

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE

A = Add
C = Change
D = Delete

Amendment Number

DOCUMENT CODE

3

3. PROJECT NUMBER
Worldwide

3. PROJECT NUMBER

936-5113

5. PROJECT TITLE (maximum 40 characters)

Nutrition Educ. & Social Marketing

4. BUREAU/OFFICE

S&T/Nutrition

6. PROJECT ASSISTANCE COMPLETION DATE (PACD)

MM DD YY
09 31 93

7. ESTIMATED DATE OF OBLIGATION
(Under 'B.' below, enter 1, 2, 3, or 4)

A. Initial FY 87

B. Quarter

C. Final FY 91

8. COSTS (5000 OR EQUIVALENT \$) =

A. FUNDING SOURCE	FIRST FY 87			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total						
(Grant)	(500)	()	()	(3,500)	()	(3,500)
(Loan)	()	()	()	()	()	()
Other U.S.						
1. Buy-ins				6,300		6,300
2.						
Host Country						
Other Donor(s)						
TOTALS	1,098			10,000		10,000

9. SCHEDULE OF AID FUNDING (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) FN	350					1,000		1,000	
(2) HE	350					2,500		2,500	
(3)									
(4)									
TOTALS						3,500		3,500	

10. SECONDARY TECHNICAL CODES (maximum 5 codes of 3 positions each)

11. SECONDARY PURPOSE CODE

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code

B. Amount

13. PROJECT PURPOSE (maximum 420 characters)

To assist developing countries to design and implement effective social marketing projects for nutrition education.

14. SCHEDULED EVALUATIONS

Interim MM YY MM YY Final MM YY
09 8 9 09 9 1

15. SOURCE/ORIGIN OF GOODS AND SERVICES

000 941 Local Other (Specify)

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a page PP Amendment)

17. APPROVED BY

Signature

Martin J. Forman

Title

Director, Office of Nutrition

Date Signed

MM DD YY
03 31 87

18. DATE DOCUMENT RECEIVED IN AID/V, OR FOR AID/V DOCUMENTS, DATE OF DISTRIBUTION

MM DD YY

PROJECT AUTHORIZATION

Project Title: Nutrition Education
and Social Marketing
Project Number: 936-5113

1. Pursuant to Sections 103 and 104 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Nutrition Education and Social Marketing project involving centrally funded planned obligations of not to exceed \$3,500,000 over a five year period from the date of authorization subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the project. Funding available for the project may also include up to \$6,500,000 contributed by regional bureaus and A.I.D. missions.

2. The project will consist of (1) testing nutrition education interventions in up to six countries, (2) providing technical assistance in support of growth monitoring, breastfeeding, weaning practices, nutrition in infection, especially diarrhea, vitamin A, maternal nutrition, and nutrition education in primary schools, and (3) training in the application of social marketing skills to address nutrition education problems.

3. The agreements which may be negotiated and executed by the office(s) to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate:

a. Source and Origin of Commodities, Nationality of Services
Commodities financed by A.I.D. under the project shall have their source and origin in the cooperating country* or the United States, except as A.I.D. may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services shall have the cooperating country or the United States as their place of nationality, except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States.



Duane Acker
Agency Director for Food and
Agriculture
5-5-87

Date

* Each country in which research, training, technical or other assistance takes place under the project shall be considered a cooperating country.

~~SECRET~~

Clearances:

S&T/N, MJForman	<u>MJ Forman</u>	Date	<u>4-6-87</u>
S&T/PO, GGower	<u>London</u>	Date	<u>5/4/87</u>
GC, STisa	<u>S/T</u>	Date	<u>4-20-87</u>

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

April 1, 1987

ACTION MEMORANDUM FOR THE AGENCY DIRECTOR FOR FOOD AND AGRICULTURE,
BUREAU FOR SCIENCE AND TECHNOLOGY

FROM: S&T/N, Martin J. Forman *Martin J. Forman*
SUBJECT: Nutrition Education and Social Marketing Project
(936-5113)

Problem: Your approval is requested for a five year, \$10,000,000 Nutrition: Education and Social Marketing Project (936-5113). It is planned that a total of \$2,500,000 will be provided by S&T from the 103 Account, \$1,000,000 will be provided by S&T from the 106 Account and \$6,500,000 will be mission and regional bureau buy-ins.

Discussion: On October 1, 1986, the Nutrition Sector Council undertook a review of the proposed follow-on Nutrition: Education and Social Marketing Project. The Council concentrated on two issues: making growth monitoring the major subject matter emphasis and raising the level of effort for the amendment to \$10,000,000.

The Council endorsed the PP at that time (attached) and since then, the level of effort has been raised to \$10,000,000, growth monitoring has remained the principal subject matter of emphasis and a draft RFP has been written.

Recommendation: That you authorize the five-year, \$10,000,000 level of effort (\$3,500,000 in central funding and \$6,500,000 in projected buy-ins) for Nutrition: Education and Social Marketing (936-5113) by signing the attached PAF, Part II.

J

NUTRITION EDUCATION AND TRAINING PROJECT

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I. SUMMARY AND RECOMMENDATIONS

I.A. Face Sheet Data

I.B. Recommendations

It is recommended that this project be approved for a period of five years for a total cost of approximately ¹⁰ ~~\$6,236,000~~. Buy-ins from regional bureaus, FVA and field missions are expected to represent ^{more than} ~~about~~ half of the project's total cost. Expenditures will take place according to the following schedule, subject to the availability of funds:

(US\$ 000)

FY 87	\$	855
FY 88		1,230
FY 89		1,578
FY 90		1,486
FY 91		1,087
Total	\$	6,236

I.C. Description of the Project

The first Nutrition Education Field Support Project (1979-1986), carried out by a consortium of organizations known as the International Nutrition Communication Service (INCS), laid the groundwork for the application of communication and education technologies to a variety of nutrition sector related activities. The first project demonstrated the continuing need of a mechanism for providing short term technical assistance to the field. At the same time, this project pointed out the need for a concentrated input of technical assistance and resources, to improve our knowledge of how to design field programs for the purpose of bringing about nutrition related behavior changes.

The purpose of the follow-on Nutrition Education and Training (NET) Project will be to assist USAID missions, host country counterparts, PVOs and other organizations working in developing countries to design, disseminate and evaluate nutrition information messages by formal and informal means, through various channels. Based on an assessment of field needs, priority will be placed on testing nutrition education interventions, and providing technical assistance in support of the following content areas:

- o Growth monitoring
- o Breastfeeding
- o Weaning practices
- o Nutrition in infection, especially diarrhea
- o Vitamin A
- o Maternal nutrition
- o Nutrition education in primary schools.

In keeping with the recommendations of the evaluation of the first nutrition education project, the new project is designed with three basic components: System (field) support, Core activities and Training.

The field support component of the project is meant to play a purely supportive role, responding to requests for technical assistance. In the majority of cases, the system support component will respond to the needs of USAID field missions, regional bureaus, and FVA for ad hoc technical assistance for a wide range of nutrition education activities.

The core activities, or subprojects, on the other hand, will support a much more concentrated effort; in a sense an experimental or "research and development" approach, through the design and implementation of project-controlled field tests of new IEC strategies in up to six countries. The purpose of these core activities is considerably more directed than those of the field support component and will be targeted primarily to strengthen the role of nutrition in Child Survival. The core activities will be directed at advancing the "state of the art" in nutrition education by actively encouraging the design and testing of high priority interventions in communication, education and information. These activities, or subprojects, will support on-site field tests of improved nutrition education techniques and will provide an opportunity for sustained, hands-on learning for host country counterparts.

Training will be the third major focus of the new project. It is a thread which will be woven through many of the project's overall activities. At the national level, assistance will be provided to help countries/programs assess their training needs in nutrition education, design training programs, develop curricula, and evaluate the training itself. It is expected that training, tailored to specific local needs, will be provided as part of the field support activities. "Hands-on" training will be a major feature of the core subprojects, and will emphasize the application of social marketing skills (discussed in Annexes G and H) to nutrition education programs. Within Title II programs training will emphasize an "institution building" approach, and will enable PVOs implementing Title II programs to better assess nutrition education problems and design program interventions to address those problems.

The funding mechanism will be structured so that each bureau and FVA will have a negotiated level of central funds at its disposal, as well as the opportunity for project buy-ins up to a predetermined ceiling. Buy-ins from missions will not only be encouraged but will be essential to the achievement of overall project objectives. Although the project will be able to respond to a diverse range of requests in nutrition education and training, priority will be given to those requests which incorporate one of the subject areas listed above, and which meet a minimum set of criteria (listed in section I.D.), such as host country or institutional commitment to addressing key nutrition problems.

I.D. Summary Findings

Based on the recent evaluation of the INCS project and analysis of USAID mission and bureau priorities, recommendations for a follow-on project are summarized below:

- o A continued project focus on the overall goal of assisting USAID missions, PVOs, and host country counterparts to design, disseminate and evaluate nutrition education messages.
- o Continuation of a mechanism for field support to USAIDs and PVOs through short term technical assistance, but with more flexibility to provide seed funds and longer term technical assistance, especially to high priority activities (e.g., growth monitoring);
- o A stronger role of key AID/W staff in S&T/N and other bureaus in identifying opportunities and supervising TA quality and outcomes;
- o Develop a few intensive field sites (core subprojects) for the purpose of testing IEC methodologies or techniques relevant to the seven priority content areas;
- o Focus on training in the priority content areas, with a particular emphasis on training in improved IEC methodologies.

The content areas recommended as priorities are those most likely to improve nutritional status, and hence, Child Survival. No other existing AID-supported project focuses its field support

activities primarily on nutrition education. The recommended content areas of highest priority are:

1. The cluster of related activities which include growth monitoring, breastfeeding, weaning practices, and nutrition in infection;
2. Communication and education support for Vitamin A programs;
3. Communication and education support for maternal nutrition programs; and
4. Expansion of nutrition education in primary schools.

The project will also emphasize the application of a social marketing methodology to nutrition education interventions.

It is recommended that assistance be limited to countries and programs in a context which meet at least a minimal set of criteria: an existing basic level of commitment to nutrition; local organizational infrastructure that is capable of carrying out the project's activities; scope for expansion or replication of project activities; potentially available resources to sustain worthy activities initiated under the project. Mission or bureau funded buy-ins should receive priority for funding during the first two years of the project. The identification of country activities which meet these minimal requirements will be essential, given the limited funding available for the new project.

I.E. Relationship to Overall AID Policy, Strategy, and Other AID Projects

The NET Project is consistent with overall AID policy, as stated

in the AID Child Survival Strategy ¹ by Administrator McPherson in April 1986,

"AID's focus will be on developing a sustained capacity in each country to effectively provide ORT, immunizations and other important child survival interventions in nutrition and birth spacing to their vulnerable populations."

The strategy established improvement in the health and survival of children and mothers as the priority goal of the Agency's health program. Among the elements outlined as part of the AID strategy is a focus on ORT and immunizations as the "twin engines of development". These two interventions receive clear priority in the AID strategy although note is made of the importance of nutrition interventions, especially as they support the prevention and treatment of dehydration.

The nutrition education and training project will support the priority nutrition interventions identified in the AID strategy paper. Those are:

1. Promotion of exclusive breastfeeding to 4-6 months to reduce the probability of infectious diseases, diarrheas and associated weight loss.
2. Promotion of proper weaning practices including the introduction of solid foods between 4-6 months, with continuation of breastfeeding.
3. Feeding during diarrhea to prevent serious weight loss and increased feeding after episodes of diarrhea and other infectious diseases.
4. Growth monitoring to detect growth faltering and to serve as a catalyst for prescribing appropriate followup

interventions, (e.g., ORT, feeding) in a timely fashion.

5. Vitamin A supplementation where appropriate.
6. Targeted supplementary feeding programs to children under three years old and pregnant women under PL 480 Title II where there is serious risk of malnutrition.

The project is also consistent with the official AID strategy which promotes institutionalization of services, use of modern communication strategies, and collaboration among donors. The project supports each of these three goals in that it will seek to utilize local resources and expertise where possible, will rely on use of modern communication techniques such as social marketing to encourage nutrition related behavior change, and will collaborate with others donors, particularly UNICEF, in its promotion of growth monitoring.

It is also expected that most, if not all activities funded under the nutrition education and training project will take place in the AID "emphasis countries."

I.E.1 Relationship to Other AID Funded Projects

This project will strive to cooperate with organizations carrying out AID-funded projects in related areas, listed below, and to build upon and complete the nutrition education and public communication aspects of those projects. It is hoped that by pursuing a collaborative approach, issues of institutional or organizational "turf" can be avoided. This project will be able to respond to requests for assistance which may be generated by these other projects. In turn, technical expertise, technical

and training materials and consultants from these other projects will complement those available under the NET Project.

Related AID Financed projects are:

1. Nutrition RSSA (Office of International Health)
2. Vitamin A Project (Helen Keller International)
3. The Weaning Project (Manoff International)
4. Clearinghouse on Infant Feeding and Maternal Nutrition (American Public Health Association)
5. The REACH Project (John Snow International)
6. Dietary Management of Diarrheal Diseases Project (Johns Hopkins University)
7. The PRITECH Project (Management Sciences for Health)
8. HEALTHCOM (Academy for Educational Development).

