comprehend packets which describe the strategy/approach process, the procedures, the methodologies with an in-depth description of how (and with what results) the intervention has been implemented in one country. In the private sector, such materials might be referred to as "slick" publications, used to market a product or service to clients. S&T/Nutrition, in fact, is in a position to do something of this sort. It can encourage A.I.D. regional bureau advisors and PHN officers in the missions to take notice of what has

been and can be done in the nutrition sector and advocate initiation/integration of nutrition project activities in their Child Survival programs.

Another means of publicizing the successes of the Wellstart and Weaning Projects is for S&T/Nutrition to organize more frequent workshops and seminars where the strategies and techniques developed and results achieved would be featured. To date both projects have made presentations to selected audiences, but nothing on a large scale has been done for those who would be responsible for developing nutrition interventions in the field. Donor agencies (e.g., UNICEF, World Bank) and the PVOs involved in Child Survival programs should also be made aware of the successful nutrition interventions since they might be able to integrate the approaches into their own programs. The Office of Nutrition should take the initiative and publicize the Lactation Management and Weaning projects as successful interventions which they have been responsible for developing through this support from the MIN Project.

**Programming Issues:** There are several steps which will be required to translate the Wellstart and Weaning interventions into broader-based programs.

1. "Cookbooks" - In the last several months remaining in the two successful MIN projects, each should be encouraged to document the management and technical process and procedures (steps) required to implement the two interventions effectively. This will enable those interested in replicating the strategies to understand what is involved and required for implementation.

2. Focused Activities - It is important that S&T/Nutrition focus any follow-up program activity on these two interventions. Inclusion of other service delivery activities not directly related to the Wellstart and Weaning Projects may/can complicate matters by distracting attention and diluting the effectiveness of these two approaches.

3. Bridge Funding - Both the Wellstart and Weaning Projects have developed considerable momentum. Any lapse in funding would result in a retrenchment of personnel and a cessation of funding of overseas activities. This would make it difficult to gear up the effort and return to the level of productivity again any time in the future.

4. Buy-In Provision - It is essential that any follow-on contract involving breastfeeding and weaning promotion permit buy-ins from interested bureaus and missions. Both activities have received numerous requests for assistance, often from missions willing to pay for it themselves, but to which the contractors were unable to respond because of contractual limitations.. It is suggested that a split of 60% central or "core" funding and 40% buy-ins would be appropriate.

5. Core Funding - The central funds are required for core support (of central staff) and for initial visits to the field (for orientation, needs assessment, project design). Missions are not willing to fund preliminary

visits out of their scarce resources, but once they have a clear sense of what needs to be done and how, they are traditionally willing to invest their own funds (i.e., buy-in to a project).

6. Technical Assistance - Any effort in breastfeeding and weaning must include generous allocations for both long- and short-term technical assistance. This would include funds to assist PVOs and A.I.D. offices (e.g., FVA) to include effective infant feeding components in their Child Survival projects.

7. Local Programming - Funds should be included that would be allocated to country-level groups who have undergone training (especially in the Wellstart approach) to facilitate the spread of the concept in their country (i.e., support training, workshops, production of materials, transportation).

8. Apprenticeships - To make the breastfeeding and weaning approaches less reliant on a few committed and over-worked individuals, the outstanding directors heading these two projects must be "cloned." That is, others must be trained to do what they do. One possible way is to include partners (associates or apprentices) in the follow-on project. These partners would work closely with the current project directors and gradually assume more of the directors' responsibilities as they gain experience and expertise, thereby broadening the expertise available.

9. Regionalization - In the same vein, more must be done to develop regional capabilities to design and implement the breastfeeding and weaning interventions. In the MIN Project, both efforts did a remarkable job in developing the capacity to carry on the work in countries where they had project activities. In the next phase, this capability must be further strengthened so that the regions can assume more responsibility for carrying out project activities in their area. Thus, the current project directors must come to assume more of a management role, concerned with problem-solving, organizational development, and quality control.

10. Strategic Planning - The new role for the project director and contractors may require radical changes in the structure and operation of the respective agencies. In order to expand coverage of the interventions, they will have to be less involved with the "hands-on" field work and assume the role of the manager and quality control expert. It is suggested that an experienced management advisor/strategic planning expert would be helpful to help them think through what is required and the implications of such changes. This would improve the chances for a successful transition from a field implementation to a management role.

11. Language Capabilities - Both the Wellstart and Weaning Projects have focused on English and Spanish-speaking countries to date. In any follow-on project, French will be required so that the desperately needy countries of West Africa can be included. Regionalization could facilitate such a move.

12. Economic Impact - More should be done to determine the economic benefit of the interventions. Thus is particularly so in the breastfeeding

intervention where the benefits (especially in the Dr. Jose Fabella Memorial Hospital in Manila) are easily identified and monetized. Quantifying its economic benefits enhances the possibility of gaining support in Washington to broaden this approach.

13. Monographs - As field activity increases and the volume of information on various aspects of breastfeeding and weaning grows, there is an increasing need for synthesizing what is known. The APHA monograph series (e.g., on Growth Monitoring, Community Participation) were found very useful by the field managers as well as advisors. They summarize what is known or what the state-of-the-art is at a particular time and serve as a very useful training tools and reference guides. Any follow-on project should include resources for the production of a limited number of such monographs.

14. Integration of DMD - Dietary Management of Diarrhea should be considered as an integral part of infant/child feeding, not treated as a separate entity. The continuation of feeding during a diarrhea episode and especially after an episode (convalescent feeding) is obviously important and should be one of the priority messages in any lactation management and/or weaning project.

15. Nutrition in ORT - To date, ORT activities have focused almost exclusively on the solution itself and neglected the nutrition aspect. To rectify this, the follow-on to the MIN Project should provide a nutritionist to the PRITECH project to ensure the nutrition component is given proper attention.

16. Health Practitioners - While the LME course is designed so that the information can be adapted for home county use, more must be done in the future to adapt the lactation management education methodology so that it can more easily be utilized by community health workers, traditional practitioners, and community members (e.g., mothers' groups).

17. Monitoring - Outcome/impact indicators (e.g., growth, nutritional status) should be built into program design so that project managers have a better sense of program effectiveness as the interventions are being carried out. This built-in evaluation approach enables project managers to make modifications and improve intervention effectiveness as the scheme evolves and also makes it easier for outside evaluators to determine project impact.

18. Workshops - Greater efforts should be made in the follow-on project to hold periodic Infant Feeding Workshops which involve not only the contractors but PVOs and donor agencies as well. That would provide a forum to exchange information and an opportunity to share experiences and findings and to discuss strategies. Such gatherings would also help publicize the project, similar to the way ICORT (International Council on Oral Rehydration Therapy) and IVACG (International Vitamin A Consultative Group) have increased the visibility of ORT and vitamin A programming, respectively.

19. TAG - A Technical Advisory Group on Infant Feeding made up of experts on various aspects of breastfeeding and weaning should be formed to advise

project directors. They would not only provide their technical knowledge, but as representatives from interested agencies and institutions can improve the collaboration and spread-effect. The TAG would also increase awareness of project approach and successes to other groups that might not otherwise hear about them.

20. S&T/N Management - Any follow-on project will require effective management in the Office of Nutrition. Additional personnel would help greatly in this regard, but hiring limitation makes this difficult. A possible solution would be to assign a Child Survival Fellow (out of Johns Hopkins University) to assist the CTO of the new project to ensure that the project receives the support it requires to achieve significant results in the field.

## B. Research

It is recommended that any follow-on project should include a research component. The MIN Project demonstrated the importance of innovative, creative research; the two activities which are now being suggested as being ready to be implemented on a broad scale (i.e., breastfeeding and weaning interventions) developed as a result of research efforts in Phase I of the project. Many vitally important areas of research remain to be explored. Provision must be made to ensure that these efforts are supported so that new interventions can be identified and tested. It is hoped that someday it will be appropriate to recommend that they too be operationalized on an expanded basis. This is the phased or evolutionary approach to project identification and development. The small grants competition mechanism is found to be an appropriate one with some modifications. Some important points to be considered in developing the research component of a follow-on project include:

1. Literature Review - A first step in a new research component should be a thorough literature review to identify critical areas or gaps in the general field of maternal/infant/family nutrition which require additional research. Examples include issues such as adolescents and working mothers.
2. Focus - While the specific issues and topics for research will be determined by means of the literature review and discussions with leaders in the field, it is recommended that the focus of the research be on the high risk groups and how the core areas of programming (i.e., breastfeeding and weaning) has an impact on them. This would relate the research component closely to the service delivery aspect and make the project more internally or conceptually coherent.
3. Innovative Methodologies - The agency responsible for administering the research component should do all it can to encourage innovative and creative research methodologies. Maximum emphasis should be placed on qualitative and ethnographic research which places a high priority on client involvement.
4. Developing Country Institutions - The general grant awarding mechanism should be structured in such a way as to give preference to research

institutions in the developing world. In addition to producing good research reports, an important result of such a grants program is the development of an institutional capacity to carry out high quality research on issues involving nutrition, particularly as it affects women and their families.

5. Technical Assistance - In order to support the development and strengthening of the institutional capacity to conduct good research, the follow-on project should make resources available for the contractor responsible for the research component to provide technical assistance to grantees. This will permit the strengthening of research designs, data collection and processing. It will also provide a smoother transfer of skills and techniques to professionals and institutions which will, as a result, continue to conduct credible research once the project-funded study is concluded.

### C. Information

As in the MIN Project, the follow-on project will require a facility which will collect documents related to the primary areas of focus (womens'/maternal nutrition, breastfeeding and weaning) as well as closely allied areas (as the Clearinghouse is presently doing). The existing facility, the Clearinghouse at APHA, has become known as an effective and easily accessible resource. This perception has been reinforced by the recent decision by S&T/Health and the Maternal and Neonatal Health and Nutrition Project to buy-into the Clearinghouse to provide the project's information needs. While the MIN Project Evaluation Team recommends the continuation of the Clearinghouse's information service and the Mothers and Children Bulletin, there are some suggestions which include:

1. Newsletter Distribution - Mechanisms for distributing the newsletter should be reviewed to ensure that the institutions and individuals who should be receiving it get it on a regular basis. It is recommended that the possibility of establishing a linkage with a host country organization be explored; this facility would develop and maintain the circulation listing for that/each specific country.