Most of these other AID supported activities do not have a mechanism for providing short term ad hoc technical assistance in nutrition education. It is this void that the proposed project will fill. A short description of the objectives and activities of related these AID-financed projects, with which this project will collaborate, is given in Annex E.

II. PROJECT BACKGROUND AND DETAILED DESCRIPTION

II.A. Background

II.A.1. Previous Project Activities

The first nutrition education technical assistance project (931-1065) was awarded in 1979 by S&T/N to the Education Development Center (EDC). A consortium of organizations consisting of EDC, Manoff International, and Save the Children Federation combined to form the International Nutrition Communication Service (INCS) Project. The INCS Project, which was divided into Part I and Part II, with a nutrition education focus and a maternal/child health focus respectively, had two stated purposes:

1. Provide technical assistance in response to field requests to a variety of nutrition education activities in developing countries for the purpose of improving the quality of these activities, to promote more widespread use of nutrition education as a program component across sectors, and to help develop LDC capabilities in nutrition education.
2. Promote breastfeeding and improved infant feeding practices through sensitization of policymakers and health practitioners, training of health professionals, strengthening mothers' support groups, campaigns for the lay public and field research to better understand patterns of infant feeding.

INCS functioned as a consortium, bringing in consultants from a variety of disciplines, which provided primarily short term technical assistance support for nutrition education/communication activities in developing countries. In fact, short term technical assistance

was the chief output of the contract, as was intended in the original design. Over 75 TA assignments were undertaken in 35 countries. It was utilized mainly for country program improvements, training, and curricula materials design and testing. No "research and development" component was included in the original project. The project was largely intended to respond to ad hoc requests for technical assistance. In addition to providing technical assistance, INCS produced reference materials for projects in the field, such as nutrition data profiles and catalogues of nutrition education training materials. INCS was also mandated to establish a clearing-house on nutrition education materials and prepare a compendium which would summarize lessons learned in applying the new technologies in communication and education, so that they might be shared by nonparticipating projects and countries. The INCS Project is scheduled to terminate in December 1986.

The outcomes of the first seven years of the project were:

- o 35 countries given technical assistance;
- o 30 conferences/training workshops held;
- o Approximately 120 person months of training provided;
- o At least 20 projects designed, improved, expanded or evaluated of which at least 10 showed preliminary indications of sustained change;
- o Breastfeeding promotion initiated, expanded or improved in about 12 countries of which two have demonstrated reduced diarrheal morbidity and increased breastfeeding prevalence in urban hospitals;

- o Improved information collected and analyzed on infant feeding practices in four countries of which two countries have proceeded to intervention, design and implementation activities.

A more detailed account of the INCS evaluation is given in Annex C.

II.A.2. Project Rationale

The rationale for the proposed project is the same as that used for the original nutrition education field support project which began in 1979; i.e., that improved and more effective nutrition education, using information learned about application of mass media techniques and face-to-face communication, will help bring about nutrition related behavior change, and improve nutrition status in target populations. Both field missions and regional bureaus have documented the need for assistance in planning nutrition education projects, or nutrition components of primary health care programs. This project will serve as a center of expertise in nutrition education, and a repository of information and experience gained from successful experiments in nutrition education in the last ten years. It will attempt to advance the "state of the art" in nutrition by undertaking experimental projects in several field sites to test nutrition communications or public education strategies. This project, like its predecessor, will train developing country personnel in the effective use of mass media and other techniques for nutrition education by providing training in program design, implementation, and evaluation.

II.A.3. Lessons Learned from Previous Project

II.A.3.a. Project Design

The responsive, flexible and adaptive nature of the first project was an essential characteristic contributing to its usefulness to the field. As the project evolved and field requirements changed, adaptations were made in the project strategy to accommodate mission needs, a factor which the missions strongly endorsed. In general, INCS assistance did not provide support to discrete AID bilateral nutrition projects, but rather to ad hoc requests for technical assistance and support to PVOs, such as CARE and CRS. It served as a convenient mechanism for AID to respond to nutrition issues. AID missions are often reluctant or unable to use bilateral project funds to support short term technical assistance, which generally requires host country approval and complicated contracting procedures, thus introducing lengthy delays.

Despite the achievements listed earlier, the evaluation of INCS also identified a number of problems which impeded project implementation. These are discussed below.

II.A.3.b. Technical Assistance

Lack of continuity and followup by the contractor or consultants in providing technical assistance to an in-country project was identified by the missions as a source of frustration. One African mission commented,

"The project should ensure that consultants provided are consistent in their approach. All too often we have suffered as one consultant after another reworked the entire plans of his/her predecessor."

The format of INCS technical assistance diverged considerably from that in the original project design of in-country "planning workshops", and most TA was actually provided on a one-on-one basis. The content of the TA varied widely depending on the individual consultant selected/available for an assignment. The evaluation of INCS points out that there was no evidence of "synthesizing lessons learned and developing standardized approaches even in subject areas for which requests were repeatedly received, e.g., growth monitoring." The educational approaches and ideologies propagated through the project varied considerably as well. It is recommended in the new project that core staff and key consultants receive a required orientation to the methodology and philosophy of the contracting organization, with refresher training courses as necessary, to ensure a continuity of approach.

The evaluation identified the reasons for these shortcomings in provision of TA as the unavailability of highly experienced consultants, inadequate communication with clients (either the mission or local counterpart organization), inadequate promotion regarding the INCS role through AID channels, especially the regional bureaus, and inadequate resources relative to the broad range of requests. Several instances were noted where a new project required methodology development or field testing prior to implementation, but funds were lacking. Problems arose from inadequate knowledge in AID/W about the nature and circumstances of the TA requests. As a result, in some cases, consultant skills were inappropriate and services were not delivered in a timely manner.

II.A.3.c. Lack of Dissemination of Project Findings

According to most missions there was little followup by the contractor to ascertain needs for additional technical assistance, evaluation or dissemination of project findings. The compendium, which INCS was to have developed to summarize and disseminate "lessons learned" from project activities, was not finalized at the time of the evaluation. A lack of any systematic method for collecting, analyzing, and disseminating the most significant findings from project activities, in a simple and convenient format, was a major shortcoming of the first project. The seemingly low priority ascribed to synthesizing lessons learned into conceptual models for better nutrition education was particularly disappointing in that it was to have been a key element in AID's strategy to improve and promote nutrition education.

II.A.3.d. Limited Availability of Nutrition Expertise in the Field

The INCS project was hindered by the lack of individuals trained in nutrition among USAID mission staff, PVOs and host country counterparts, needed to design and carry out nutrition education activities. AID as an agency has only a handful of nutrition advisors, making it difficult to muster the technical expertise necessary to develop, supervise and utilize the resources available. In the new project it will be necessary for both S&T/N and the regional bureaus to undertake an awareness and sensitization campaign for key mission HPN staff regarding new

approaches to nutrition education and the potential uses of centrally funded managed TA. Additionally, high priority should be given to needs assessments and TA strategy visits by AID/W and senior contractor staff to assist USAIDs in developing TA strategies.

A related issue is the role of the project monitor in S&T/N. A strong project manager is an asset in guiding the contractor and the missions to appropriate use of contract funds. Given budget constraints and the current staffing pattern in S&T/N, this will continue to be a concern during the implementation of the new project.

II.A.3.e. Contract Management

Project management was adequate to meet contractual obligations, but a greater use of senior consultants with recognized expertise in nutrition education or related fields would have enhanced the project's effect. This was particularly true in development of conceptual models for nutrition education and strategies for program development.

II.B. Detailed Description of the Project

II.B.1. Project Goal and Purpose

In a review of communications in support of development programs, Bart ² said,

"Outreach with effective health technologies - this may be the most significant challenge facing the international health community today. We know how to reduce infant mortality. We must now deliver on this promise. Public health education and communication are central elements in this process and AID strongly supports them."

Goal: To reduce the mortality and incidence of malnutrition among young children and their mothers in developing countries

The purpose of the NET Project is to assist USAID missions, host country counterparts, PVOs and other organizations working in developing countries to design, disseminate and evaluate nutrition information messages by formal and informal means through various media. Priority will be placed on designing and implementing nutrition education interventions which focus on the following content areas:

- o Growth monitoring;
- o Breastfeeding;
- o Weaning practices;
- o Nutrition in infection, especially diarrheal disease;
- o Vitamin A;
- o Maternal nutrition, particularly in relation to low birth weight;
- o Nutrition education in primary schools.

The project's objectives in each of these content areas are discussed in the following section.

This project will be S&T/N's principal mechanism for implementing an educational component in support of AID's nutrition sector strategy. It is expected that the project will assist in the development, implementation and evaluation of nutrition education components in sectoral programs in agriculture, health, food commodity programs, education, as well as direct nutrition projects.

The recent focus within AID on Child Survival, as well as within the other donor agencies, has made this a particularly appropriate time to pursue a strategy in nutrition education

which draws together many aspects of the key Child Survival technologies. For example, growth monitoring can serve as a vehicle, when applied effectively, to promote breastfeeding, ORT, and improved weaning behaviors.

The project purpose, end of project status, and major outputs and inputs of the project are provided in the Logical Framework, Annex A. They are summarized briefly here as well.

11.B.2. End of Project Status

The end of project status which will indicate the achievement of the project purpose is described below:

1. There will be a measurable improvement in the ability of U.S. and indigenous PVOs and host country governments in at least 15 countries to plan and implement nutrition education programs.
2. Capacity to apply improved communication/education methodologies, especially social marketing is established and being used in up to six countries.
3. A social marketing methodology in support of growth monitoring programs is refined and disseminated through technical assistance and training to countries conducting growth monitoring programs.
4. Reports and/or fieldnotes which discuss the design, methodology, and implementation used, and results of the six core subprojects are prepared and disseminated.
5. Improved understanding of modern communication/education techniques, relevant to key areas of nutrition intervention, established in at least 15 countries.

II.B.3. Outputs

The major outputs of this project will be:

Technical Assistance

1. Provision of timely and effective technical assistance to USAID missions, host country governments, and PVOs wishing to plan, implement or evaluate nutrition education projects.
2. Synthesis and dissemination of significant findings in nutrition education from the core projects.

Training

1. Training programs in nutrition education/communication techniques, organized and implemented, in at least ten target countries.
2. Provision of long term training assistance by an in-country advisor assigned to the core projects in up to six countries.

Core Subprojects

1. Core subprojects, specifically focused on advancing the "state-of-the-art" in nutrition education implemented in at least six countries. These projects will field test the most current communication/education technology, drawing heavily on the principles and practices of social marketing. At least two of these core projects will focus on growth monitoring.

II.B.4. Inputs

The project will provide approximately \$1.25 million for short and long term technical assistance. This represents approximately 125 person months of TA.

Table I provides a breakdown of this assistance by type of activity.

Table I Assistance by Activity

<u>Type of Activity</u>	<u>Person Months</u>
Growth monitoring	40
Breastfeeding	15
Weaning practices	15
Nutrition in infection	15
Vitamin A	10
Maternal nutrition	15
Nutrition education in primary schools	<u>15</u>
	125

Other inputs include funding for training (\$.75 million) and implementation costs (\$1.55 million) related to the core subprojects, and seed money (\$.45 million) needed for assisting other, small in-country projects, not defined as core subprojects.

Table II Assistance by Region

<u>Region</u>	<u>Percent</u>	<u>Emphasis Countries</u>
Africa	33%	Zaire, Senegal, Mali, Malawai, Nigeria, Niger, Kenya, Sudan
ANE	33%	Bangladesh, Indonesia, Pakistan, Nepal, Papua New Guinea
LAC	33%	Haiti, Bolivia, Dominican Republic, Ecuador, Honduras, Peru, Guatemala

II.C. Substantive Topics

II.C.1. Growth Monitoring

Growth monitoring is the regular monthly weighing of a child, the recording of that weight on a growth card, interpretation of

the growth curve, and appropriate action, counseling and followup. Regular growth monitoring can make child growth visible to both health workers and mothers, and can alert them to the signs of growth failure at an early stage. Growth monitoring is a key activity among the Child Survival technologies, but one whose importance has been underestimated. Rohde³ recently summarized his view of the importance of growth monitoring in primary health care:

"While growth monitoring alone will surely not provide health, I do not believe that effective primary health care with high coverage for the most disadvantaged can occur in the absence of growth monitoring at the village level."

As a health technology, regular growth monitoring has several distinct advantages: it establishes a recurring contact with primary health care services; provides feedback and reinforcement for healthy growth; enables an early diagnosis of faltering growth and an opportunity to take corrective action; and lastly, it is a useful screening device for targeting food supplies. It should be viewed as a means of detection, not as an intervention in itself; it must be linked to an action program if it is to be effective. Unfortunately, many large scale growth monitoring programs worldwide, with one or two notable exceptions, have been disappointing. Increasingly, however, there is recognition of the fact that the problem is not with the concept of growth monitoring itself, but rather with the manner it is being implemented. Some would say that growth monitoring hasn't failed because it hasn't been tried.

Experts believe that growth monitoring and nutrition education programs, if they are to complement one another, must be designed together as part of a total communication package. Indonesia's village-based nutrition project is perhaps the most discussed example of such a program (Annex G). In this program growth monitoring was used as a forum for nutrition education.

Recent experience from several other countries has begun to show evidence that growth monitoring programs can be modified to improve their effectiveness. A recent review⁴ of four growth monitoring programs in India summarizes "some lessons from India" on successful growth monitoring. The summary of that report is given in Annex F.

There is an urgent need for improved communication, information and education in improving the way in which growth monitoring programs are designed and carried out. Although education is only one component of a good growth monitoring program, many areas need experimentation. For example, research is needed on such issues as:

- o Is individual counseling of mothers about growth preferable to group counseling?
- o What messages about growth failure or feeding are most appropriate and effective?
- o How is it possible to tie in nutrition program messages to mass media messages?
- o What channels are most appropriate for growth monitoring messages?

Some of the most exciting advances in the area of growth monitoring were initiated during the current INCS project by Griffiths, who used a "social marketing" approach to bring about behavior change. Results from her work in the Dominican Republic and Ecuador hold out promise for a new, effective approach to message design and media selection in support of growth monitoring. A substantial part of this design grew out of intensive field work with target audiences using anthropological and market research techniques, in which the point of view of mothers and families is emphasized. The evaluation ⁵ of the INCS project summarized this work:

"One of the most promising breakthroughs resulting from INCS' work was the development of a replicable technology for making effective use of growth monitoring as a motivating factor in bringing about better nutritional status. Based on the techniques developed in Indonesia, methods were refined and applied in Dominican Republic and Ecuador. These can be transferred immediately to other programs."

Growth monitoring provides a handle for health education, since many primary health care interventions are likely to be ineffective without related nutrition interventions. Healthy growth is the best overall indicator of health status in the child, and this growth can be made manifest through regular growth monitoring. Growth monitoring, as it has been used in Indonesia, can "pull" health services into the communities. Villages have begun to demand health services such as immunizations and ORT as a result of community involvement in monthly growth monitoring.

Project's Growth Monitoring Objectives

The specific objectives of the project in growth monitoring should be:

1. Continue to test and refine the application of a social marketing methodology to the communication/education components of growth monitoring programs, through technical assistance and training efforts.
2. Institutionalize and replicate the social marketing methodology in ongoing or proposed growth monitoring programs with which AID is associated.
3. Demonstrate the ability of growth monitoring activities to form a conduit for expanding immunization or ORT coverage through careful selection of a one or two focus sites.

In a presentation to the International Union of Nutrition Scientists in Brighton in 1985, Rohde ⁶ challenged the nutrition community;

"For too long the nutrition community has abdicated its natural place in the hierarchy of public health programs. Let us speak out with far greater clarity and purpose to carry our message beyond the realms of health care providers to those in positions of political power and responsibility. Let us clearly state that there cannot be health without proper nutrition, that regular growth in the first two years is the critical foundation of health throughout a lifetime, and that only through monitoring that growth can mothers be expected to perceive, appreciate and act to assure normal growth."

II.C.2. Breastfeeding

The benefits of breastfeeding to infant and child health and nutrition are hard to overestimate. Numerous studies have sub-

stantiated the role that breastfeeding plays in early infant nutrition, and protection from infection. Mata ⁷ summarizes the advantages of breast milk,

"Breastfed infants can thrive even under unhygienic conditions in areas of extreme poverty. The anti-infectious properties of human milk account for the very high resistance of the nursing infant to infection in general and in particular to diarrhea. In deprived tropical areas infants grow adequately, even if they have experienced fetal growth retardation or were born prematurely, as long as they are kept at the breast during the first four to six months of life. Breast milk has unique immunologic, psychological and economic benefits."

There is at present no country where a major, ongoing national public education campaign on breastfeeding exists. Brazil, the best known and most well documented example, is winding down. Where programs have been conducted, they tend to be hospital based, such as in Central America, Thailand and Indonesia. Breastfeeding promotion needs more coverage than just hospitals, and must move beyond the urban areas. Linkages between breastfeeding and the other Child Survival technologies, such as ORT and growth monitoring, need to be more strongly emphasized. There is an important role for education and communications in support of breastfeeding, through both public education and face to face approaches.

Lactation management and training with medical professionals from developing countries, begun under the INCS contract, will probably be supported under a separate project funded by S&T/N. However, there is potential for experimentation in communi-

cations techniques for promotion of breastfeeding in many project activities. Countries which began breastfeeding activities under the INCS Project need support for continued activities, and a source of assistance for expanding into communication efforts to change practices and policies.

Project Objectives in Breastfeeding

Specific objectives for the new project are:

1. Develop an overall AID strategy and conceptual model for expansion of breastfeeding activities which were begun under the INCS Project.
2. Expand and support the work of the San Diego Lactation Management Training Program, with selected in-country activities.
3. Investigate avenues of support for breastfeeding working women, in selected countries.
4. Use social marketing methodology (through mass media and interpersonal channels) to promote and support breastfeeding.

II.C.3. Weaning Practices

This project's focus on nutrition education serves as a unifying force for several separate, but intrinsically related substantive topic areas: growth monitoring, breastfeeding and weaning practices. An effective growth monitoring program cannot be carried out without a strong education and information component, and the main topic of that educational focus should be information about feeding, and weaning. Attention to the role of dietary

management in diarrheal disease should also be included in growth monitoring counseling sessions.

Attention should be focused on the weaning period, as that is the time when a child is at highest risk of infection, especially diarrheal disease and malnutrition. Infant mortality is highest during the weaning period as a result of the synergism among these factors. What a child eats during that period is of paramount importance.

Considerable work has already been done on the educational and communications aspects of improved weaning practices under the INCS Project, as well as the specialized Weaning Project (described in Annex E) begun in 1985. Social marketing techniques have been successfully tested in several countries and can be applied to improvement of weaning practices, in concert with growth monitoring programs.

This project will supplement the activities of the Weaning Project, and facilitate the transfer of the knowledge and experience gained to other countries.

Project Objectives in Weaning Practices

1. To disseminate the knowledge of the social marketing methodology as it supports weaning practices, through training and technical assistance efforts.
2. To further test and refine the social marketing methodology, begun under the Weaning Project, to countries beyond the scope of the Weaning Project.

II.C.4. Nutrition in Infection, Especially Diarrheal Disease

In a major address at the ICORT meeting in Washington in December 1985, Rohde asserted that "diarrhea is a nutritional disease", which can only be managed properly with appropriate feeding. It is no coincidence that the peak incidence of growth faltering coincides with the highest incidence of diarrhea, during the first two years of life, providing evidence of the vicious cycle of diarrhea and malnutrition.

Data from numerous studies dramatically underscores the fact that diarrhea lasts longer and is more severe in malnourished patients. Diarrhea related mortality too, is more strongly associated with malnourished children. Rohde⁸ says,

"A follow-up study of children discharged from ICDDR,B showed that subsequent mortality was 140 per thousand in those whose nutritional status was worse than 55% weight for age and only ten per thousand in those greater than 75%."

Weight loss due to diarrheal disease is a major determinant of nutritional status. It can be effectively addressed through efforts to bring about behavior change mainly consisting of increased intake of home available fluids and food during and after diarrhea episodes. Nutrition education has to focus on teaching mothers the importance of feeding both during and after diarrhea when there is potential for considerable catch-up growth. Both health workers and mothers must be convinced of this relationship and the importance of proper nutritional management of the diarrhea patient. They must be made aware of the importance of this interaction.

The problem of malnutrition combined with diarrhea must be met with a curative as well as with a preventive approach.

The role of nutrition in infection is also closely related to other substantive areas of the new project, such as growth monitoring and breastfeeding. Because several other AID funded projects focus on diarrheal disease and oral rehydration therapy, the nutrition education and training project will support these efforts with assistance in communication/education. In particular it will attempt to complement the activities of the Dietary Management of Diarrheal Disease Project, which has emphasized the importance of the nutrition/infection interaction. That project, which is limited to interventions in two countries, will support communications research to identify and test messages and media relevant to the nutritional management of diarrhea.

Project Objectives in Nutrition in Infection

1. Support the development of a communications package/ methodology, with a specific nutrition education focus, for widespread use in ORT programs.
2. Through technical assistance and training, replicate and expand on the educational components of the work done in the Dietary Management of Diarrheal Diseases Project.

II.C.5. Vitamin A

The recent surge of interest in vitamin A stems primarily from work done by Sommer and others in Indonesia. In a now landmark study of vitamin A and mortality, Sommer⁹ stated,

"We know that five to ten million children develop mild xerophthalmia, hence vitamin A deficiency, every year. Given these figures, and the increased risk of death among children with mild, and probably even with subclinical vitamin A deficiency, it may account for as much as 20-30% of all preschool age deaths in developing countries."

Vitamin A has long been known to be crucial to normal development of the eye, but the research cited above now links low-cost vitamin A supplementation with major reductions in child mortality, making it an extremely significant intervention for Child Survival. The recent research proves vitamin A to be vital not only to childhood growth and development, but most importantly to increasing a child's capacity to resist infection, particularly respiratory, urinary tract and intestinal infections.

Helen Keller International (HKI), with AID funding and technical assistance from Manoff International, has been active in much of the field research and program implementation being carried out on vitamin A in Indonesia, Bangladesh and soon in the Philippines. HKI's work has been focused on improving the effectiveness and efficiency of vitamin A distribution and in training indigenous health workers in diagnosis and treatment of nutritional blindness, as well as in development of training materials for field workers. Pending current research outcomes, there is likely to be an expanded focus on use of vitamin A supplementation in other countries as well, as part of primary health care programs. There is a potential demand for technical assistance in developing public education programs around vitamin A as well as other communications support from this new project.

In Indonesia, where much of the earliest work in vitamin A was carried out, declines in vitamin A deficiency are being documented and a mythology is growing up around beliefs about "dark, green leafy vegetables", a key message of the education efforts there. In Indonesia, and in other countries, an education focus should be emphasized, supporting the vitamin A work.

Malawai is another potential target country for vitamin A support activities in order to complement the work of the International Eye Foundation (IEF), which is developing a project there.

Project Objectives in Vitamin A

1. Provision of technical assistance to help design and implement programs in support of vitamin A.
2. Training for nutrition educators relevant to vitamin A.
3. Development of training materials for health workers on vitamin A.

II.C.6. Maternal Nutrition

Maternal nutrition is perhaps one of the most neglected areas of primary health care, especially at a time when many programs are focused on Child Survival technologies. Mothers, ironically, are too often forgotten in the emphasis on reducing infant and child mortality. However, a significant problem exists which deserves attention. For example, Anderson ¹⁰ in discussing mothers enrolled in the ICDS program, in India states,

"There is a major maternal malnutrition problem. Of 261 pregnant women in the last trimester, half of the women weighed less than 40 kg, putting them at high risk of delivering low birth weight babies and 82% were anemic."

Of major concern is the relationship of maternal nutrition to low birth weight (LBW), since the association between birth-weight and perinatal mortality is beyond dispute. Despite equivocal results from some studies on the relationship between maternal nutrition and LBW, enough is known to suggest that further work in investigating nutrition during pregnancy, and the effects of food supplementation during pregnancy, should be encouraged.

Project Objectives in Maternal Nutrition

The objectives of the new project in support of maternal nutrition are:

1. Use of a social marketing approach, using both mass media and interpersonal communications to encourage improved nutrition during pregnancy, directed at both mothers and other family members.
2. Test field methods for improving maternal nutrition through education, such as the ICDS Project is doing in India. These include an experimental "maternal growth chart" to monitor and educate mothers about the importance of weight gain during pregnancy.

II.C.7. Nutrition Education in Primary Schools

Although much has been written about the importance of education in bringing about nutrition related behavior changes, communications technologies have not been applied to formal school settings,

except in a few countries. During the current INCS project a model was developed and tested in Jamaica to explore the use of school children as health and nutrition promoters. The focal point of the project was the development of simple literacy teaching materials which deal with nutrition topics, geared to school age children.

Work begun by INCS in this effort will continue in the new project. Its stated goals are:

1. Demonstrate that reading abilities and nutritional understanding of students in grades four and five can be improved through combined materials.
2. Demonstrate effectiveness of participatory approaches in curriculum materials development.
3. Demonstrate that simple and effective materials can be rapidly introduced into the curriculum.

Similar work in Zaire by INCS began in 1985, focusing on the development of a nutrition education curriculum for use in the primary school system. The Zaire approach centers on the integration of nutrition, hygiene, and agriculture (food production) and how each of these contributes to good health. The intent is to allow school children to learn in a more active fashion, concentrating on problems familiar in their everyday lives. At present the work is in a pilot testing stage.

The Africa Bureau believes that in this region the child-to-child concept is one which should be further tested and evaluated.

It is an approach which uses primary school education as a vehicle to influence child health through sibling contact.

The objective of the new project in this area will be to refine and expand on these initiatives.