2. Regionalization - While the regionalization concept is suggested by all concerned, many problems are involved to making it function effectively. For this reason, it is recommended that efforts start at the country level, establishing relations with appropriate institutions that can provide resource facilities and newsletter distribution capabilities. The arrangements which prove effective and efficient can be expanded, eventually becoming regional operations.

3. Technical Assistance - For effective regionalization to take place, it is essential that funds be available in the follow-on project to allow the information contractor to assist agencies overseas to develop their institutional capabilities to serve as local or regional information resource centers. Technical assistance could be provided in two ways. One is to develop a training program which would bring those responsible for the foreign resource facility to the contractor's office where they would

be introduced to the approaches, techniques, managements systems used in operating the central clearinghouse. The other way is for the resource center's manager(s) to travel abroad to do needs assessments and provide assistance as required to make the foreign collaborating facilities more effective.

4. Service Marketing - The contractor for the information component of the follow-on project must be pro-active and be creative in developing and marketing its services. For example, the information service could be marketed in the newsletter, provided the contractor has the resources to respond to the volume or requests that would be generated.

5. Field Materials - It is suggested that the information contractor take an active role in developing mechanisms to collect information and materials from the field. While A.I.D. missions have been of little assistance in the past, means should be explored for linking them more closely with the resource center and gaining their cooperation and assistance in return. It is also possible that mechanisms could be found to utilize the long- and short-term consultants who work in the maternal and infant nutrition/health field in developing countries, requesting them to collect and supply relevant documents and materials to the Clearinghouse.

6. Linkages - It is recommended that the information contractor strengthen linkages with S&T/Nutrition so that the latter can access the resource center's files and utilize the collection of documents in support of its work. This could be done by means of a modem and a terminal in the Office of Nutrition which would be compatible with the resource center's operation. Similar arrangements might be considered for other major clients (contractors, universities, donor agencies). It is also suggested that newsletter format and content be considered more collaboratively with the Office of Nutrition.

7. Networking - Strong links should be developed with A.I.D.-funded projects in the maternal and infant health/nutrition field both in this country and abroad. Projects such as the Maternal and Neonatal Health and Nutrition (MotherCare) Project as well as the Nutrition Education and Social Marketing Project (NCP) should not only be active participants and partners in the resource center, but should periodically meet with the lactation management and weaning project managers to share findings and experiences. The resource center would be an appropriate catalyst to make an annual meeting of such a group a reality.

8. Cost Recovery - While being a very difficult issue, it is appropriate that some thought be given to the long-term future of a resource center. Should A.I.D. contrive to support such a facility ad infinitum<sup>7</sup> or should some realistic steps be taken to lessen the burden on A.I.D.? Because of the nature of its work, it is unrealistic to consider that a resource

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<sup>7</sup> Examples of long-term AID support for information centers do exist, one being the population sector's resource facility which has been in operation for 20 years under AID funding.

center could ever be totally self-sustaining. Nonetheless, ways and means might be explored which could permit the operation to fund a portion (perhaps 10-20%) of its costs. Of course, those in developing countries cannot be expected to pay for the newsletter or services because of scarce resources and difficulty of acquiring foreign exchange. However, those utilizing the Clearinghouse in the U.S. could be asked to contribute as could subscribers to the newsletter from the developed world. Other funding possibilities include foundations and agencies of the United Nations (e.g., UNICEF). One issue to be addressed is how to generate income without the process itself becoming a costly and burdensome activity. One thought is the establishment of an annual membership fee for a set amount of services. Various ideas would have to be tested.

ATTACHMENTS

ATTACHMENT I

Scope of Work

AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D C 20523

ATTACHMENT A

STATEMENT OF WORK

Project Title: Improving Maternal and Infant Diets

1. Project No.: 931-1010
2. A.I.D. Project Manager: Dr. Nina P. Schlossman  
Office of Nutrition, Bureau for Science and Technology
3. Contractors Grantees, and Cooperating Agencies:
  - 1) American Public Health Association  
Clearinghouse on Maternal and Infant Nutrition
  - 2) International Center for Research on Women
  - 3) Johns Hopkins University
  - 4) The Manoff Group
  - 5) The San Diego Lactation Project (Wellstart)

A. Purpose of the Evaluation

The purposes of this review are to

- (1) evaluate the progress and experience gained from the project to date, with particular emphasis on activities since the last project evaluation (September 1986)
- (2) assess suitability of the current project design as a vehicle for achieving project (931-1010) goals and objectives
- (3) identify elements that have been particularly successful and fruitful
- (4) identify gaps in knowledge and project activities.
- (5) make recommendations for the potential follow-on activities (936-5117), as to: elements to be included and an effective management structure.

## B. Objectives:

To evaluate the procedures and achievements completed or underway under the grants, contracts and cooperative agreements listed above in 4) with the American Public Health Association, the International Center for Research on Women, Johns Hopkins University, the Manoff Group (formerly Manoff International), and the Wellstart San Diego Lactation Program. The evaluation of Project 931-1010 will meet the following objectives:

a) Assess modifications made in response to recommendations of the Midterm Evaluation completed in September 1986, and (especially those activities begun since the Midterm Evaluation) compliance with the objectives stated in the Grants, Contracts, and Cooperative Agreements.

b) Tangible and intangible final results achieved (or results achieved to date in cases where research and other activities are still underway), including improvements in the problems addressed, observable impacts on host country institutions and programs, and relationships between project personnel (principal investigators, contractor, sub-contractors, consultants, etc.), host country counterparts, and USAID staff.

c) Managerial and technical effectiveness of the entities involved in providing oversight and guidance, technical assistance, research, training, conceptualization and state of the art development, analysis, timely reporting, and other undertakings under the terms of the contracts and cooperative agreements.

## C. Project Summary

Project 931-1010, Improving Maternal and Infant Diets, is A.I.D.'s central technical resource to improve the nutritional status of mothers and infants in developing countries.

### Phase I: 1979-1983

The project was initiated in 1979 as a \$7.8 million four-year activity. The project was predicated on the assumption that infant mortality and malnutrition could be greatly reduced if maternal nutrition were improved and adequate nutrition sustained throughout the first years of life. The project had four major goals:

- Sensitization
- Education and Training
- Research
- Program Intervention.

Since so little was known about the interrelationships between maternal and infant nutritional status and infant feeding patterns, a diversified approach was taken, with many individual components. The activities fell into several areas designed to meet Phase I goals and objectives: an information clearinghouse, studies on the role of infant formula, coordination and consultation activities, and nutrition education and training. The project was to service field projects and stimulate awareness and motivation at the policy level.

Project activities included the following: Educational activities using mass media such as radio and/or other mechanisms to reach target populations; activities to incorporate materials into curricula of primary and secondary schools; training activities for workers from several sectors (community health workers, agricultural extension agents, health and nutrition aides, feeding program advisors, family planning workers, etc.); national, regional, and international meetings to sensitize medical and ancillary health personnel; institution of an information clearinghouse to publish and distribute newsletter; and studies of infant feeding trends, practices, determinants and identification of policy options for improving feeding practices. Phase I was successfully completed in 1983.

#### Phase II: 1983-1989

The project was extended through 12-31-89 and the funding ceiling increased to \$19.9 million. The overall goal remained the same, activities in education, training, and information dissemination were expanded. This phase was to emphasize field studies on maternal/infant nutrition and the determinants of low birthweight and to identify effective interventions. Activities were consolidated and concentrated in a few major grants, contracts and cooperative agreements.

#### Recommendations of the Interim Evaluation (1986)

The project was evaluated in the Summer of 1986 by Management Sciences for Health. The following recommendations were proposed:

1. Project focus on breastfeeding should be maintained but should build on experience garnered to date.
2. Develop maternal nutrition projects to test strategies for improving maternal nutrition, including research and literature reviews.

3. Continue to be a catalyst in infant feeding and assess potential leadership role in women's nutrition.

4. Address problems with both an urban and a rural focus.

5. Pay special attention to the management structure and burden, to the role of technical assistance, and to monitoring and evaluation activities.

6. Effective dissemination of research results and their use in the design of follow-on activities.

#### E. Scope of Work

The contractor will complete the following activities:

1. Review project documentation as identified by the CTO

2. Interview relevant staff in

- o A.I.D./W (i.e. in S&T/N, Regional Bureaus)
- o Key personnel in institutions currently holding or having completed contracts, cooperative agreements, or grants under project 931-1010
- o Relevant PVO's, multilateral donor institutions, A.I.D. field missions, and host country institutions.

Interviews and observations will gauge the relevance and achievement of project activities and objectives.

3. Undertake field trips to interview relevant USAID mission staff and host country counterparts, and to observe project activities and outcomes in 3-4 countries (exact locations to be determined).

4. Update documentation since the Midterm Evaluation of:

- 931-1010 activities broken out by content, cost, and country
- Other USAID and A.I.D. bureau or office activities in womens' (including maternal) and infants' nutrition
- Consultant reports prepared under 931-1010
- Publications, papers, and other materials prepared under 931-1010 and/or based on work supported by 931-1010.

5. Make recommendations based on a thorough assessment of completed and on-going activities for potential follow-on activities (i.e. design, implementation, and management of program relevant research, intervention, and technical field support in women's and infants' nutrition.

6. Prepare an evaluation report including documentation and analyses of points C1 through C5 above and addresses the questions posed in Section B.

7. Discuss the evaluation findings and recommendations with the A.I.D. Office of Nutrition, provide a briefing to relevant A.I.D. personnel with the A.I.D. Office of Nutrition, provide a briefing to relevant A.I.D./W personnel. Revise the evaluation report as appropriate.