II.D. Social Marketing Methodology

The social marketing approach is a systematic methodology for making decisions which can be applied to nutrition education programs. It represents a significant leap forward in ways to design new activities or review existing ones for the purpose of improving behavioral impacts, through careful message design and media selection. This methodology, which draws heavily from several disciplines including marketing, systems analysis, anthropology and nutrition, is consumer responsive and depends on heavy "up front" assistance early in project implementation. It has been tested in nutrition education programs in Indonesia, Ecuador, and the Dominican Republic, among others. Steps in the social marketing process are listed below.

Process for the Development of an Educational Plan ¹¹

1. Identify general problems and general objectives for the educational program.
2. Gather quantitative information on the priority problems. (Often these data already exist.)
3. Determine educational priorities.
4. Gather qualitative information in the community through focus groups and individual depth interviews.

5. Analyze the qualitative information and decide action objectives, audience segments, and the creative message strategy.
6. Select appropriate media.
7. Develop prototype materials for each medium.
8. Pretest materials.
9. Improve materials based on test.
10. Develop a media plan with detailed specifications about mix, frequency, duration, and budget.
11. Train workers in basic messages and use of materials.
12. Implement the public information program.
13. Evaluate and continually refine.

More detailed discussions of the application of a social marketing methodology are given in Annexes G and H.

III. PROJECT ANALYSES

III.A. Technical Analysis: Overview of Nutrition Education and Training

During the last few years a strong focus on the role of education in public health has emerged, as evidenced by such project titles and programs as "social marketing", "education for health", "development support communication", "mass media and health" and "health promotion". This trend is not surprising given the enormous demands on health education to bring about health related behavior changes in the massive populations of the poor, illiterate and disadvantaged in developing countries. Public health education has been called upon to promote breast-feeding, use of oral rehydration during diarrhea, family planning, use of immunizations, and so on. These recent communications efforts underscore the fact that although we have life saving technologies such as ORT and immunizations, there is a large gap between that knowledge and its widespread practice in developing countries. It is now believed that effective communications are a way of bridging that gap and making the possibility of saving millions of childrens' lives a reality.

No where is this gap between knowledge and behavior more evident than in the area of nutrition. A recent review of the "state of the art" in nutrition education by Hornick¹² begins with a discussion of its historical role. Nutrition education is widespread, in one form or another, and is carried out as part of many health programs. There is little basis, however, for challenging the commonly held view that in fact, most of it doesn't work

very well. Hornick acknowledges there is "widespread suspicion that nutrition education activities of the types which now predominate have not been very effective." Smith¹³ describes the worst scenario surrounding health education, which is unfortunately common,

"Health education as traditionally practiced has all too often consisted of a poster pre-tested with the local cleaning lady because 'she's from the rural areas', a flipchart developed for group presentations that never take place, a few slick TV spots to please the Minister, radio programs which advertise services that don't exist or give advice to health workers who are too overworked to treat patients, much less organize community groups. This has to change. Far too often bad messages are being pushed through weak channels to the wrong people at the cost of scarce resources."

In spite of this dubious history and the shortcomings of the past, there is renewed interest in the capacity of education to bring about behavioral change. Because of experimentation in the field with new and different approaches, which have produced impressive changes in nutrition related knowledge, attitudes and behavior in recent years, the focus has swung to the question not of whether nutrition education is effective but rather whether it can be effective.

However, in assessing the probabilities for future successes in the field of nutrition education, one must differentiate among the kinds of problems for which nutrition education is best suited. Nutrition education is not similarly effective in all situations; where poverty is an absolute constraint, it can be expected to have little effect. Put bluntly, if a family has limited access

to adequate food or the money to buy it, it is likely the family will be marginally nourished. Anderson¹⁴ cites an example of such a situation from the ICDS Project in India, saying,

"There is definitely potential for using growth monitoring as an educational tool. However, the poverty constraints need also be recognized as nutrition education and growth monitoring alone cannot solve the problem. More than 40% of the rural households in the USAID assisted states do not consume enough food to meet the needs of all the family members."

This of course argues for strong ties between supplementary food programs like PL 480 Title II and nutrition education efforts, where program success is truly dependent on a collaborative effort.

On the other hand, nutrition education does seem to hold out more promise in those situations which involve behavior change within the family. Examples of such behaviors are breastfeeding, weaning practices, and feeding and treatment during infections, especially diarrhea. Recent programs that have attempted to bring about nutrition related behavior change in weaning practices, use of ORT and breastfeeding, applying social marketing and other communications techniques have reported successes. Hornick cites examples of programs that have made a difference:

1. Education in association with food supplements in Morocco was found to produce greater change in nutritional status than that associated with food supplementation alone.
2. In Micronesia, social marketing of coconut milk as a substitute for imported drinks led to a widespread change in drinking patterns.

3. In Indonesia, nutrition education by village volunteers, supported by radio and action posters, produced a distinct improvement in nutritional status.
4. Media based projects in the Philippines, Tanzania, Honduras and The Gambia are reported to have reached large numbers of people who have begun to show changes in nutritional knowledges, attitudes, and practices.

These last two examples, that of the Manoff work in Indonesia, and the Mass Media and Health Practices Project (Academy for Educational Development) in Honduras and The Gambia, deserve special recognition. They have direct application to the activities expected to take place in the new nutrition and training project. Summaries of the methodology, design and evaluation of these projects is provided in Annexes G and H.

To some extent these examples of "successful" projects were atypical in that they were carried out with unusual inputs of technical assistance, resources and commitment. In fact, in some cases they were more characteristic of pilot projects than full scale national programs. Despite such qualifiers, these projects do show promise for future directions in nutrition education, even when viewed with guarded optimism. A recent UNESCO report¹⁵ is more positive in its affirmation of recent events, saying "the art and science of nutrition education has reached a milestone in its development." The UNESCO report contends that recent experience reflects a growing focus on participatory teaching and learning

methodologies and a commitment to using education and communications as interventions to change KAP in target communities.

In analyzing the aspects of the programs listed above and other similar efforts, Hornick¹⁶ selected the following features as ways of avoiding the shortcomings of traditional approaches:

- o Reaching out to the target audiences presently served by clinic networks through a mixture of face-to-face extension education and mass media information activities.
- o Improving the quality of the information and education provided through these channels by means of careful prior investigation of the issues being addressed, design of the messages offered on the basis of knowledge gained during the prior investigation, training and supervision of field workers, regular maintenance research to assess audience response, and adjustments in program messages and strategies on the basis of the findings of such research.
- o Employing multiple channels to disseminate the same message in order that each channel might reinforce what is being said through the others.
- o Using nutrition education in conjunction with, rather than as a substitute for, the provision of material inputs - for example to promote the availability of food supplements or oral rehydration packets.
- o Providing incentives for educators to continue working effectively and for the clients to adopt and continue

the practices desired; and financial and human resources necessary for the development and implementation of programs incorporating the features just described.

The only major point of controversy in all the discussion of recent "successes" seems to be the question of primacy of channels used. Depending on one's point of view (and there are several, all strongly held) each of the following merits attention:

- face-to-face
- mass media
- education in schools

or a combination of any or all of these.

Hornick¹⁷ summarizes the recent findings, and in looking to future programming in this area states,

"one cannot suggest that they are representative, or that they show that nutrition education can be done on a large scale, as routine practice, or effectively when measured against nutritional status. The tension between reaching large audiences, which media-based programs can do, and producing nutritionally significant behavior change, which pilot outreach projects have been able to do, remains as the central problem of nutrition education."

III.A.1. Next Steps

The content and design of the recent education/communications programs have begun to provide us with some answers to the critical questions of nutrition education. But the majority of questions remain unanswered. For example,

1. What can be done to improve the conventional nutrition education programs which exist worldwide, with the limited resources available?

2. What are the critical determinants of key nutrition behaviors, such as appropriate weaning practices?
3. What impact can nutrition education have in communities or households, where absolute food deprivation is the norm?
4. Can the seeming success of recent mass media approaches in ORT and related dietary practices (such as Honduras and Gambia) be translated to a broader spectrum of nutrition topics?
5. Can nutrition education be effective in the absence of political and financial commitment by governments?
6. How can we deal with the enormous task of training and supervising field workers responsible for most face-to-face nutrition education?
7. What role is there for nutrition education in schools and how effective is this approach?
8. How can nutrition education efforts be evaluated simply and at low cost?
9. Which nutrition related behaviors are most amenable to change through education efforts?

III.B. Financial Analysis and Plan

III.B.1. Project Funding

In order to maximize the resources available from S&T/N, buy-ins from missions, regional bureaus and FVA will be encouraged in the new project. Project funds will be used for technical

assistance, training, and field subprojects. Buy-ins will be encouraged up to a predetermined ceiling, and the level of buy-ins from each bureau and FVA will be negotiated to ensure an equitable distribution of project resources. Buy-ins will be negotiated with the following factors considered:

- o Agency policy concerning regional and country emphases.
- o The scope of work of expected projects within the region, and from that an expected level of effort.
- o Availability of funds within bureaus and FVA to buy-in.
- o A specified set aside of funds for S&T/N activities (for example, five person months to be used for evaluation of centrally funded activities).

Levels can be renegotiated at the end of year I of the project to accommodate changes in bureau and FVA funds and priorities.

The following countries have indicated that they could buy-in to the follow-on nutrition education field support project:

Niger

Burkina Faso

India

Swaziland

Bolivia

Ecuador.

The following countries may be able to buy-in to the project:

The Gambia Zaire

Malawai Senegal

Yemen Mali

Indonesia	Niger
Nigeria	Kenya
Sudan	Cameroon.

REDSO/WCA has also indicated its interest in potential buy-ins.

Before the RFP is issued, each regional bureau and FVA will be asked to prepare an estimate of the level of buy-ins anticipated. An accounting system for buy-ins will be developed to satisfy buy-in clients. Each commitment should be accompanied by a partially completed PIO/T with a sample scope of work, which is necessary to assure that activities undertaken in the project will be consistent with project foci and objectives.

The following table gives a projected funding breakdown by region*. The listing breaks down the regional programs and anticipated source of funding including regional and USAID buy-ins.

Table III. Person Months and Cost Breakdown

	Person Months			Cost Estimates		
	S&T	Buy-In	Total	S&T	Buy-In	Total
Africa	10	50	60	100,000	500,000	600,000
ANE	10	50	60	100,000	500,000	600,000
LAC	10	20	30	100,000	200,000	300,000
FVA	10	20	30	100,000	200,000	300,000
S&T	5	--	5	50,000	---	50,000
Total			185			\$ 1,850,000

* Since information on buy-ins was incomplete at the time the PP was being written, these figures are estimated projections.

ILLUSTRATIVE PROJECT BUDGET (FP, P. 46, revised)

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1. Contractor Staff	217	223	334	358	423	1555
2. Consultants	38	38	57	62	72	267
3. Travel and Per Diem	55	51	78	83	100	367
4. Facilities and Equipment	47	45	67	71	87	317
5. Overheads	143	143	214	226	268	994
6. Sub-Total (Central Funds)	500	500	750	800	950	3500
7. Buy-Ins	518	975	1490	1714	1803	6500
8. Totals	1018	1475	2240	2514	2753	10000

III.C. Social Analysis

The countries which will receive assistance from this project are almost exclusively the AID-designated "emphasis" countries, which have or are likely to develop nutrition sector projects. As in the previous project, it is expected that the technical assistance will be provided primarily to technical and/or administrative personnel within government ministries (such as health, education, communications) and local organizations, or PVOs. The core activities, which are field based, will be conducted in collaboration with local organizations and institutions. The ultimate beneficiaries however, are the mothers and infants targeted by the activities of the project, particularly growth monitoring, breastfeeding, weaning practices and others. Because most of the activities of the project are designed to enhance and support Child Survival projects, interventions which have the greatest impact on infant and young child morbidity and mortality will receive the highest priority.

III.D. Other Donor Activities and Assistance

III.D.1. UNICEF

At a recent UNICEF meeting in New Delhi, UNICEF endorsed its support of a major programmatic effort in growth monitoring, much like its previous support of ORT and immunizations. As part of a worldwide effort to improve, strengthen and expand growth monitoring programs, UNICEF will adopt a strategy which will include technical and financial assistance to strengthen growth monitoring programs through operations research, publication of an international newsletter on growth monitoring, establishment of a clearinghouse for tracking research and developments in growth monitoring technologies such as growth charts, arm circumference tapes, and weighing scales.

Following is a description of the UNICEF Plan of Action, stated in the UNICEF publication¹⁸ titled, "Growth of Children: Strategies for Monitoring and Promotion", published in April 1986.

"UNICEF is preparing to play a key role in mobilization of international and national support for monitoring and promotion of child growth and development. The preliminary plan of action is given below. It embodies advocacy, programme strengthening, and expanding the knowledge base on conceptual and operational aspects. The programme of action proposed for support by UNICEF focuses on five strategies:

1. Popularizing child growth issues.
2. Expanding and strengthening monitoring and promotion of child growth.
3. Developing in-depth study/action projects.
4. Establishing a network of institutions on child growth.
5. Expanding UNICEF's capacity in headquarters and in the field in order to develop and manage a child growth monitoring and promotion programme."

III.D.2. World Bank

Generally, in World Bank funded activities information, education and communications are components in most primary health care projects, and most programs also have growth monitoring or other nutrition elements. Nutrition education is included in the larger context of nutrition programs.

The Bank is planning to carry out country specific work in nutrition in a few countries (e.g., Brazil, Columbia and possibly a follow-on in India), such as was done with the Tamil Nadu Integrated Nutrition Project in India. This work will not have the depth of the earlier Bank supported research in Indonesia. Currently there is no new funding available for research.

IV. IMPLEMENTATION PLAN

IV.A. Administrative Arrangements

Through a competitive bidding process, an institution or firm with expertise in the following areas will be selected to implement the new project:

public health nutrition	education
social marketing	educational psychology
anthropology	health communications
behavioral psychology	training
mass media	research and evaluation.

The contractor should be (or will be made) familiar with AID projects and priorities in nutrition education. The contractor should also be familiar with other AID funded projects in related fields, such as HEALTHCOM, PRITECH, the Dietary Management of Diarrheal Diseases Project, the Weaning Project and others, and the results of recent activities of relevance to the current project. The contractor should be especially qualified in the area of communications, including mass media program development, social marketing and use of interpersonal approaches in education to promote nutrition related behavior change.

After a contractor is selected, a worldwide cable will be prepared and sent to all health/population officers in USAID missions, to inform them of the award of the new contract in nutrition education and the services available through the project. It will also solicit information about opportunities for project development in nutrition education and requests for technical assistance.

IV.B. Project Staffing

To carry out the objectives of this project, the contractor shall recruit or otherwise provide a highly qualified technical and managerial staff. Within one month of the effective date of the contract, the contractor shall have in place a full time staff of three professionals with nutritional and communications/social marketing expertise. The project staff will manage operations, provide technical assistance and training, closely monitor all activities, and evaluate and report on results. All project staff must be available to travel and possess the appropriate technical skills and developing country experience to enable them to provide direct technical assistance to developing country programs.

The major tasks by position are as follows:

Director - Overall project management.
- Principal contact with AID project officer and contract officer.
- Field program assistance

Technical Specialists (2) - Providing technical assistance as requested.
- Analyzing country situations in relation to prospects for core subprojects.
- Designing nutrition education interventions.
- Promoting broader interest in nutrition education and training.
- Contributing to preparation of technical reports.

IV.C. Implementation Plans

IV.C.1. Field Support Activities

Shortly after the award of the contract, the contractor will make a series of visits to all AID offices in Washington with interest

and following, have been met and discussed with project officer

in the project, including the regional bureaus, FVA, Peace Corps, as well as PVOs (such as CARE and CRS) who may be interested in utilizing the resources of the project. The new contractor will need to be assertive in anticipating and identifying opportunities for inputs from the project into mission or other field activities. Research into regional bureau and mission planning for new activities which might incorporate a nutrition education component will be a necessary requirement for project success. It is expected that the contractor will already have an existing network of contacts with overseas USAID missions and other implementing organizations and will activate that network upon the contract award.

It is also expected that the contractor will have an existing consultant pool with a wide variety of consultants in the disciplines related to this project. The consultants should be particularly expert in nutrition, communications and social marketing. Because nutrition is often viewed as a rather peripheral activity in many missions, selection of consultants will be a critical activity. Use of respected, experienced consultants with appropriate field and language experience is crucial in gaining credibility for the project, especially given the short term nature of most technical assistance assignments.

It is expected that the project's core staff will undertake most of the technical assistance activities, and that consultants will be used sparingly. Those consultants used will be very familiar with the orientation, philosophy and communications methodology endorsed by the project. Team planning meetings, where possible, will be conducted prior to consultant assignments.

Potential clients should be very clear about the services available, AID priorities and preconditions and what to expect in terms of response time, costs, reporting requirements, and so on.

IV.C.2. Implementation Plan - Core Subprojects

The core subprojects will be directed at advancing the "state of the art" in nutrition education by actively encouraging the design and testing of interventions in communication, education and information. These core activities will be developed in up to six countries and will be intensive "experiments" in nutrition education. It is expected that the technical focus of these core activities, in keeping with the focus of the overall project, will be primarily on growth monitoring. These core activities will usually develop out of activities or projects already ongoing or funded by the missions or PVOs. Short term technical assistance provided under the field support mechanism of the project may serve as an initial "pump priming" for a particular project or focus, which will be followed up by a longer term, more intensive type of technical assistance through one of the core projects. The contractor, beginning in the first month of the project, will begin to identify countries which might be sites for the core projects. These should be identified early in the project schedule, so that sufficient time will be available for country assessment, design and implementation of these programs.

IV.C.3. Implementation Schedules

The implementation schedule for major project activities is given in Table IV.

IV.C.4. Organizational Chart

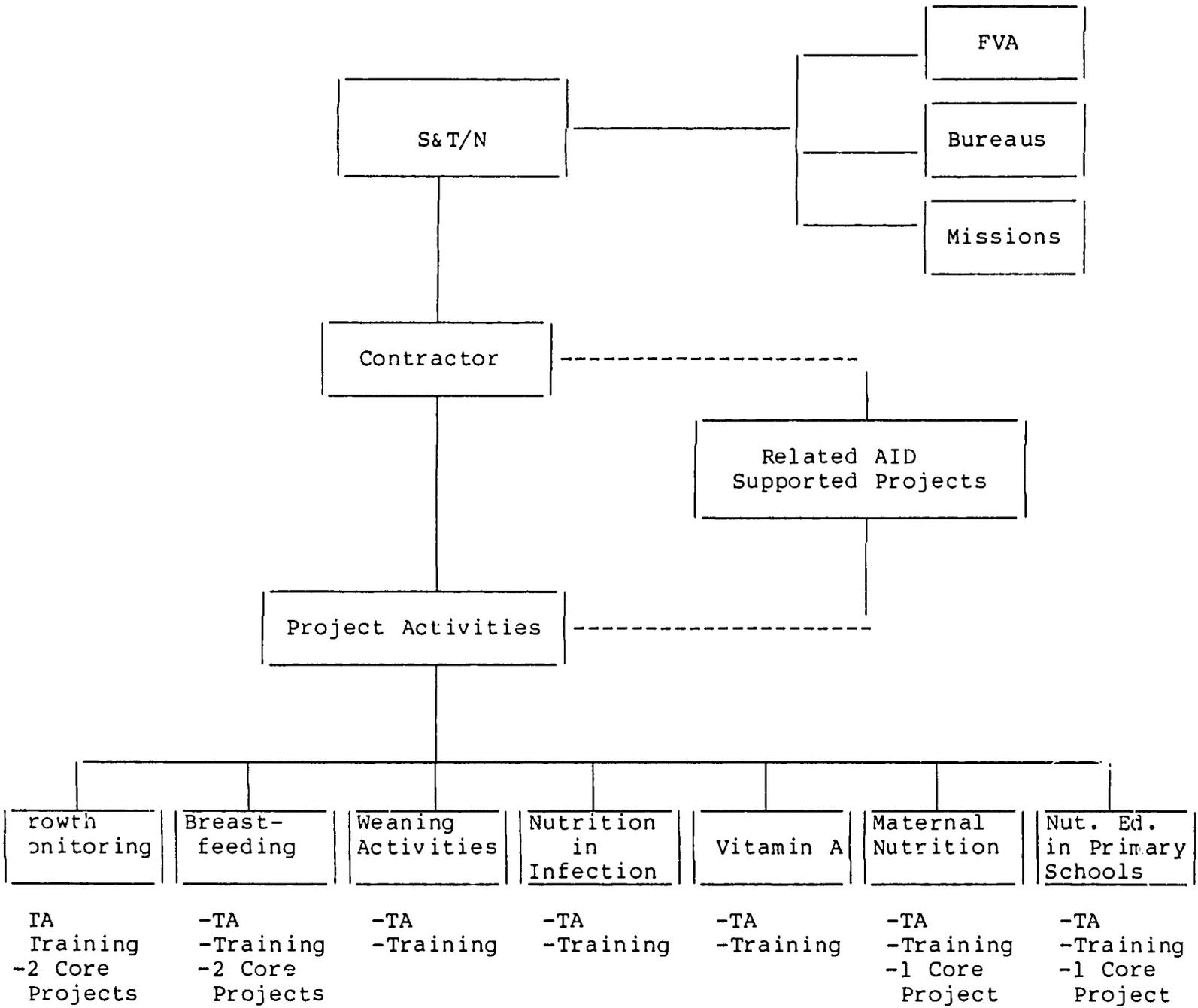
Figure I presents the organization of the project.

Table IV. Implementation Schedule

<u>Activity</u>	<u>Timing</u>																		
	1987	1988				1989				1990				1991			1992		
Year	12	3	6	9	12	3	6	9	12	3	6	9	12	3	6	9	12	3	
Month	12	3	6	9	12	3	6	9	12	3	6	9	12	3	6	9	12	3	
RFP Finalized	X																		
Contractor Selected		X																	
Advise USAIDs, PVOs		X				X				X				X					
Begin responding to TA requests for field support			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Site selection for core subprojects			X	X	X	X													
Implementation of core subprojects					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Training Begins						X	X	X		X	X	X	X	X	X	X	X	X	X
Scheduled Evaluation										X									
Contract Complete																			X

Figure 1

Project Organization



IV.D. Training Plan

Training will be one of the key components of the project and will crisscross many of the overall project activities. The contractor will be responsible for the development of a training plan for the project which will focus on:

1. Training for program planners which will expose them to new concepts in education/communication, particularly social marketing. It will demonstrate what strong education/communication efforts can accomplish.
2. Training for program managers and those responsible for incountry training programs. The intent of this training will be to:
 - help assess nutrition education training needs
 - design training programs
 - develop curricula
 - introduce improved training techniques
 - evaluate training programs.

One major training focus of the project will be on growth monitoring. Among the most urgent training needs in this area are the:

- training of trainers
- supervision and management
- counseling and education of mothers.

Another major training focus of the project will be carried out through the provision of intensive "hands on" technical assistance in the country sites selected for the core subprojects. In

perhaps one or two of the selected "experimental" sites, a long term training advisor will be included to assist with project design and implementation, but also to train host country counterparts in the education and communication methodology being employed in the project.

Core funds for training have been allocated in the project, but the pattern of using mission funds for any participant training will be followed. There is some limited flexibility for payment of participant training, but missions will have to assume costs in the majority of cases.

FVA has indicated its interest in supporting the development of a specialized training program for PVOs responsible for implementing Title II projects. The PVOs are weak in their ability to conduct needs assessments as they relate to health and nutrition problems. Training is needed to improve their ability to assess the determinants of nutrition problems at the community level in a particular country or regional setting, and to identify which behavioral changes are necessary to bring about improved nutritional status. For example, the PVOs need training which focuses on content areas such as infant and child feeding, feeding during diarrhea, and in some countries, breastfeeding in urban areas. They need assistance in the methodology of program development and in specifics such as a training plan for the project which will include assistance in the use of multimedia channels, and in development of strategies which will change behavior.

In the coming years, PVOs without strong expertise in nutrition and nutrition education will increasingly be responsible for Title II activities, especially in Africa. A training course, developed for PVO central staff, would focus on the methodology of developing training programs appropriate for field use. This methodology could be applied to specific country situations, and adapted for use in developing training courses and materials on such topics as growth monitoring, feeding in diarrhea, and breast-feeding.

IV.E. Evaluation Plan

Evaluation specialists, such as Hornick, have pointed out that evaluation of the impact of nutrition education programs is extremely difficult and costly. This is due to the fact that many factors affect the target audience's beliefs, attitudes and behaviors. Cause-and-effect relationships which can be traced to a nutrition education input are difficult to establish. Additionally, many projects are developed without a well documented baseline data needed to measure change.

The need for alternative ways of assessing project success has prompted development of "proxies" for impact, such as process evaluation. In this process, if a project's activities, expressed as process indicators, are "on target", it is assumed that impact has taken place. For example, if one assumes that changes in nurses' knowledge of lactation management is linked to changes in hospital practices, it follows that changes in behavior are also likely to have taken place.

It is suggested that evaluation of this project focus on monitoring and evaluating process indicators. Review and assessment of this project will be conducted by S&T/N staff, together with selected consultants who will be contracted for this purpose. There will be one midway review (in the third year of the project), to assess progress and re-evaluate the direction of project activities, as well as a final evaluation upon completion of the project. Informal reviews by S&T/N staff will be conducted biannually.

A summary of the project's evaluation activities is listed below.

1. Internal Management Evaluations

a. Performance Appraisals - A performance appraisal form will be completed by USAIDs, bureaus or FVA and forwarded to the Project Managers, at the completion of the contractor's involvement with each assignment. This appraisal form will include ratings for each consultant used, based on:

- technical expertise
- ability to apply expertise to problem identified
- and on the contractor's overall performance in fielding and following up on the assignment.

b. Annual Reviews - The Project Manager will conduct annual reviews of the project, and will summarize by region, the types of assistance and activities funded by the project during the year. It will also include performance appraisals.

2. External Evaluations

a. An External Mid-Point Evaluation - This will take place in Year 3 of the project, undertaken by an evaluation team consisting of ^{two} one external evaluator and ^{two} ~~one~~ AID ~~representative~~.