D. Questions to be answered by the evaluation:

The contractor will evaluate the activities under project 931-1010 and answer the following questions; focusing mostly on the period since the 1986 evaluation.

1. Have the:
  - research
  - interventions
  - training
  - conferences
  - technical assistancecompleted under the project complied with the goal, objectives and purposes stated in
  - (a) the project paper, and
  - (b) the phase II amendment to the project paper?
2. What has been the impact of project activities on programs in developing countries and/or the state of the art in the field of maternal and infant nutrition?
3. How effective have:
  - strategies
  - personnel qualifications
  - central management approaches
  - regional distribution of activities
  - mechanisms (e.g. contracts, grants, cooperative agreements)been in the attainment of project objectives?

4. What has been the relevance of project objectives and activities to each A.I.D. regional bureau program?

What has been the utility and effectiveness of the project in each regional bureau?

Have outcomes differed by region? Why?

Has the distribution and balance of project resources to the regions been appropriate?

5. Has the interface between this project and other A.I.D. units and projects in Washington and in the field been effective? If not, how can they be improved?
6. On the basis of the evaluation, what recommendations would the contractor make with regard to the planning, implementation, and management of future activities.

#### E. Report requirements

1. Prior to departure from each project site country visited, consultants will prepare a draft report for review and discussion with appropriate USAID staff, host country counterparts, and PVOs. The draft report will include the following information:
  - A summary of project activities including purpose, objectives, accomplishments, constraints, follow-on activities or spin-offs, conclusions and recommendations;
  - Names and titles of people contacted during the visit;
  - List of documents reviewed during the visit.
2. Within one month of completing the last project site visit, the consultant will complete the evaluation report in final draft, circulate it to relevant A.I.D. staff, and undertake discussions and any necessary revisions. In addition to information described above, the report should include the following:

- Description of all research supported by the project, outcomes of research, effects on host country programs, spin-off or follow-on activities generated, and gaps in knowledge which have been indentified during the evaluation as priorities for programs in maternal infant nutrition.
- Description of all intervention projects funded under project 931-1010, design, implementation, and evaluation strengths and limitations, outcomes in the field, follow-on or spin-off activities, and current status. Changes or priorities for the future which have been indentified should be fully discussed.
- Technical assistance: nature of requests received by the project; types and costs of assistance provided under the project; impacts of assistance provided; analyses of strong and weak aspects of assistance; and organization, management, and cost effectiveness.
- Communication and management logistics among project components, A.I.D./W bureaus and offices, USAID missions, PVOs, and international agencies.
- Assessment of outcomes of training and sensitization activities, workshops, conferences, etc.
- Materials produced and assessment of information dissemination mechanisms, coverage, and utility for the field.
- Overall accomplishments in breastfeeding promotion, improving weaning practices, and maternal nutrition.
- Major constraints to project effectiveness.

Twenty copies of the final evaluation report and recommendations will be submitted to the A.I.D. Office of Nutrition project manager, Nina P. Schlossman, Room 413A, SA-18, Washington, D.C.

**F. Relationship and Responsibilities**

The consultant will work under the general supervision of Nina P. Schlossman, S&T/N.

**G. Term of Performance**

Maximum of 60 working days of any or all consultants or other non-secretarial staff beginning on/about April 27, 1989 to be completed on/about June 30, 1989.

**F. Schedule of Activities**

Within one week of the execution of the contract for this evaluation, the contractor will submit a detailed schedule of activities to the A.I.D. project manager for approval. This schedule will make provisions for:

1. Review of relevant project documents and other information;
2. Interviews with relevant personnel in AID/W, A.I.D. field missions, U.S. and overseas based private and governmental institutions which have been funded under the project, or which have substantially been involved in other ways.
3. Field visits in Mexico, Ecuador, Swaziland, and Nigeria.
4. Preparation of an updated written inventory of activities and documents relevant to this project:
  - Project 931-1010 activities, broken out by content, cost, and country or region;
  - Buy-ins, follow-on, spin-off activities of Project 931-1010, including information on what was done, where it was done, and the cost of each;
  - Scientific and technical publications, papers, or other materials based on or derived from work supported under project 931-1010;
  - Project 931-1010 consultant reports;
  - Activities of other A.I.D. units in Washington and in the field in the area of maternal and infant nutrition broken out by content, cost, and country or region;

5. Preparation of an evaluation report that covers the areas listed above in Section E.
6. Weekly consultations with the A.I.D. project manager (a) in advance of major stages (e.g. initial contacts with other A.I.D. units in Washington or in the field, travel, evaluation staff recruitment, drafting of interim and final reports, etc.); and (b) following major phases (e.g. travel, submission of interim and final reports, etc.).
7. Intermediate and terminal briefings on the findings of the evaluation with relevant A.I.D. units interested in the project on maternal and infant nutrition.
8. Revision and submission of the final report on the evaluation.

All consultants will spend 6 working days in Washington, D.C. (starting on or about April 27, 1989) during which they will meet with S&T/N staff. The two consultants making site visits will leave for the field on or about May 3, 1989 for approximately 12 days. At their return from the field, the evaluation team will reconvene in Washington, D.C. for a final six day work session and debriefing.

#3780E

ATTACHMENT II

DOCUMENTS REVIEWED

GENERAL BACKGROUND:

Midterm Evaluation of the Child Survival Project (PREMI) in Ecuador, Report prepared for USAID/Ecuador by the PRIMTECH Project, MSH, August 1988.

Evaluation and Analysis of Malnutrition in Ecuador: Priority Accions (in Spanish) Interinstitutional Technical Committee for Nutrition, Ecuador, OMS/UNICEF Publication, February 1989.

Maternal and Neonatal Health and Nutrition in Ecuador (in Spanish), Report prepared for USAID/Ecuador by Dr. Majorie Koblinski, John Snow, Inc., January 1989.

Health Systems in Ecuador (in Spanish), Report from the 1st National Seminar, prepared by Dr. Fernando Ortega for the Ministry of Public Health and PAHO, August 1985.

Impact of AIDS/Mexican Program in LDC's within the Region, AID Document, Mexico City, Mexico, October 1988.

The AID Program in Mexico: Model for support of US Foreign Policy in Advanced Developing Countries, Report prepared by James S. Landberg for USAID/Mexico, March 1988.

Nutrition Education and Training Project Paper, Office of A&T Nutrition, AID Washington.

Maternal/Infant Nutrition Project Midterm Evaluation, Report prepared for Office of S&T Nutrition, AID Washington, by MSH, September 1986.

Project Paper - Nutrition Project Midterm Evaluation and Social Marketing Field Support Project (956-5113), July 27, 1987.

APHA/CLEARINGHOUSE ON MATERNAL NUTRITION AND INFANT FEEDING

Mothers and Children, Bulletins on Infant Feeding and Maternal Nutrition  
vol. 7, # 1,2,3  
vol. 6, # 2,3

Contract Award/APHA, AID Washington, June 1985.

Summary of Project Activities, APHA/Clearinghouse, Report prepared by APHA, April 1989.

Lists of Publications for Ecuador and Mexico, APHA/Clearinghouse, April 1989.

"Catalogues of Education Materials" (July 1988).

Information Packet: Growth Monitoring (June 1987).

Government Legislation and Policies to Support Breast-feeding, Improve Maternal and Infant Nutrition, and Implement a code of Marketing of Breastmilk Substituted - Report No. 5 (January 1988).

#### DMD PROJECT

Dietary Management of Diarrheal Disease Program Annual Progress Report: Year III (October 1987 - September 1988), Report prepared by the DMD Project for the Office of S&T Nutrition, AID Washington.

Cooperative Agreement for DMD Program, AID Washington, September 1985.

"Consumption of Weaning Foods from Fermented Cereals in Kwara State, Nigeria", by K.H. Brown et al.

"Infant Feeding Practices and their Relationship with Diarrheal and other Diseases in Huascar (Lima), Peru, K.H. Brown, R. Black, G.L. de Romana, H.C. de Kanashiro in Pediatrics, vol.83, no.1, (January 1989)

"Incidence and Etiology of Infantile Diarrhea and Major Routes of Transmission in Huascar, Peru", by R.E. Black et al, American Journal of Epidemiology, vol.129, No.4, (1989).

"Development of a Home-Prepared Weaning Food in the Central Highlands of Peru"- I."Cultural Perceptions of Appropriate Child Feeding", by M. Fukumoto, M.E. Bentley, H.C. Kanashiro, K.H. Brown,(12 April 1989) and II."Use of Recipe Trials, a Community-based Qualitative Research Technique", by H.C. Kanashiro, E. Jacoby, C. Verzosa, M.E. Bentley, K.H. Brown, (14 April 1989)

"Pediatrics Diarrhea and Nutrition - Observations from the Peruvian Sierra", by W.L. Straus, M.E. Bentley, M. de La Pena (undated).

"Development of a Nutritionally Adequate and Culturally Appropriate Weaning Food: An Interdisciplinary Approach", by M.E. Bentley et al., (14 April 1989).

"Improved Nutritional Therapy of Diarrhea: A Guide for Program Planners and Decision Makers", by K.M. Brown and M.E. Bentley (PRITECH).

"Applied Research for a Dietary Management of Diarrhea Program in Peru: Comparison of Anthropological and Survey Methods", by S.L. Huffman et al., (6 March 1989).

"Do Child Feeding Practices change due to the Diarrhea in the Central Peruvian Highland", by S.L. Huffman et al., (24 February 1989).

"Feeding Practices and Prevalence of Hand-Feeding of Infants and Young Children in Kwara State, Nigeria", by G.A. Oni et al (presented at International Workshop - Toward More Efficiency in Child Survival Strategies: Understanding the Social and Private Constraints and Responsibilities, May 1988).

#### ICRW

CORA Project Survey Instruments, Mexico City, 1988.