They will review project documents, talk with relevant AID/W bureau and FVA representatives. This mid-point evaluation will focus on appropriateness of project design, management and administrative procedures, adequacy of mix among project components, and recommendations or modifications in project design or funding.

b. Final evaluation - The final evaluation is tentatively scheduled for mid 1991. The final evaluation team will consist of ^{one} external evaluator and ~~one~~ ^{one} AID representative. The evaluation will focus on:

- appropriateness of original project design
- assessment of contractor's performance
- quality of technical assistance
- impact of core subprojects
- lessons learned.

The contractor will be expected to submit quarterly reports, summarizing project activities, as well as an annual project report. In consultation with S&T/N, the contractor will decide on the timing and a format for disseminating information about project results. This might take the form of an annual "Factsheet" about nutrition education activities, or "Fieldnotes" describing the project's activities.

As noted earlier, poor analysis and dissemination of key lessons learned was a significant failure of the first Nutrition Education Field Support project. A strong emphasis on project evaluation, as

was the case in the Mass Media and Health Practices Project work in Honduras and The Gambia, by an outside evaluator, lent enormous credibility to that project findings and outcomes. A strong focus on evaluation will be built into this project as well, particularly to document the interventions in public education which will be tested in the core projects.

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LOGICAL FRAMEWORK

From FY 87 to FY 92
 Total U.S. Funding _____
 Date Prepared: 8/15/1986

Project Title & Number: Nutrition Education and Training

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>Overall goal: Reduce the incidence and severity of malnutrition among young children and their mothers in developing countries. Subgoal: Foster positive changes in nutrition related behaviors</p>	<p>Measures of Goal Achievement:</p> <ol style="list-style-type: none"> Changes in nutritional status; records of levels of 2nd and 3rd degree malnutrition. Data on behavior change (e.g., breastfeeding, weaning etc.) relevant to nutrition. 	<ol style="list-style-type: none"> Growth monitoring program data. National anthropometric survey data. Qualitative (focus group) studies and surveys. 	<p>Assumptions for achieving goal targets:</p> <ol style="list-style-type: none"> Targeted changes in nutrition related behaviors will lead to improvements in nutritional status. Improved nutrition education strategies are successful in influencing nutrition related behaviors.
<p>Project Purpose:</p> <p>To improve host country capacity to design, implement and evaluate public nutrition education programs and messages relevant to maternal and child health.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <ol style="list-style-type: none"> Increased capability to design and implement public nutrition education programs in 15 countries. Capacity to apply improved public education methodology, established and being used in up to six countries 	<ol style="list-style-type: none"> Midterm and final evaluation reports. Site visits by AID Project manager. Contractor and host country reports. Outside project evaluations. 	<p>Assumptions for achieving purpose:</p> <ol style="list-style-type: none"> Host country interest and commitment to improving this capability. Skills acquired in new public education methodology and approaches are applied.
<p>Outputs:</p> <ol style="list-style-type: none"> Technical assistance <ol style="list-style-type: none"> short term long term Field experiments Training 	<p>Magnitude of Outputs:</p> <ol style="list-style-type: none"> Technical assistance short-term- 45 months, long-term 24 months Field experiments-36 months; short term TA Up to six field tests of improved nutrition education methodologies completed. Number/type of persons trained: 	<ol style="list-style-type: none"> Contractor reports and records. Host country reports. Field experiment project notes/ evaluation reports. <p>(Continuation) RVO staff - 60 people in 5 countries Health professionals - 120 in 8 countries Educators, communicators - 30 people in 6 countries</p>	<p>Assumptions for achieving outputs:</p> <ol style="list-style-type: none"> Host country receptivity design/testing of public education models. Host country/AID mission demand for project resources. Host country interest in obtaining proposed training
<p>Inputs:</p> <p>AID funding for: Technical assistance, training, seed money for core projects.</p> <p>Host country in-kind assistance.</p>	<p>Implementation Target (Type and Quantity)</p> <ol style="list-style-type: none"> TA & training - \$1,000,000 Seed money - 300,000 Core projects 375,000 Core project TA - 360,000 	<ol style="list-style-type: none"> Contractor trip reports. Training curricula. Core project reports. 	<p>Assumptions for providing inputs:</p> <p>AID financial commitments are met as planned.</p>

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Perceived Needs for Technical Assistance in Nutrition Education
and Training By Regional Bureaus and FVA

Africa Bureau

The Africa Bureau has identified priorities in nutrition education which it would like to pursue through the resources available in the new Nutrition Education and Training Project. The first of these is the application of social marketing techniques to improved weaning practices, similar to the approach used in the Dominican Republic through the current INCS project. The bureau would also like to see increased support for the educational aspects of breast-feeding promotion. Another area of potential interest to the Africa Bureau is continued support of the work begun by INCS in developing nutrition education and agricultural education components in primary school curricula. The work currently being developed in Zaire may eventually evolve into a model for replication elsewhere. This work, in collaboration with similar efforts by FAO and UNESCO, should be continued and expanded.

The bureau also believes that growth monitoring has potential for serving as a focal point for increased efforts in weaning projects. In fact, the focus on growth monitoring brings together all of the Child Survival technologies being promoted in many African programs. The bureau would like to see mass media campaigns developed around growth monitoring in one or two countries in its region.

Asia/Near East Bureau

The ANE Bureau would like to see the new nutrition education and training project better integrated with activities ongoing in the region. In the past, it was felt that some of the centrally

funded nutrition activities existed in a vacuum, and were not as supportive of bureau or mission funded activities as they should have been. This underscores the importance of communicating with the bureau and missions, in an effort to anticipate new project opportunities where nutrition education might be integrated into a project in the early stages. For example, the new project might expand on the research and findings of the regionally funded Tufts University research being conducted in Bangladesh on "positive deviance" mothers and their child care practices.

The bureau also believes there is much work to be done in the area of growth monitoring in countries throughout the region. The bureau has identified several countries which should receive emphasis in the new project, including Bangladesh, Nepal, Pakistan, Indonesia and Papua New Guinea.

Latin America/Caribbean Bureau

The LAC Bureau has recently made a commitment to expanding the role of nutrition in bureau activities by bringing in one of the Agency's nutrition advisors. Nutrition components already exist in ongoing primary health care projects within the region, and these could be supported through the new project. Unlike Asia where the missions are more autonomous, in the LAC bureau there is close contact between the bureau and the missions. The bureau could agree on a focus for new project activities within the region which would include the following topics:

- o dietary management of diarrhea
- o growth monitoring which complements a rural health model

- o breastfeeding, focused on professional training.

FVA

The FVA Office would like to make it mandatory that all PL 480 maternal/child feeding programs include a growth monitoring and education component. The office plans to design training programs for PVOs in each region on the use of social marketing techniques (such as focus groups) for health workers in nutrition related programs. This training is described in Training Plan. In addition, there are about 35 PVO Child Survival Projects* which have a nutrition component and which will require technical assistance in the coming years. The geographic focus is on countries in Africa, but Haiti, Bolivia, Educador, Indonesia, Pakistan and Bangladesh are also included as emphasis countries. The FVA Office would like to capitalize on the obvious links between this project and the Child Survival technologies now being promoted through the major PVOs.

*Among the organizations which are implementing child survival projects are: ADRA, CARE, CRS, HKI, HOPE, ICC, IEF, MIHV, PCI, SAWSO, SAVE and WVRO.

Evaluation of the INCS Project

An evaluation of the INCS project was conducted during the summer of 1985. The purpose of that evaluation was to answer two questions of primary importance to AID:

1. Has the INCS project been designed, implemented and managed effectively, to achieve the stated project objectives?
2. Is a broad based technical assistance model the most effective way for AID/W to provide support services and to achieve institution building in recipient countries? What alternative models might be more effective?

The evaluation found that, "INCS met AID contractual obligations in terms of responsiveness to field requests for short-term technical assistance, conferences and training."

The INCS project was most successful in serving as a mechanism for providing short term technical assistance in nutrition education to the field. It was constrained in the early years of its existence to a "passive" mode and could not be assertive in promoting ideas or interventions it felt most promising, but was limited to merely responding to requests for technical assistance whether they fit any overall strategy or not. The nature of the technical assistance, the duration, the geographic location, and the level of effort were all determined by the mission requests. The net results of many of these TA endeavors were disappointing.

However, in the later years of the project, INCS evolved considerably from its original precept in 1979, and broke new ground in several of the areas in which it worked. It became more active in generating opportunities for its inputs, and was able to channel more concentrated assistance to selected countries. INCS was also able to provide seed money for projects in a few countries and to fund conferences. Beginning in 1984, the focus of Part I of the project, nutrition education, was to be channeled to those substantive areas where work was already scheduled and which were felt to be high priority. These were:

- o PL 480 Title II supplementary feeding programs
- o Agriculture school curriculum
- o Primary health care and agriculture extension programs
- o Undergraduate public health nutrition
- o Mass media campaigns
- o Library and clearinghouse for education materials.

More intensive work, with a consistent and focused approach began in a number of countries. As a result, advances in the "state of the art" occurred in Part I, especially in the application of social marketing techniques to nutrition-related behaviors. The 1985 project evaluation found that,

"Methodologies for pre-project investigation into feeding behavior constraints were improved upon. The importance of message design and media selection were reinforced. Qualitative techniques and a disciplined approach to program development were identified. Results convincingly demonstrated behavior changes and improved nutritional status."

In response to the question, "what are the finite techniques, materials, procedures, etc. that can be applied to AID programs immediately or after a short interval of adaptation and further testing, which have emerged from the INCS work?", the evaluation identified three major outcomes of the INCS project. These were:

1. A refined social marketing methodology appropriate for changing nutrition behavior.
2. Application of the above in utilizing growth monitoring to strengthen behavior change.
3. In-service training curricula and sensitization forums for changing hospital practices and health policy to support breastfeeding.

USAID Feedback on New Project Design (S&T/N Questionnaire)

In preparation for the new project, during the fall of 1985 S&T/N sent a questionnaire to all USAID missions in the field to invite their comments about the design and substance of the new nutrition education project. They were asked the question: What future activities might your mission develop and implement in nutrition education? A total of 22 missions responded to the questionnaire. The highest priority activities are listed below in the priority order given by the missions:

1. 43% - Growth monitoring as an informational and motivational tool for mothers;
2. 29% - Social marketing methodology for nutrition education "messages";
3. 19% - Participatory approaches for training community nutrition workers;
4. 19% - Short in-service training courses for nutrition educators;
5. 24% - Introducing nutrition concepts through the primary school curriculum.

The missions were also asked if they would be able to "buy-in" to new project activities. Of the total 22 missions responding, 43 percent said yes, and 10 percent said possibly. In response to the question about possibilities for buy-ins, one mission commented, "experience indicates that AID/W funding has to be used completely to start a new activity that is not part of an

existing project, but once an idea takes hold, and if there are project funds available, the mission could cost share." Several missions also commented that they could buy-in if the activity were applicable to Child Survival efforts. FVA has also expressed an interest in buying into the project for specific activities, particularly training.

Description of Related AID Supported ProjectsS&T/N Funded:Nutrition RSSA (Office of International Health)

Through a RSSA with the DHHS Office of International Health, this project serves as a mechanism for providing technical assistance to AID missions and to developing countries. Services available include: preparation and distribution of information and training materials concerning integration of nutrition into primary health care; development of a series of manuals on nutrition interventions and training; convening of regional and national workshops; provision of technical assistance in planning, implementation, and evaluation to missions and developing countries on the incorporation of nutrition concerns and services into primary health care delivery programs.

Vitamin A (Helen Keller International)

With funds from AID, in 1980 Helen Keller International (HKI) began a program in four countries to: assess eye disease; develop curricula, training and public education materials; train primary level health and allied personnel in prevention and simple treatment; and provide curative care and surgical services at secondary and tertiary sites. Those four countries are Peru, Sri Lanka, Philippines and Tanzania. HKI continues to be actively involved in research into the relationship between vitamin A and morbidity and mortality in Indonesia and Bangladesh.

The Weaning Project (Manoff International)

The major task of the project, begun in late 1984, was originally to provide technical assistance to four countries (envisioned

to be to be one from each of the four AID geographic regions) to promote nutritionally beneficial weaning practices. Emphasis is placed on intense, "up front" work in-country to analyze determinants of infant feeding, before other training and materials development is begun. The Project expects to collaborate with PVOs such as Save the Children where possible. The project has expanded to serve eight countries, although the "full package" of services will not be provided to all eight. These eight countries are Ghana, Cameroon, Indonesia, Peru, Ecuador, Swaziland, Zaire and the Caribbean Region. The project does have provision for short term TA but will not respond to one-time requests for assistance.

Clearinghouse on Infant Feeding and Maternal Nutrition
(American

Public Health Association)

The Clearinghouse was established in 1979 with the following purpose: to improve access to information and materials on child and maternal nutrition for developing country health and nutrition practitioners and policymakers and thereby help them implement more relevant and effective programs and policies to improve maternal and child nutrition. The clearinghouse publishes a newsletter, three times a year in English, French and Spanish on the topics of central concern to the project. The newsletters focus on four major topics: breastfeeding, infant feeding/weaning, maternal nutrition and training and legislation.

S&T/H Funded:

REACH (John Snow International)

The Resources for Child Health Project began in 1985 and targets improvements in the design, implementation, evaluation,

monitoring, quality control and cost effectiveness of immunization and other disease control activities, commodity supply, PHC management, financing, training, and project design and evaluation in AID-assisted countries. Another component of the project emphasizes alternative financing schemes for primary health care activities. It also has a system support component to "improve the management of PHC programs, strengthen personnel development capability, and design and evaluate PHC programs". It has no nutrition focus as such.

Dietary Management of Diarrheal Diseases (Johns Hopkins University)

The project, funded beginning in 1985, has the following objective: to integrate into ongoing diarrheal disease control, nutrition, and/or primary health care programs of two less-developed countries, safe and effective intervention strategies for improving the dietary management of acute childhood diarrhea. Those two countries are Nigeria and Peru. The project will highlight development of educational and communications techniques to disseminate information about appropriate feeding practices during diarrhea.

PRITECH (Management Sciences for Health)

The Technologies for Primary Health Care (PRITECH) Project, begun in 1983, focuses almost solely on oral rehydration therapy. Its mandate is worldwide, to assist government and private organizations to improve and expand ORT services. PRITECH can provide technical assistance in a variety of disciplines important to planning, managing and evaluating ORT programs. The project also

has a mechanism for providing short term TA in non-ORT health issues. There is an obvious link between the work of PRITECH in ORT and the focus of the new nutrition education and training project on nutrition during infections, especially diarrheas.

S&T/Ed and S&T/H Funded:

HEALTHCOM (Academy for Educational Development)

The Communication for Child Survival (HEALTHCOM) Project is a continuation of the Mass Media and Health Practices Project (MMHP), both implemented by AED. Since the initial success of the MMHP Project in promoting oral rehydration therapy in Honduras and The Gambia, the new HEALTHCOM Project has been expanded to 17 countries. The project was originally designed in 1978 to apply communications and social marketing methodology to promotion of oral rehydration therapy and related Child Survival practices. The HEALTHCOM Project has continued to refine its communications methodology with an expanded focus on Child Survival objectives, which includes besides ORT, immunization, and nutrition. In addition to work in the initial two countries, HEALTHCOM is now working in Swaziland, Guatemala, Ecuador, Peru, Indonesia, Malawai and Lesotho. HEALTHCOM can provide both short and long term TA but emphasizes sustained collaboration, including provision of a resident communications advisor, with specific responsibility for mission and regional projects.

FEATURES OF SUCCESSFUL GROWTH MONITORING
LESSONS FROM INDIA

Growth monitoring is an excellent tool for assessing the growth and development of a child, for detecting the earliest changes in growth and to bring about appropriate responses to ensure that the growth continues uninterrupted. As such, it contributes to the promotion of child health and nutrition and is an educative tool for the mother and the family. It helps to bring about behavioural changes in the mother with regard to child feeding, appropriate response to illness and an understanding of the various factors which play a role in growth and development of the child.

Growth monitoring is being used in several countries for the last 2-3 decades. However, its full potential and impact is yet to be realized in most places. What are the strategies and methods that can be used to increase the impact of growth monitoring?

UNICEF sponsored case studies of three rural based primary health care programmes and one urban programme, of which growth monitoring is an integral part. The case studies were aimed to review the process of growth monitoring within these programmes and to identify features that might have contributed to effective growth monitoring.

Growth monitoring is used on the largest scale in the Integrated Child Development Services (ICDS) programme which has been in operation for ten years covering over one fifth of India's administrative blocks (approximately 130 million population) and is slated for rapid expansion.

Two other programmes chosen for the case study, though operating on a smaller scale are of interest because of some innovative features in design, training and implementation that might provide useful lessons for other programmes. The Tamil Nadu Integrated Nutrition Programme (TINP) covers 17.3 million people in 9 districts of Tamil Nadu state and is in operation since 1980. The nutrition programme was added to the existing Maternal and Child health services to strengthen and to increase awareness of the crucial role of weight gain and, nutrition and functions in more or less a vertical manner.

The Child In Need Institute (CINI) in West Bengal, is a non-government organization which provides a package of health and nutrition services with other activities for social and economic development to a rural population of 70,000. The fourth project, the Public Health Centre at Madras represents an example of the use of growth monitoring in an urban clinic setting.

FEATURES ASSOCIATED WITH SUCCESSFUL GROWTH MONITORING:

What are the key determinants of success for growth monitoring?

There are certain basic principles and prerequisites but the modalities could vary from one setting to another. Keeping this in view and based on our observations of the four case studies, the following may be considered the attributes of a successful growth monitoring programme:

1. GM AS A PART OF THE PRIMARY HEALTH CARE PACKAGE

Growth monitoring should be an integral part of the primary health care services as in the ICDS programme. It was introduced in a vertical manner to strengthen the existing Maternal and Child Health services in the TINP programme. This allowed concentrated attention and inputs into the growth monitoring component and has no doubt contributed to its success.

2. CENTRE AND HOME BASED

Growth monitoring is centre and home based in both ICDS and TINP with focus on the individual child. This is how it should be. In CLNI, clinic based approach has succeeded in achieving only about fifty percent coverage for monthly weighing. Home based growth monitoring is necessary and indeed desirable to achieve the desired 80-90 percent coverage and to be able to reach the very young child, who is not brought to the centre because of other preoccupations of the mother.

3. TARGET AGE GROUP

Growth and nutritional problems are most critical among children upto 3 years of age, even though they are also frequently seen in subsequent years. TINP has shown that children in the 0-3 years age group can be attracted to the centre for weighing without the inducement of a food supplement. Effective coverage is achieved with household monitoring. It may be advisable to dispense with growth monitoring after the age of 3 years to save the worker's time which can be used to maximise health and nutrition education of the mother and strengthen the various other components of primary health care.

4. GROWTH MONITORING AS THE OBJECTIVE OF A PROGRAMME

To achieve the impact of growth monitoring, the objectives have to be clear and well defined and the training and other activities should be geared to that. In programmes like the ICDS with the present objectives and orientation of training, the exercise of weighing the children tends to be used to identify beneficiaries for supplementary feeding and to improve the nutrition grade rather than to recognize optimum growth and to detect early growth faltering. It

is necessary therefore, that the planners and decision makers realise and are convinced of the basic preventive and promotional objectives of growth monitoring. It is only then that the training will become relevant and the worker will respond appropriately as soon as growth begins to falter and will look for the reasons why. The ultimate objective of growth monitoring is to achieve changes in mothers' behaviour through education using the growth card, which in turn will result in better child health.

5. HEALTH WORKER

There is one village level worker for 700-1000 population in these projects, which seems satisfactory. The worker should be a female, preferably, a successful mother herself. It is important that she belongs to the village. Education up to VIII grade is a great asset in acquiring a high level of skills in growth monitoring. The qualities of the worker are very important. The worker needs to be highly motivated, spontaneous and articulate and take pride in the esteem that the job brings. While voluntary mothers make very useful contribution in TINP and CINI, a suitably paid and satisfied worker seems an essential prerequisite of the programme. A good growth monitoring worker clearly understands that the mother is the focus of all her action. She respects her ability and skills and believes that able mothercraft is not related to literacy alone. Many workers in TINP and CINI have graduated from women's working groups and this offers additional advantages. The time distribution for various activities should be such that it allows her sufficient time for home visits because that is crucial for community involvement and education. Her skill in weighing plotting, interpretation and education of the mother must be of high quality. She must know how to effectively use the growth card for education. Her knowledge

about feeding must be practical, relevant and flexible enough to be adapted to the needs of the individual child. It is indeed creditable that even without the stated objectives and with emphasis on nutrition assessment, some of the workers in the ICDS programme have realised the value of growth monitoring by observing the growth lines and discovered spontaneously that the opportune time to respond is just when the growth begins to falter.

The worker must know how to use the various health education materials that she might have.

6. TRAINING

TINP offers very useful lessons in training. The brief initial training of about 2 months is followed by intense, repeated, purposeful, methodical and action oriented in-service training that accounts for the excellent quality of workers in this project. The workers actually participate in the predetermined number of problem solving exercises during the 40 percent training time in the field. The learning objectives are well defined and known to the staff. There is emphasis on developing skills in education and communication. The batch size of 20 to 25 for classroom and 5-7 for field training is optimal. A training manual in local language is given to all the workers for routine use at the time of initial training. It is meant for the staff at all levels. The instructions are task and action oriented. The focus is on how to achieve specific objectives (e.g. how to find the cause of growth failure in a child; how to launch a campaign). The workers must be taught the use of the growth card to explain the interplay between food, illness and growth and use this as the foundation for giving messages on feeding and response to illness.

7. SUPERVISION

The quality of supervision is good when the ratio of supervisor to workers is 1:10 as in TINP. The supervisors in ICDS cover 20 Anganwadis each, which results in infrequent visits to those farther away and lack of uniformity in the quality of supervision. Some of the useful features of the excellent supervision in the TINP are, greater emphasis on technical rather than administrative matters, check list of tasks to be done during each supervisory visit and a well defined list of purposes. The supervision is not restricted to the centre only, but extends to the household level which is the nodal point of mother-worker interaction. Further improvement could be achieved by allocating time for individual supervisory tasks for each visit. The first line supervisor is supervised by the instructor at the block who again has clear cut methodology and objectives. On the other hand, in the ICDS, the block level supervision is more administrative rather than technical and supportive. Supervision of supervisors is as crucial as that of the basic worker.

8. COMMUNITY PARTICIPATION:

Excellent examples of community participation in growth monitoring activities are seen in TINP and in CINL. To achieve maximum community participation, it is important that people become aware of growth and are convinced of the benefit of growth monitoring. An effective education and communication programme is essential to achieve this objective. The mechanisms of achieving these are several. The growth card is used to promote understanding of

relationship between food, illness and child's growth. Providing other essential services like ORT, deworming and immunisation along with growth monitoring promotes its acceptance and participation of the community.

The innovative features of community involvement in some of the programmes are:

1. Formation of local women's working groups:

- a) Members take responsibility for 5-10 neighbouring houses.
- b) Act as motivators, educators, organisers and growth monitoring workers.

It is important that mothers are active participants. They should help with weighing, plotting, mass campaigns, group discussions and in the functions at the centre. This has been achieved with considerable success in the TLNP and CLNI projects.

II. Youth Club: educators and motivators.

III. Teacher - children working groups:

- a) School as the base
- b) Growth monitoring and nutrition in school curriculum.
- c) Act as motivators and educators for the community.

9. EDUCATION AND COMMUNICATION

For education and communication to play an important role an adequate emphasis budgetary allocation and a clear strategy are essential. In TINP and to a considerable extent in CINI, educators and communication experts play a major role in the programme. Their strategy is to create a demand for growth monitoring among mothers and leaders through person to person contacts and through mass campaigns. The workers should be involved in the development and trained in the effective use of the education and communication aids. Up and down feed back, stress on innovations and creativeness are important lessons from TINP. A major contribution of communication activity is to sustain the motivation among workers which tends to slacken with time. Education needs to be targeted to a wide audience; mothers and mother substitutes, opinion leaders, politicians, teachers, social workers, school children and public at large. The education message must be based on prevailing KAP and improved with frequent evaluation. Very effective use of local folk theatre, singing during marriages, peep shows, slogan competitions, films etc. is seen in TINP and CINI. Radio programmes where the Anganwadi worker is an animator and forming of listening clubs is evident in some ICDS programme areas. The educational messages need to be made relevant in the local socio-cultural milieu.

10. NUTRITION EDUCATION

Conversations with mothers and workers brought out a major lacuna among workers and supervisors in these programmes. The workers do not provide the mother with an understanding of the amount, bulk, and frequency of diet appropriate for the child nor teach them how to make the family diet suitable for a child or to increase energy

density. While there is emphasis on Vitamin A rich foods, the emphasis on the major energy rich food is lacking. Very careful attention should go into the design of the content of the messages if we are to not only inform the mother but motivate her to change her behaviour. The messages should be simple, practical and appropriate to the tradition and cultural milieu of the community. Similar attention is required for messages regarding feeding during illness.

11. BACK UP HEALTH CARE SUPPORT

The two important elements of the response to early growth faltering are education of the mother, search for the cause of deviant growth and provision of appropriate remedial measures. Common illnesses and infections are usually the precipitating cause. This necessitates prompt referral to the health personnel and indeed their active involvement in the programme. This seemed to be a common weakness in the programmes reviewed. The latent period before referral should be short and the guidelines and logistics of referral should be clearly defined. There should be active involvement of the health personnel in the whole growth monitoring strategy.

12. GROWTH CARD

Since the mothers' involvement is essential in growth monitoring she must become the keeper of a suitably designed, easily understood growth card which would become her proud possession. There is a distinct difference in the mother's understanding and perception of growth monitoring depending on whether the card is kept by her or by the worker. In TINP the growth cards are retained by the mothers and most of them could interpret the line trends. This was not so in projects where cards are kept with the workers. If necessary,

a special card may be used at the centre for effective follow up of growth faltering and malnourished children only till the time their growth slopes assume normal direction. The messages in the card should be few, relevant and simple. Often the cards are overcrowded and messages are seldom absorbed by mothers. The card should have 100 gm. markings so that the weight can be charted accurately.