Prenatal Care Behaviors of Adolescents: Attitudes and Practices in the Women's Hospital of Mexico City (in Spanish), Report prepared by CORA and ICRW, 1989.

The Maternal Nutrition and Health Care Program: Fifth Quarterly Report, prepared by ICRW for the Office of S&T Nutrition, AID Washington.

Cooperative Agreement ICRW, AID Washington, July 1987.

Assessment of Prenatal Health Behaviors in Mexico and Development of Mass Communication/Education Strategies for Improvement: Proposal submitted to ICRW by UCLA School of Public Health, 1986.

Assessment of Prenatal Health Behaviors in Mexico and Development of Mass Communication/Education Strategies for Improvement: Technical Progress Reports # 1,2,3,4&5, prepared by UCLA SOPH Project for ICRW, March 1988, June 1988, September 1988, January 1989 and March 1989.

Utilization of Formal Services for Maternal Nutrition and Health Care in the Third World, Report prepared by Joanne Leslie and Geeta Roa Gupta for ICRW, March 1989.

#### MANOFF WEANING PROJECT

Contract Award/Manoff, AID Washington, September 1984.

Ecuador CLAI/PREMI Program Activities for 1987/88 (in Spanish): INCS Consultant Report Series, prepared by Manoff for Educational Development Center for the Office of Nutrition, AID Washington and USAID/Ecuador, February 1987.

The Weaning Project Ecuador Staff Trip Reports for: August 1986, September 1987, October 1987, January 1988, October 1988 and April 1989, prepared by Manoff for S&T Nutrition, AID Washington and USAID/Ecuador

Literature Review of Infant Feeding Practices in Ecuador, prepared by Manoff for S&T Nutrition and USAID/Ecuador, July 1988.

Infant Feeding Practices: Literature Review (in Spanish), prepared by Manoff for the MOH Ecuador, July 1988.

Infant Feeding Practices: Final Report on the Investigation of Nutritional Practices (in Spanish), prepared by Manoff for the MOH, Ecuador, August 1988.

New Strategies for Infant Feeding: Workshop Proceedings, prepared by Manoff for the MOH, Ecuador, September 1988.

"Growth Monitoring and Nutrition Education: In pact Evaluation of an Effective Applied Nutrition Program in the Dominican Republic", AID Washington, (February 1988).

#### WELLSTART/SAN DIEGO LACTATION PROGRAM

Lactation Management Education Program Session Report: August 29 - September 23, 1988, Report prepared by Wellstart for the Office of S&T Nutrition, AID Washington.

Infant Feeding Patterns, Practices and Trends: Selected Asia/Near East Countries, Document prepared by Baumslag and Putney for ANE Bureau, AID Washington, November 1988.

Invitational Asian Regional Lactation Management Workshop and Related Events (June 29 - July 9, 1988) - Report to Funding Agency, Document prepared by Naylor and Schooly.

Soetjningsih and Sudaryat Suruatmaja, "Establishment of Rooming-in in Sanglah Hospital, Denpasar and Its Impact" (undated).

Concolacion de Guzman, "Developing a Model Program in the Philippines", (undated).

Wellstart (Newsletter), vol.I (Summer 1986), vol.II (Spring 1987), vol.III (Autumn 1988).

Wellstart Program Summary, Report prepared by Wellstart for AID, Washington, May 1989.

Interim Progress Report: April 1, 1988 - September 30, 1988, Report prepared by Wellstart for the Office of S&T Nutrition, AID Washington.

Modification of Grant: Wellstart/San Diego Lactation Program, AID Washington, October 1988.

5

ATTACHMENT III

LIST OF PERSONS CONTACTED

Agency for International Development

Norge Jerome	Director, S&T/Nutrition
Holly Flutty	CTO NCP, S&T/Nutrition
Nina Schlossman	CTO MIN Project, S&T/Nutrition
Samuel Khan	Project Officer, S&T/Nutrition
Neen Alrutz	Nutritionist, Africa Bureau
Julie Klement	Nutritionist, LAC Bureau
Karen Nurick	Nutritionist, ANE Bureau
Jay Bergman	Contracting Officer, Office of Procurement
Hope Sukin	Evaluation Officer, FVA Office
Mary Ann Anderson	CTO Maternal and Neonatal Health and Nutrition Project, S&T/Health
Francesca Nelson	S&T/Health
Chloe O'Gara	S&T/Education (former CTO MIN Project)
Cathy Krasivik	Consultant, S&T/Health

American Public Health Association (APHA) - Clearinghouse

Gayle Gibbons	Director
Virginia Yee	Deputy Director
Liz Merchant	Staff Associate

International Center for Research on Women (ICRW)

Judith Timyan	Project Director
Laure Parker	Project Manager
Geeta Rao Gupta	Consultant

Johns Hopkins University - Dietary Management of Diarrhea

Kenneth Brown	Project director
Peggy Bentley	Medical Anthropologist
Kate Dickin	Field Supervisor, Nigeria

The Manoff Group - The Weaning Project

Marcia Griffiths	Project Director
------------------	------------------

Wellstart/San Diego Lactation Program

Audrey Naylor	Project Director
Katie Finn	Administrator

John Snow, Inc.

Marjorie Koblinsky

Project Director, Maternal and Neonatal  
Health and Nutrition Project

Academy for Educational Development

Margaret Parlato

Project Director, Nutrition Communications  
Project

Mexico

Saskia Estupian

ICRW Grantee, UCLA

Rosa Luna

University of Baja California

Sam Taylor

USAID Representative, Mexico City

John Townsend

Director of Operations, Population Council

Rebecka Lundgren

CORA - ICRW Research Project Staff

Tonantzin Ochoa Cervantes

CORA - ICRW Research Project Staff

Lucia Serafin Amaya

CORA - ICRW Research Project Staff

Mayeth Ramirez Vega

CORA - ICRW Research Project Staff

Guadalupe Valadez Ramirez

CORA - ICRW Research Project Staff

Jane Bravo

La Leche League

Yolanda Guillen Garcia

RN, Mexico City General Hospital (Wellstart  
Graduate)

Ecuador

Kate Jones Patron

Assistant Director, Office of Health, USAID/  
Ecuador

Fernando Ortega

Child Survival and Health Officer, USAID/  
Ecuador

Joseph Baldi

USAID/CDC Representative, PREMI Project

Maria Elena Acosta

Associate Investigator, IIDES (Weaning  
Project)

Anna Maria Merchan

Technical Assistant, IIDES

Yolanda de Grijalva

Principal Investigator, IIDES

Magdalena Vanoni

Director of Implementation and Protection,  
MOH

Miguel Artola

Director of Health Programs, Peace Corps/  
Ecuador

Rosa Romero

Team Leader in Quito for Wellstart Program

MONDAY AUG 29	TUESDAY AUG 30	WEDNESDAY AUG 31	THURSDAY SEPT 1	FRIDAY SEPT 2
8:30 Escort to Wellstart and Tour of Facilities		8:30 - 9:45 Wellstart Staff Meeting		8:15 - 9:45 HOSPITAL ROUNDS (Classroom 8:15)  Angulo El-Sayed Montaño Gihanga El Fouli Walusimbi
9:30 - 11:00 General Orientation to Program	10:00 - 12:30 Breastfeeding and Child Survival - A. Naylor	10:00 - 11:15 Anatomy and Physiology of Lactation - M. Powers	10:00 - 12:30 Issues Impacting Successful Lactation and Breastfeeding, Part II - R. Wester - L. Berthold	10:00 - 1:00 CLINICAL EXPERIENCES Lactation Clinic (Clinic House 9:45) Lopes El-Sayed Gihanga
11:15 - 1:30 Opening Session and Team Presentations		11:30 - 12:00 Additional Basic Science Review - A. Naylor		Home Visit (Clinic House 9:45) El Fouli Montaño Guillen  Nutrition Counseling (Joyce's Office 9:45) Matovu Soliman Mateega  Breast Examination Simulation (Classroom 10:00) Reyes Angulo Nakabiito Salem Walusimbi Mukasa
	12:30 - 1:30 LUNCH	12:00 - 1:00 LUNCH	12:30 - 1:30 LUNCH	1:00 - 2:00 LUNCH
	1:30 - 3:00 Allergy Prevention and Breastfeeding - R. Hamburger	1:00 - 3:00 Management of Successful Breastfeeding - R. Wester - L. Berthold  3:15 - 5:30 Issues Impacting Successful Lactation and Breastfeeding, Part I - R. Wester - L. Berthold	1:30 - 2:45 Maternal Nutrition - J. Marshall  3:00 - 5:00 Infant Nutrition and Weaning - J. Marshall  5:00 - 6:00 Orientation to Clinical Experiences - Staff	2:00 - 3:30 Drugs and Contaminants - P. Anderson  3:45 - 4:45 Jaundice - N. Powers

Wellstart/San Diego Lactation Program  
 Lactation Management Education Program  
 August 29 - September 23, 1988  
 Week 11

MONDAY SEPT 5	TUESDAY SEPT 6	WEDNESDAY SEPT 7	THURSDAY SEPT 8	FRIDAY SEPT 9
LABOR  DAY  HOLIDAY	9:00 - 10:45 Slow Gain/ Insufficient Milk Syndrome - N. Powers	8:15 - 9:45 HOSPITAL ROUNDS (Classroom 8:15)  Reyes,        Salem Guillen      Matovu Soliman      Mateaga	8:15 - 9:45 HOSPITAL ROUNDS (Classroom 8:15)  Lopez        Angulo Nakabiito    El Foull Mukasa       El-Sayed	8:30 - 9:45 Wellstart Staff Meeting
	11:00 - 12:00 Neonatal Oral Neuro- developmental Evaluation - K. Bouma	10:00 - 11:30 Maternal/Infant Separation - L. Berthold  11:30 - 12:30 Discussion and Review - Staff	10:00 - 1:00 CLINICAL EXPERIENCES/ AUDIOVISUAL REVIEWS Lactation Clinic (Clinic House 9:45) Matovu Soliman Mateaga  Home Visit (Clinic House 9:45) Reyes Nakabiito Walusimbi  Nutrition Counseling (Joyce's Office 9:45) Angulo Salem Mukasa  Breast Examination Simulation (Classroom 10:00) Lopez El-Sayed Gihanga  MOD/TALC Slide Set Reviews (Library 10:00) El Foull Montaño Guillén	10:00 - 12:30 CLINICAL EXPERIENCES Lactation Clinic (Clinic House 9:45) Lopez El-Sayed Gihanga  Growth Monitoring (Classroom 9:45) El Foull      Matovu Montaño      Soliman Guillén      Mateaga Angulo       Salem Mukasa
	12:00 - 1:00 LUNCH	12:30 - 1:30 LUNCH	1:00 - 2:00 LUNCH	12:30 - 1:30 LUNCH
	1:00 - 2:00 Breastfeeding, Fertility and Child Spacing, Part I - E. Hanson  2:15 - 3:15 Breastfeeding, Fertility and Child Spacing, Part II - S. Wishik  3:30 - 4:30 Panel Discussion - E. Hanson - S. Wishik	1:30 - 3:00 Breastfeeding and the Preterm Infant, Part I - P. Bromberger  3:15 - 4:00 Breastfeeding and the Preterm Infant, Part II - R. Wester  4:00 - 5:00 Film: "Feeding Low Birth Weight Babies"	2:00 - 3:30 Growth Monitoring - J. Marshall  3:45 - 5:00 Orientation to Program Planning Assignment - Staff	1:30 - 4:30 CLINICAL EXPERIENCES/ AUDIOVISUAL REVIEWS Housestaff Rounds (Classroom 1:30) Montaño      Guillén Reyes        Angulo Lopez  Video Reviews (Classroom 1:30) Matovu      Walusimbi Gihanga      Mukasa Mateaga      Nakabiito  Video Reviews (Library 1:30) El Foull      Soliman Salem        El-Sayed

Wellstart/San Diego Lactation Program  
 Lactation Management Education Program  
 August 29 - September 13, 1988  
 Week 111

MONDAY SEPT 12	TUESDAY SEPT 13	WEDNESDAY SEPT 14	THURSDAY SEPT 15	FRIDAY SEPT 16
8:15 - 9:45 HOSPITAL ROUNDS (Classroom 8:15)  Montaño Reyes Gihanga Soliman Walusimbi Salem	8:15 - 9:45 HOSPITAL ROUNDS (Classroom 8:15)  Guillén Lopes Matovu Nakabiito Mateega Mukasa	7:00 Depart from San Diego  8:00 - 12:00 Comparative Lactation Field Trip to the San Diego Wild Animal Park	8:00 - 12:00 USC/LAC Breastfeeding Babies Clinic	8:30 - 9:45 Wellstart Staff Meeting
10:00 - 11:00 Induced and Relectation - E. Jones - A. Naylor	10:00 - 1:00 CLINICAL EXPERIENCES Lactation Clinic (Clinic House 9:45) El Fouli Montaño Guillén			10:00 - 1:00 CLINICAL EXPERIENCES Lactation Clinic (Clinic House 9:45) El Fouli Matovu Montaño Soliman Guillén Mateega
11:00 - 11:45 Contraindications - N. Powers	Home Visit (Clinic House 9:45) Angulo Salem Mukasa			Growth Monitoring (Classroom 10:00) Lopes Reyes El-Sayed Nakabiito Gihanga Walusimbi
11:45 - 12:45 AIDS and Breastfeeding - N. Powers	Nutrition Counseling (Joyce's Office 9:45) Reyes Nakabiito Walusimbi			Independent Study Session Angulo Salem Mukasa
	Breast Examination Simulation (Classroom 10:00) Matovu Soliman Mateega			
	Independent Study Session Lopes El-Sayed Gihanga			
12:45 - 1:30 LUNCH	1:00 - 1:30 LUNCH	12:00 - 1:00 LUNCH	12:00 - 1:00 LUNCH	1:00 - 2:00 LUNCH
1:30 - 4:30 CLINICAL EXPERIENCES/ AUDIOVISUAL REVIEWS Housestaff Rounds (Classroom 1:30) El Fouli Salem Soliman El-Sayed	1:30 - 2:30 Film: "Amazing Newborn"  2:30 - 4:00 Psychosocial Development - S. Dixon	1:00 - 2:00 Discussion  2:30 Depart for Los Angeles	1:00 Depart for San Diego	2:00 - 4:30 Case Management Review Session - Staff
Video Reviews (Library 1:30) Montano Reyes Lopes Guillen Angulo	4:15 - 5:15 Comparative Lactation - A. Naylor			4:30 - 7:30 Teaching Resources Review and Selection
Video Reviews (Classroom 1:30) Matovu Gihanga Mateega Walusimbi Mukasa Nakabiito				

MONDAY SEPT 16	TUESDAY SEPT 20	WEDNESDAY SEPT 21	THURSDAY SEPT 22	FRIDAY SEPT 23
8:15 - 9:45 HOSPITAL ROUNDS (Classroom 8:15)  Angulo El-Sayed Montano Gihanga El Fouli		8:15 - 9:45 HOSPITAL ROUNDS (Classroom 8:15)  Walusimbi Guillen Matovu Soliman Reyes	8:15 - 9:45 HOSPITAL ROUNDS (Classroom 8:15)  Salem Mukasa Mateega Nakabiito Lopes	9:30 - 9:45 Wallstart Staff Meeting
10:00 - 12:30 Curriculum Design and Implementation - J. Marshall - J. Schooley	10:00 - 12:30 CLINICAL EXPERIENCES/ AUDIOVISUAL REVIEWS Lactation Clinic (Clinic House 9:45) Angulo Salem Mukasa  Home Visit (Clinic House 9:45) Matovu Soliman Mateega  Nutrition Counseling (Joyce's Office 9:45) El Fouli Montano Guillen  MOD/TALC Slide Set Review (Library 10:00) Lopes Reyes El-Sayed Nakabiito Gihanga Walusimbi	10:00 - 12:30 Consultant's Report Seminar (20 Questions)	10:00 - 1:00 CLINICAL EXPERIENCES/ AUDIOVISUAL REVIEWS Lactation Clinic (Clinic House 9:45) Reyes Nakabiito Walusimbi  Home Visit (Clinic House 9:45) Lopes El-Sayed Gihanga  Breast Examination Simulation (Classroom 10:00) El Fouli Montano Guillen  MOD/TALC Slide Set Review (Library 10:00) Angulo Salem Mukasa  Independent Study Session Matovu Soliman Mateega	10:00 - 1:00 Team Program Presentation
12:30 - 1:30 LUNCH	12:30 - 1:00 LUNCH	12:30 - 1:30 LUNCH	1:00 - 2:00 LUNCH	1:00 - 2:00 LUNCH
1:30 - 4:30 CLINICAL EXPERIENCES/ AUDIOVISUAL REVIEWS Lactation Clinic (Clinic House 1:15) Reyes Angulo Nakabiito Salem Walusimbi Mukasa  Nutrition Counseling (Joyce's Office 1:15) Lopes El-Sayed Gihanga  MOD/TALC Slide Set Review (Library 1:30) Matovu Soliman Mateega  Independent Study Session El Fouli Montano Guillen  4:30 - 7:30 Teaching Resources Review and Selection	1:00 - 5:00 Field Trip: ISSSTE/CALI Hospital Tijuana, Mexico	1:30 - 4:30 CLINICAL EXPERIENCES/ AUDIOVISUAL REVIEWS House Staff Rounds (Classroom 1:30) Matovu Nakabiito Mateega Mukasa Walusimbi Gihanga  Video Reviews (Library 1:30) El Fouli Salem El-Sayed Soliman  Video Reviews (Classroom 1:30) Montano Reyes Lopes Guillen Angulo  4:30 - 7:30 Teaching Resources Review and Selection	2:00 - 3:00 Formula Marketing and the WHO Code - A. Naylor - J. Schooley  3:15 - 4:30 Professional Roles and Responsibilities in Breastfeeding Promotion - Staff  4:45 - 5:30 Breastfeeding Promotion and UNICEF's Child Survival Programs - M. Kyenkya	2:00 - 4:00 Wrap-up
				7:00 - 10:00 Closing Ceremonies and Farewell Banquet



# WELLSTART<sup>SM</sup>

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## San Diego Lactation Program

THE LACTATION MANAGEMENT EDUCATION PROGRAM  
FOR HEALTH PROFESSIONALS FROM DEVELOPING COUNTRIES

Volume 3

Autumn 1988

### ADMINISTRATIVE UPDATE

The past year has been a very busy and exciting one. We have continued to expand our staff, facilities and activities, both in size and in scope. Though this is a somewhat difficult and time-consuming process, it is a necessary one and quite rewarding as well. These expanded resources of staff, facilities, materials, etc., are now in place and we are rapidly extending and expanding our professional educational opportunities and services even further.

We are pleased to announce the following additions to our staff:

*Joyce Marshall, Ph.D., R.D.*, joined the staff in July, 1987, as full-time Perinatal Nutritionist. Dr. Marshall's doctorate degree from Oregon State University is in Education/Nutrition. She has an extensive background in education, including teaching, counseling, and research, as well as interest and experience in effective communication with individuals and groups from diverse economic, social and cultural backgrounds.

*Lynn Brown, M.P.A.*, joined the staff in February, 1988, as full-time Director of Administrative Services. Ms. Brown obtained her Masters in Public Administration from the University of Southern California. She has 10 years of public management experience, including experience in marketing, finance, revenue generation, and

personnel. Prior to joining Wellstart, Ms. Brown was the Executive Director of the YWCA in Denver, Colorado. Ms. Brown is also fluent in Spanish.

*Monica King* joined the staff in March, 1988, as full-time Staff Assistant II. Prior to joining Wellstart, Ms. King worked as a Telecommunications Systems/Equipment Maintenance Specialist at Hickam Air Force Base in Hawaii where she developed a wide variety of administrative and clerical skills. Ms. King has been working closely with Janine Schooley, Educational Program Manager, on all administrative aspects of Wellstart's education and training activities.

*Marisa Pertierra* joined the staff in May, 1988, as full-time Administrative Assistant. Ms. Pertierra is originally from Argentina and is fully bilingual (English and Spanish). Prior to joining Wellstart, Ms. Pertierra owned and operated her own business which provided facility maintenance services for doctors' offices. Her responsibilities at Wellstart include reception, acting as executive secretary to the Co-Directors, translation, procurement, word processing and other administrative duties.

*Bart Johnson* joined the staff in July, 1988, as full-time Word Processor. Mr. Johnson has wordprocessing, data processing, and computer management experience. Prior to joining Wellstart, Mr. Johnson worked at UCSD Medical

- 4) A four-week course was held for 14 participants from Indonesia and the Philippines May 23—June 17, 1988.

*Upcoming Course Dates:*

- 1) August 29-September 23, 1988 (participants to include six Ugandans, five Mexicans, and four Egyptians)
- 2) December 5-December 16, 1988 (two-week Spanish language course planned for 15 Bolivians)
- 3) January 16-27, 1989 (two-week Spanish language course planned for Ecuadorians and Peruvians)
- 4) February 13-March 10, 1989
- 5) May 15-June 9, 1989
- 6) August 7-September 1, 1989

By the end of September, 1988, Wellstart will have provided its International Lactation Management Education Program to 146 health professionals from 17 countries.

*Continuing Education and Support Visits*

A follow-up or continuing education and support (CES) visit was made by Dr. Naylor and Ms. Wester to Indonesia September 11-October 3, 1987. This trip also included a brief stop in Bangkok, Thailand to meet with AID Mission staff, the Siriraj Hospital team and other key individuals. A CES visit was also made by Dr. Naylor and Ms. Wester to Bolivia March 26-31, 1988. This trip to South America included a "reconnaissance" visit to Ecuador to meet with key USAID, Ministry of Health, and other personnel and discuss Ecuador's child survival needs and possible utilization of Wellstart services. Dr. Veronica Valdes (pediatrician, Chile; August-September 1986 course) accompanied Dr. Naylor and Ms. Wester as translator and consultant on the visits to both of these countries.

**INVITATIONAL ASIAN REGIONAL  
LACTATION MANAGEMENT WORKSHOP  
and RELATED EVENTS**  
*Bali, Indonesia*

On July 7-9, 1988, the Fifth Asia Oceania Congress of Perinatology was held in Denpasar, Bali, Indonesia. Prior to the Congress, Wellstart, with support from the Asia-Near East Bureau of USAID, and in cooperation with the Indonesia Society for Perinatology (PERINASIA), sponsored a three-day Invitational Regional Workshop for its Southeast Asian participants and key government officials from Indonesia, Thailand, and the Philippines. In addition, arrangements were made for Wellstart alumni to participate in a two-day pre-Congress seminar on recent scientific developments in lactation and breastfeeding research being organized by PERINASIA. Wellstart supported four internationally known speakers for the meeting. Wellstart also arranged several other activities designed to update the lactation knowledge of program participants, including a day-long clinical update for nurse alumni provided by Ruth Wester and the opportunity for physician alumni to attend the Perinatology Congress. Several people with key leadership responsibilities in the PERINASIA organization are Wellstart alumni (Dr. Rulina, Dr. Winahyo, Dr. Soetjningsih).

In an effort to share some of the positive energies, excitement and hard work involved, we have listed below a brief description of the workshop and related events.

*Invitational Asian Regional Lactation Management Workshop*

The workshop held June 30-July 3, 1988, was designed to provide Program alumni and selected guests from USAID, UNICEF, WHO, and the ministries of health in Indonesia, Thailand, and the Philippines, with an opportunity to share information and experiences, develop methods for expanding lactation management education opportunities and discuss strategies for developing national and regional programs.

oral-motor assessment of the breastfeeding baby and information on how to approach case management in a systematic way. Participants were also provided with information on appropriate methods for changing hospital practices which are not supportive of breastfeeding.

In order to insure that all the nurses, including those who are not as fluent in English, were able to take maximum advantage of this update, three physician alumni (Dr. Wirapong, Thailand, January-February 1984 course, Dr. Suwunne, Thailand, August-September 1987 course, and Dr. Fatimah, Indonesia, May-June 1988 course) were asked to become "nurses for a day" to assist with simultaneous verbal translation.

### ADDITIONAL WELLSTART ACTIVITIES

Wellstart has requested and received approval from USAID Washington to extend its current project period through September 1989. A proposal for funding beyond that time will be developed later this year.

Public and professional awareness about the Program, breastfeeding, the GOBI Campaign and issues of child survival was increased over the past year through a variety of mechanisms:

- A Child Survival Open House in conjunction with the U.S. Committee for UNICEF's Campaign for Child Survival was held in Wellstart's facilities October 29, 1987.
- The Mayor of the City of San Diego proclaimed "Child Survival Week" on behalf of Wellstart in October 1987.
- Cable News Network (CNN) filmed and broadcasted a story on nationwide TV about Wellstart's Program, featuring the lactation management education course for health professionals from El Salvador held in December, 1987.

In October 1987, Wellstart and UCSD Medical Center received funding from the Department of Health and Human Services to provide lactation management education to multi-disciplinary

teams (physician, nurse, and nutritionist) from maternal and child health departments in each of the ten public health regions in the U.S. Nine of these teams participated in a six-day course in San Diego in April, 1988. The tenth team from the Virgin Islands participated in a two-week course provided July 25-August 5, 1988, for teams from several of the U.S.-related Pacific Basin Islands.

### ACTIVITY SHARING *Southeast Asian Region*

In preparation for the regional alumni workshop in Bali, all Program participants from Indonesia, Thailand and the Philippines were asked to complete a current hospital profile and a questionnaire on team activities since participating in the Wellstart Program. Some of the data collected are presented below: (pre = data collected from initial hospital profile; post = data collected from hospital profile completed in May-June 1988)

	Current Annual Deliveries		Hospital Average
	Number of Hospitals	Total	
Indonesia	11	38,261	3,478
Thailand	2	25,770	12,885
Philippines	2	30,917	15,459
Total	15	94,948	6,330

	Average Age in Hours at First Breastfeeding (weighted by average number of annual deliveries)				
	PRE		POST		% Reduction
	Vag	C-Sect	Vag	C-Sect	
Indonesia	9.6	46.7	.5	18.4	95%/61%
Thailand	9.0	-	3.5	-	61%
Philippines	3.1	-	1.2	-	65%
Total	7.9	-	1.2	-	85%

	Percentage of Deliveries Exclusively Breastfeeding at Discharge (weighted by average number of annual deliveries)				
	PRE		POST		% Increase
	Vag	C-Sect	Vag	C-Sect	
Indonesia	70%	51%	87%	80%	+17%/+29%
Thailand	88%	-	93%	83%	+5%
Philippines	22%	-	99%	99%	+77%
Total	63%	51%	91%	85%	+28%

- No restrictions in visiting hours.

#### Abnormal Deliveries:

- Babies born by vacuum extraction follow the same procedures as the normal delivery babies;
- Babies born with caesarian section are put in special room for 2-3 hours after birth for observation, and then brought to the mother in the recovery room (partial rooming-in). After 2 days the mother and baby are put together in the rooming-in ward.

#### Low Birth Weight Babies (2000 g and below):

- Require special care in an incubator and nasogastric feeding with expressed breast-milk.

The exclusively breastfeeding babies increased since April 1986 from 32.7/61.9% to 86.6/93.9%.

Along with these procedural changes, the following actions have also been taken:

- The obstetric and nursing staff have been made more confident about lactation and have been re-oriented to the mechanism of early and exclusive breastfeeding.
- Courses have been held for nursing and PHC staff in lactation and breastfeeding management.
- Nursing staff and female physicians are used as models in promotion of breastfeeding in the hospital.

### *Thailand*

*Maharaj Nakornrajsima Hospital, Korat  
(Dr. Ruchira, Dr. Panwajee, Dr. Mongkol, Ms. Ratana, Ms. Malee, Dr. Payom, Dr. Vorapun, Dr. Suwunne, Ms. Sa-ngob, Ms. Nuallaor, Ms. Orapan, Ms. Saraswatee, Ms. Poahong)*

In addition to a wide variety of professional and lay teaching both within and outside of the hospital, the Korat team has accomplished the following:

- A working committee on breastfeeding was established.
- A volunteer mothers and primary school pupils support group was established by the Social Medicine Department.
- In November-December 1987, total rooming-in was begun. Infants and mother now go from the delivery room directly to the post-partum ward (no nursery).
- Working mothers in the medical records department have been educated about the benefits of breastfeeding and are urged to bring their breastfeeding infants to work.
- On December 8, 1987, a lactation clinic was begun once a week in the out-patient department.
- An intensive health education program, including the distribution of promotional materials such as T-shirts, gift packs, stickers, etc., has been developed.
- A breastfeeding journal club meets every two months.

These accomplishments are part of the hospital's new Integrated Comprehensive Breastfeeding Promotion Programme and plans for development of a regional lactation center for teaching, promotion, and research are under way.

*Siriraj Hospital, Bangkok  
(Miss Ubon, Dr. Wirapong, Dr. Uapong, Dr. Suaree)*

Accomplishments include changes in hospital policies, modification of medical and nursing curricula and a wide variety of local, regional, and national health professional teaching.

Most recently, five two-day workshops on breastfeeding were conducted during February and June 1988 for 300 nurses in the Pediatric and Ob-Gyn departments; two two-day workshops for 130 hospital directors, chiefs of social medicine, pharmacists and health educators from 32 provinces in north/northeastern Thailand were held in

- 2) Evaluated and modified the curriculum design to include how to effect change, accomplish objectives and assess teaching techniques. The 15 participants have, in turn, helped conduct a similar "echo" course for another 15 participants.
- 3) Designed a training module for student midwives.
- 4) Started a mini-milk bank with the help of the nursing supervisors and student midwives.
- 5) Incorporated breastfeeding into all undergraduate and graduate training programs.
- 6) Integrated lactation management into the Under Six Clinic.
- 7) Conducted several research studies on breastfeeding and lactation. These include "Breastfeeding After the Second Stage of Labor: Its Effects on Maternal Blood Loss" and "Knowledge, Attitude, and Practices of the Dr. Jose Fabella Memorial Hospital Health Workers Regarding Breastfeeding: A Survey of 355 Workers."
- 8) Established a Speakers Bureau.

The rooming-in program of Fabella Hospital is truly amazing both in size and scope. The Program's basic policy statements are:

- 1) The house formula, first and foremost, is breastmilk.
- 2) The lag time between birth and first breastfeeding should be as minimal as possible.
- 3) The breastfeeding continuation rate should be increased as much as possible.

The rooming-in standards are:

- 1) There should be facilities available for personal hygiene.
- 2) The rooming-in situation should be comfortable for the mother and safe for the baby.
- 3) Co-mother influence should be stimulated, rather than provider influence.
- 4) Bottles are strictly not allowed.

The Fabella Lactation Program is an impressive and important example of how even a large and very busy hospital can successfully promote and protect early and exclusive breastfeeding.

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### PHILIPPINE DECLARATION

The Philippine national working group issued the following signed declaration of mission statement at the Invitational Workshop in Bali:

*In a developing country, breastfeeding is not only a medical issue but socio-economic as well, greatly affecting the quality of life, not only of individuals, but of families, communities, and of the nation as a whole. We, the alumni of the Wellstart San Diego Lactation Program, do hereby declare our firm conviction and commitment to promote and protect breastfeeding for a healthy Filipino nation. Believing in the strong character of the Filipinos, we are confident we will meet our goal of attaining a quality of life truly worthwhile for our infants and children and ultimately, for our ASEAN neighbors.*

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Wellstart Project Performance

**Current Annual Deliveries**

	Number of Hospitals	Total	Hospital Average
Indonesia	11	38,261	3,478
Thailand	2	25,770	12,885
Philippines	2	30,917	15,459
Total	15	94,948	6,330

**Percentage of Hospitals in which Breastfed Infants Routinely Receive Additional Supplements**

	Pre	Post	% Reduction
Indonesia	70%	20%	71%
Thailand	100%	0%	100%
Philippines	100%	0%	100%
Total	79%	14%	82%

**Average Age in Hours at First Breastfeeding (weighted by average number of annual deliveries)**

	PRE		POST		% Reduction
	Vag	C-Sect	Vag	C-Sect	
Indonesia	9.6	46.7	5	18.4	95%/61%
Thailand	9.0	-	3.5	-	61%
Philippines	3.1	-	1.2	-	65%
Total	7.9	-	1.2	-	85%

**Percentage of Hospitals in which Infants Receive a Bottle Feeding Before the First Breastfeeding**

	Pre	Post	% Reduction
Indonesia	70%	0%	100%
Thailand	50%	0%	100%
Philippines	100%	0%	100%
Total	70%	0%	100%

**Percentage of Deliveries Exclusively Breastfeeding at Discharge (weighted by average number of annual deliveries)**

	PRE		POST		% Increase
	Vag	C-Sect	Vag	C-Sect	
Indonesia	70%	51%	87%	80%	+17%/+29%
Thailand	88%	-	93%	83%	+5%
Philippines	22%	-	99%	99%	+77%
Total	63%	51%	91%	85%	+28%

**Percentage of Hospitals with a Change in Curriculum Since Participation in the Wellstart Program**

	Medical School	Nursing School
Indonesia	40%	4%
Thailand	50%	50%
Philippines	100%	100%
Total	50%	54%

**Current Percentage of Perinatal Nursery Staff Formally Trained in Lactation Management**

Indonesia	40%
Thailand	56%
Philippines	61%
Total	47%

**Percentage of Hospitals with a Special Breastfeeding Counselor/Consultant**

	Pre	Post
Indonesia	0%	90%
Thailand	0%	100%
Philippines	0%	100%
Total	0%	93%

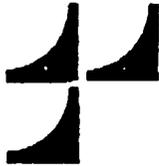
**Percentage of Hospitals with a Breastfeeding Committee**

	Pre	Post
Indonesia	67%	100%
Thailand	0%	100%
Philippines	0%	100%
Total	40%	100%

**Percentage of Hospitals Whose Teams Have Had an Influence on Health Professional Curriculum Changes**

Indonesia	67%
Thailand	50%
Philippines	100%
Total	67%

Issues Addressed by ICRW-Funded Research Projects



International Center for Research on Women

Issues Addressed by Research Projects Funded Under the Maternal Nutrition and Health Care Program

	UNW (Nigeria)	FHI (Zambia)	FHI (Zambia)	Stanford (Kenya)	UCLA (Mexico)	CFM (Mexico)	U. del Valle (Kenya)	CPCM (Ethiopia)	ICES (Sri Lanka)	U. of Phil. (Philippines)	London SHFM (Kenya)	GEFED (Brazil)	CURA (Mexico)	Shary Brook (Peru)	UW/SMU (Mexico)	CARE (Tanzania)	CIAD (Mexico)	Corvel (Mexico)	McGill (Canada/India)	JIRU (Bangladesh)
Maternal Health Service Utilization		x	x		x		x		x	x	x		x	x	x				x	
Non-formal Maternal Health Care		x			x		x		x	x			x	x	x				x	
Maternal Nutrition	x			x																
- Maternal Depletion	x							x				x					x	x	x	x
- Energy Consumption/Dietary Patterns								x				x								
- Food Supplementation								x				x							x	
Lactation	x			x									x					x	x	x
Nutrition/Health Education					x												x	x		
Adolescent Pregnancy							x						x							
Iron Supplementation						x														
Obstructed Labor		x	x																	
Economic Indicators of Nutritional Status/Service Utilization	(x)							x	x		x			x					x	
Maternal Activity Patterns	(x)							x	x		x								x	

ATTACHMENT VIII

**Projects Funded under ICRW's  
Maternal Nutrition and Health Care Program**

<b>Funding offers</b>	<b>Final Agrmt.</b>
<b>No. and Name of Institution</b>	
01 - University of North Carolina Carolina Population Center	158,647.00
02A - Family Health International	70,668.00
02B - Family Health International	44,735.00
03 - Stanford University Food Research Institute	109,427.00
04 - UCLA/ Latin American Center	149,946.00
05 - Pan American Health Org'n Carib'n Food & Nutrition Inst.	101,361.00
06 - Universidad del Valle de Guatemala	31,725.00
07 - Center to Prevent Childhood Malnutrition	47,300.00
08 - International Centre for Ethnic Studies	38,000.00
09 - University of the Philippines	22,929.00
10 - London School of Hygiene Tropical Medicine	24,440.00
11 - Groupement d'Experts en Projets d'Education et de Developpement	40,000.00
12 - Centro de Orientacion para Adultos Jovenes	22,681.00
13 - Univ. of New York at Stony Brook	60,068.00
14 - Univ. of West Indies	26,455.00
15 - Southern Methodist University (to collaborate with #14)	9,386.00
16 - CARE	30,264.00
17 - Centro de Investigacion en Alimentacion y Desarrollo	5,000.00
18 - Cornell University	37,000.00
19 - McGill University/ University of Malawi	66,500.00
20 - Johns Hopkins University	30,000.00
	<b>81,114,532.00</b>

ATTACHMENT IX

Requests to Clearinghouse by Region

REQUESTS BY REGION FOR EACH QUARTER -- 1988

Quarter	Africa	Asia/Oceania	Central America	Caribbean	Europe	Middle East	North America	South America
Jan-Mar	113	65	17	8	22	25	190	39
Apr-Jun	81	26	18	2	7	14	117	38
Jul-Sep	28	24	12	6	9	6	92	17
Oct-Dec	109	65	13	3	10	12	116	26
Total	331	180	60	19	48	57	515	120

REQUESTS BY COUNTRY -- 1988

Nigeria	80
Swaziland	5
Ecuador	9
Mexico	18

# Clearinghouse on Infant Feeding and Maternal Nutrition

## Thesaurus

Materials in the Clearinghouse collection are cataloged using the keywords in this thesaurus. These keywords are used to search our computer data base to identify all relevant documents on a given subject. Major subjects, such as breastfeeding and pregnancy, are broken down into subcategories. The initials RT following a keyword provide another related term which might also be used. Keywords in parentheses are used together with a broader term to narrow the search, such as morbidity (child). The data base can also be searched by language, region, country, year and type of material.

- acquired immunodeficiency syndrome AIDS  
(adult)
- agriculture
- allergy
- amenorrhea (use breastfeeding-fertility)
- anemia (RT iron deficiency)
- antennal care (use pregnancy-prenatal care)
- anthropology
- anthropometric measurement
  - arm circumference
  - cut off points
  - height
  - skinfold thickness
  - weight for age
  - weight for height
- appropriate technology
- artificial feeding (use infant formula)
- auxiliary health worker (use community health worker)  
(bibliographies)
- birth control (use family planning)
- birth spacing (use family planning)
- birthweight
- body measurement (use anthropometric measurement)
- breast milk (use human milk)
- breast pumps
- breastfeeding (RT lactation; relactation; human milk)
  - advantages
  - atopic diseases
  - bonding (RT mother-infant interaction)
  - contraceptive effect (use fertility)
  - contraceptives
  - dental caries
  - determinants
  - economic aspects
  - extent and duration
  - frequency and length
  - infant health
  - insufficient milk
  - management (problems)
  - policies (use legislation or hospital practices)
  - promotion
  - protective factors (use human milk-immunologic properties)
  - support groups
  - trends
- Breastfeeding vs artificial feeding  
(child, 1-5 years)
- child birth
- child care
- child development
- Child Survival
- child-to-child program
- colostrum (use human milk-colostrum)  
(community)
- community health worker
- community participation
- complementary feeding (use weaning practices)
- computer
- contraceptives (use family planning)  
(cost)
- creches (use child care)  
(curriculum)
- day care (use child care)
- development
  - communications
  - economic
  - health, nutrition
- diarrhea
  - enterocolitis
  - gastroenteritis
- dietary habits (use food-habits)
- disease (RT nutrition-infection; immunization)
  - neonatal
  - prevention
  - infectious
  - respiratory
- economics
  - household  
(education)
- education materials
- energy requirements (use protein-energy requirements)
- enterocolitis (use diarrhea)
- environmental health (use water sanitation)  
(evaluation)
- family planning
- fertility
- fetal alcohol syndrome (use pregnancy-alcohol)
- fetal development and growth
- food
  - aid
  - beliefs
  - composition
  - consumption
  - distribution (intra-familial)
  - distribution
  - fortification
  - habits
  - household acquisition

patterns  
 preparation  
 preservation  
 processing  
 production  
 storage  
 technology  
 traditional  
 weaning (*use weaning foods*)  
**galactagogue**  
**gardens** (*use home gardens*)  
**gastroenteritis** (*use diarrhea*)  
**goitre** (*RT iodine deficiency*)  
**growth** (*RT anthropometric measurement*)  
   charts (*RT health records*)  
   monitoring  
   rate  
   retardation  
   standards  
**health delivery systems**  
   facilities  
   services  
   utilization  
**health education**  
 (*health professionals*)  
**health records** (*RT growth charts*)  
**health status**  
**hematology**  
**home economics**  
**home gardens**  
**hospital practices** (*RT legislation*)  
**human milk** (*RT breastfeeding, lactation*)  
   colostrum  
   composition  
   contamination (*includes drugs*)  
   immunologic properties  
   intake  
   nutrient deficiencies  
   nutrients  
   storage  
   volume  
**immunization** (*RT disease*)  
**immunology**  
**income generation**  
 (*infant*)  
**infant feeding**  
**infant formula**  
   composition  
   contamination  
   effects on infant health (*RT breastfeeding vs artificial feeding*)  
   marketing (*includes promotion*)  
**infant mortality — morbidity** (*use morbidity-infant / mortality-infant*)  
**iodine deficiency** (*RT goitre*)  
**iron**  
   absorption  
   deficiency (*RT anemia*)  
   supplementation  
**jaundice**  
**KAP** (*knowledge, attitudes & practices*)  
**kwashiorkor**  
**lactation** (*RT breastfeeding; human milk*)  
   diet (*use maternal nutrition lactation*)  
   failure  
   physiology  
**lactose intolerance**  
**legislation** (*RT hospital practices*)  
   WHO Code  
**literacy**  
**low birthweight** (*use birthweight*)  
**malaria**  
**malnutrition** (*RT nutrition status*)  
**marasmus**  
**mass media**  
 (*maternal*)  
**maternal child health**  
**maternal education**  
**maternal nutrition**  
   lactation  
   prenatal  
**maternity leave** (*use legislation*)  
**measles**  
**medication and drugs**  
**mental health**  
**midwives** (*RT traditional birth attendants*)  
**milk banks**  
**milk** (*includes condensed, cow's, evaporated, modified, powdered, skimmed, substitutes, whole*)  
**minerals**  
   deficiency  
**morbidity**  
**mortality**  
 (*mothers*)  
**mother-infant interaction** (*RT breastfeeding-bonding*)  
**nonformal education**  
 (*nurses*)  
**nutrition**  
   infection (*RT disease infectious*)  
   planning  
   rehabilitation  
**nutrition education**  
**nutrition status** (*RT anthropometric measurement; nutritional assessment; malnutrition*)  
   diet  
   indices (*use anthropometric measurement; nutritional assessment*)  
**nutritional assessment** (*RT growth; anthropometric measurement*)  
**nutritional supplement** (*use supplementary feeding*)  
**nutritional surveillance**  
**obesity**  
**obstetrics and gynecology**  
**oral rehydration therapy ORT**  
   cereal based  
   home prepared  
   composition  
**phenylketonuria PKU**  
 (*policy*)  
 (*polymakers*)  
**population growth** (*use fertility*)  
**pregnancy**  
   adolescent  
   alcohol  
   eclampsia (*toxemia*)  
   intrauterine growth measurement (*RT fetal development and growth*)  
   nutrition and diet (*use maternal nutrition-prenatal*)  
   outcome  
   perinatal care  
   postnatal care  
   prenatal care

weight gain  
risk indicators  
premature infants  
primary health care  
(programs)  
protein calorie malnutrition PCM  
protein energy requirements  
(questionnaire)  
relactation  
respiratory disease (use disease — respiratory)  
rickets  
rooming-in (use hospital practices)  
(rural)  
(research methodology)  
Safe Motherhood Initiative  
sanitation (use water sanitation)  
(schoolchildren)  
seasonality  
sex differentials  
social marketing  
(socioeconomic determinants)  
(statistics)  
sudden infant death syndrome SIDS  
supplementary feeding  
WIC program  
(survey)  
tetanus  
traditional birth attendants (RT midwives)  
traditional medicine  
(training)  
tuberculosis  
(urban)  
vitamin A deficiency (RT xerophthalmia)  
vitamins  
deficiency  
water — sanitation  
weaning practices  
timing  
weaning foods  
appropriate  
centrally processed  
community processed  
composition  
contamination  
double mix  
extrusion cooker  
homemade  
indigenous  
multi mix  
preparation  
recipes  
WHO CODE (use legislation — WHO Code)  
women  
health providers  
status  
working (includes time allocation)  
WIC Program (use supplementary feeding — WIC program)  
xerophthalmia (RT vitamin A deficiency)

Distribution of "Mothers & Children" Newsletter  
by Region

Africa	8,270
Asia	6,476
Latin America/Caribbean	10,499
Middle East/Near East (includes North Africa)	1,032
Industrialized countries (includes distribution by NGO's based in North America and Europe to field staff in the Third World)	2,570
Paid subscriptions	<u>241</u>
TOTAL	<u>29,162</u> <u>=====</u>

April 1989

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Newsletter Circulation  
by Language Edition

Mothers & Children

Individual airmail	4,631
Pre-addressed bulk mailing distributed by USAID*	1,500
Bulk mailing	4,008
Pakistan distribution	<u>2,100</u>
Total English	12,239

Nadres y Niños

Individual airmail	1,457
Bulk mailing	934
INCAP distribution	<u>8,000</u>
Total Spanish	10,391

Mères et Enfants

Individual airmail	2,662
Bulk mailing	<u>3,629</u>
Total French	6,291

Paid subscription at \$5 per volume	241
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TOTAL CIRCULATION	29,162 =====
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## \* Missions include:

Barbados	(25)
Botswana	(16)
India	(799)
Indonesia	(286)
Swaziland	(29)

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# ASIAN

## WOMEN & CHILDREN

A bimonthly newsletter  
on issues concerning  
women and children

VOL. V NOS. 2 & 3  
AUGUST - NOVEMBER 1988

## Meant To Fix Not Just to Fetch

By Anne Kepple

The involvement of women in management of water and sanitation systems improves the chances of success.

Since women are the principal users and managers of water supply, new technologies must be accepted and understood by them to be successful.

It is logical that women be trained — where feasible and culturally acceptable — in implementation, maintenance and repair of water and sanitation systems. An estimated 35 to 50 per cent of water and sanitation systems become inoperable after five years. This is attributed to poor utilisation of human resources (especially women) to manage the systems once installed.

Women have a direct interest in a reliable water supply and better hygiene because of the impact on their daily workload and the health of their families. They are therefore motivated managers of water and sanitation systems.

Involving women in management also increases direct communication with the users of the system who are generally women.

In Sri Lanka, the skilled, technical work called for in a handpump project sponsored by a local volunteer organisation was considered to be men's work. But the volunteer group worked with village elders to select a group of young women to participate in a four-month technical training programme.

Afterwards, the trainees impressed the community with their ability to manufacture, install and repair handpumps and drill wells. Young women and their parents who had been reluctant to get involved became enthusiastic supporters. In addition to enabling the women to earn an income, the project has also

helped in the economic development of the community.

The importance of recruiting women as trainers and as trainers of trainers must not be overlooked, especially if enhancing the participation of women is a priority of the project.

Women represent a wealth of expertise on water sources, water availability and water quality. Water and sanitation programmes will benefit from the involvement of women at every stage.

Women should play an active role in the initial surveys of practices, beliefs and perceived needs. In a village handpump project in the Philippines, baseline surveys were initiated by community organisations. Women leaders volunteered to assist with the interviews.

Once oriented and informed, the interest and enthusiasm of the women in the community increased. They formed special water commit-

tees, took on responsibilities pertaining to programme implementation, participated in technical training and project management and assisted with the selection of pump sites.

In many cases in the world, women's organisations have taken complete responsibility for management and financing of projects. Women have proven to be especially adept at financial matters, such as fund-raising, fee collection and fund-keeping.

Income generating activities are also complementary to water and sanitation projects. In Polynesia and Kenya, women's groups sought training in masonry. They then constructed rainwater collection tanks and built latrines for their own use and to generate income. They have also trained other women's groups.

Water and sanitation should be integrated with other community projects. In the Philippines, a village handpump project stimulated other health-related activities such as gardening and health education. (*Mothers and Children*, Vol. 7, No. 1)



ABSTRACT

H. Evaluation Abstract (cont'd)

The evaluation was specific in recommending bridge funding of key activities (lactation management education and clearinghouse/information dissemination activities) in order to avoid any hiatus between terminating activities and the development and implementation of follow-on activities.