13. WEIGHING SCALES

The programme can succeed only if the basic ingredients and tools are available. The weighing scale should be accurate, locally manufactured, durable and easy to maintain, repair and transport. It should be easy to use by workers and mothers. It should have 100 gm. markings. The readability on the dial should be easy, so that both the workers and mothers can use it easily and correctly.

14. LOGISTICS AND SUPPLIES

Efficient supply, maintenance and replacement of weighing scales, growth cards and other items is crucial if optimum results are to be obtained for growth monitoring. In some situations, it may take months instead of days to repair or replace a broken weighing scale. At times new types of scales may be introduced into a programme without adequate training and preparation. The supply of growth card should be regular so that their availability is never in doubt.

Growth monitoring is useful only if it is impactful. The critical constraints are lack of clarity about the growth and development role of growth monitoring, poor training, supervision and support, lack of understanding of each workers role and responsibilities and insufficient and interrupted supplies and maintenance.

GROWTH MONITORING AND NUTRITION EDUCATION:
CAN UNIFICATION MEAN SURVIVAL?

By
Marcia Griffiths

Growth monitoring¹ and nutrition education have been important activities of nutrition and health programs in many countries for more than a decade. However, both activities are now under review because they are considered to pose management and training burdens without having demonstrated a potential for commensurate reductions in infant and child morbidity and mortality rates. Proponents of one or the other are laboring to find ways to make each activity more viable and effective. A third option, devising a strategy that combines these activities to achieve a balance of their respective strengths and weaknesses, may offer the most direct route to halting and even reversing the trend of deteriorating child health, and thus to increasing child survival in the world.

But first, what are the respective strengths and weaknesses of growth monitoring and nutrition education activities? The great strength of growth monitoring is its ability to make children's growth visible both to health practitioners and to parents. The concept of better health for children--including the steps to getting there and maintaining good health--is made more accessible to parents through growth monitoring. Parents can observe what is happening to their children directly and come to interpret and act upon what they see, with counsel from the health worker. When done well, growth monitoring is a wonderful motivator and, as such, a cornerstone for community programs.

But growth monitoring alone cannot produce dramatic changes in child health; those changes come about only as a result of a well formulated action program. Growth monitoring is a means of detection, not an intervention (i.e., it does not correct or prevent problems). It sets the stage for corrective action by spotting problems. Action plans are the Achilles heel of programs that use growth monitoring. Because growth monitoring alone cannot save children's lives, it must be planned and carried out in tandem with an effective action program.

The action plan most programs rely on to address faltering growth consists of two parts: (1) parental education to teach parents about what they can do at home to improve children's education and nutrition, and (2) referrals to more sophisticated health facilities.² Simple as the action

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plan is and crucial as it is to making growth monitoring meaningful, it has largely been neglected.

Just as a growth monitoring activity needs to be coupled with an action program, so intervention schemes need a targeting mechanism to make them efficient and effective. The educational and referral components that are the staples of intervention-type programs gain in both efficiency and effectiveness by the relatively simple targeting growth monitoring makes possible.

What is more, when advice is related to growth monitoring results, it is less abstract than when it is offered as a standard list of "dos" and "don'ts." Growth monitoring also allows advice to be targeted in terms of the time to give advice and what advice to give. It ensures that mothers will receive relevant advice when they need it most—that is, at the time a problem has been spotted.

Consider for a moment the mother's situation at the monitoring session: she has just helped weigh and may have helped measure her child. The health worker recorded something on her child's card and returned it to her. What does it mean? A few minutes of explanation now will take advantage of the mother's curiosity, and advice about what she can do will be given at the moment she is most prepared to act. As soon as the child's growth is recorded and analyzed, the health worker knows if there is a health problem. That information and the approximate age of the child is enough for the health worker to ask questions and then offer advice tailored to the child's age and condition. With repeated exposure to this process, and to good advice, mothers learn to recognize common symptoms of disease and the consequences of their cooking and feeding practices on children's growth and to gauge children's progress by the ascent of the growth line on the chart. Bit by bit, they develop greater confidence in their competence as mothers, and their confidence in the health workers' knowledge also increases.

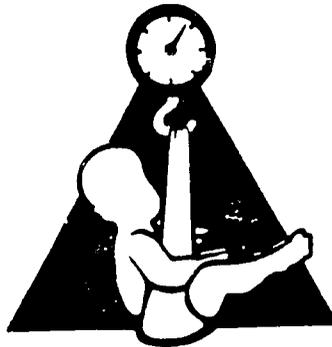
The Communications and Growth Monitoring Strategy

If growth monitoring and nutrition education are to complement one another, they must be designed together as part of a total communications strategy. A look at existing programs indicates that only a handful³ were designed in this way. Indonesia's national nutrition program (UPGK)³ is the classic and most discussed model. More recently a national⁴ program in Haiti⁴ and pilot projects in the Dominican Republic (ANEP)⁵ and Ecuador (PEM-PAAMI)⁶ have followed Indonesia's example. These programs have exemplified advantages of linking growth monitoring and education—in fact, of using growth monitoring as a forum for nutrition education. The collective experience of these programs indicates essential steps and considerations for combining the two activities.

Creating Awareness

The first step is to develop the awareness of health practitioners, mothers, and the community in general that nutritional health is one of the most important determinants of children's health and that by organizing a weighing program they can judge for themselves whether or not children are in good nutritional health. Participation in the monitoring program and

looking for weight gain should be marketed as something positive and desirable. The UPGK program developed a slogan--"A healthy child gains weight each month"--which appeared in print virtually everywhere in Indonesia. The ANEP project's symbol (of a child in weighing pants with an upward triangle in the background) increases the visibility of its growth monitoring program. That project also designed a poster for public areas, asking if parents know if their children are healthy.



ANEP Project's Symbol

The poster emphasizes the health workers' expertise with growth monitoring, which it promotes as a method parents can rely on to know if children are healthy. ANEP stimulates further community interest with its large growth charts. Each community completes one every six months to show the weights of all the local children. In that way, the community sees for itself whether the children have grown better or worse and whether the health of the community is improving.

Developing a Positive Climate

Striking a positive note that creates a good feeling about the program is as important to promoting growth monitoring as it is to promoting almost anything else. Many programs have found that having health workers congratulate the mothers of children who gain weight is one way to do this. Some programs have even given inexpensive prizes to mothers whose children gained weight over several consecutive months.

It is important for the tools of the growth monitoring program, particularly the card, to be sensitive to changes in growth velocity and help to create a good climate. The more mothers can understand and participate, the more positively they will regard the program. The experiences of UPGK and PEM-PAAMI led to these innovations:

- o UPGK: Developed a rainbow pattern for its growth chart. The rainbow is a series of colored channels corresponding to international standards of weight-for-age. Each channel represents 5% of the standard weight. A child is said to have his or her "own color." Mothers are given the goal of helping the child "grow along the channel" (in the same color) or along the next channel above it. Health workers are instructed to be positive and encouraging with all mothers, especially to those whose children have grown below standard.

- o PEM-PAAMI: In creating its chart, project personnel wanted to be sure that the colors for different zones (normal - malnourished) were colors the mothers associated with wellness and illness. This project found that the traditional "stoplight" colors had to be rejected. To select the colors, the project showed a series of colors and pictures of three children—a healthy, sick, and very sick child—to groups of mothers. They were asked which color seemed best suited to each of the children and why. The mothers decided that red or deep pink were the most suitable colors for the healthy child, because those were the colors in the cheeks of robust children. They chose yellow or light pink for the sick child, because those were the colors that signified illness and a loss of skin tone. They chose green or white for the very sick child. The card was printed with red as the upper zone and green as the lowest zone. In addition to choosing the colors for the growth chart, mothers decided what should be printed on the cards. Since most were functionally illiterate, the text was to be kept to a minimum.

Encouraging Community Participation in Designing the Action Plan

The most fundamental component of the action plan is the education, or counseling, of mothers and other family members. Counseling may be about where to refer children, what to feed them, or how to prepare oral rehydration solution. Counseling a mother in response to her child's growth is not the same as traditional nutrition education, because the message is tailored to the child's needs: the mother is given a prescription for action instead of a lecture. The educational messages can be standardized, as long as the intended audience for the message has taken part in the formulation of the messages. This participation goes beyond the usual surveying by most educators to understand the target audience before designing educational contents.

We say that the community participates in message design when a small but representative sample of mothers or families has actually tested, modified, retested, and commented upon a recommendation. The original recommendations are selected because of their technical soundness and because they appear to be practical. The testing and retesting ensure as far as possible that the messages fit the perceptions and practices of people in the communities the program will serve. What emerges after intense work with carefully selected participants is the synthesis of a

traditional practice and a new technique—a message that can affect daily feeding practices or actions taken during illness because it addresses the mother's or family's fears, doubts, and aspirations. Such a synthesis would be impossible to formulate without the participation of members of the communities, especially the mothers, no matter how well the persons designing the recommendations may believe they understand the communities.

Affecting Changes in Practices

The sophistication of the package of counseling materials depends on the personnel doing the counseling and on the resources of the program's participants. The goal is to get as specific as possible without making the system too cumbersome. For example, because community workers with low literacy skills are the nutrition educators in the IPGK and ANFP programs, the materials are simpler than those developed for the PEM-PAAMI project, where auxiliary nurses handle the counseling sessions. Despite differences in the sophistication of their materials, all of these programs have found that it is useful to provide health personnel with advice for mothers of children of the ages and with the conditions noted below; that is, each box in the graph is completed with specific, carefully designed recommendations and rationales.

Age (mos.)	Weight Gain	No Weight Gain Once	No Weight Gain Twice or More	Diarrhea Now or Lately
0-4				
5-9				
10-12				
13-18				
19-24				
25-36				

One or more recommendations differentiated by the child's age, weight status, and recent history of diarrhea can be offered by the health worker as he or she deems most appropriate for the child's condition. By working with the mother in this focused way to find one or two actions she can implement, there is more likelihood of success than if she attended a

lecture and had to select by herself the single most fitting recommendation for her child.

The first program that used this counseling strategy was the UPGK. In that program a child's inability to gain weight becomes a warning sign for the health worker. The number of months the child has failed to gain weight and the age of the child determine what message is communicated to the mother.

Selected UPGK messages for mothers of children in several target age groups and with different kinds of growth results are shown below:

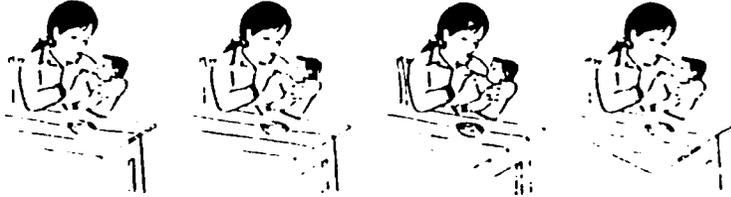
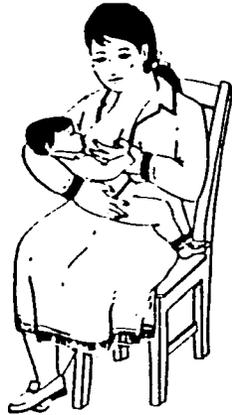
- o For a child 0-3 months old who has not gained weight over the last month: 1) the child should be breastfed three to five times more than usual every day; 2) the mother should drink a total of six glasses of water every day.
- o For a child 4-6 months old who has not gained weight for two months: the child should eat a medium-sized plate of soft food five times a day.
- o For a child 12-24 months old who has not gained weight for two months: 1) the child should eat adult food five times a day; 2) the child should be given food between meals.

While UPGK's strategy of delivering educational messages at the time children are weighed has proven sound, some practitioners have questioned whether the recommendations are realistic. As this author notes elsewhere (see "Nutrition Education's Promise: Can It Be Kept"), Indonesia's Nutrition Communication and Behavior Change pilot project, which adopted the social marketing process, paid more attention to audience research with village families and to having them participate in the design of the project's messages. The success of this pilot project was proven by significant improvements in the nutritional status of children in the pilot project villages. It worked within the UPGK framework of educating mothers at weighing sessions but with messages that had been designed with their help.

In the last three years, two projects have assimilated the lessons of the work in Indonesia and have taken it several steps further. ANEP, in the Dominican Republic, and PEM-PAAMI, in Ecuador, both have combined the individual counseling with carefully crafted messages and a growth monitoring program. Both have tried to make the individual counseling materials more flexible and easy to use. For example, instead of making a flip chart, which the UPGK uses, ANEP and PEM-PAAMI have developed counseling cards. Each card is printed on one side and illustrated on the other and clearly specifies the target audience for which it is appropriate. To use the cards, the health worker selects one or two from the group of cards. This reduces time, because the health worker does not have to leaf through a book, and it reduces error, because the health worker is less likely to mistake the message he or she should give.

The purpose of the cards is to help health workers discuss the recommendations with mothers in terms of the mothers' resources and thus to adapt the messages to individual situations. Therefore, besides the

7 - 9 MESES
NO ESTA GANANDO PESO



" LO MEJOR PARA UN GUAGUA A ESTA EDAD ES " :

- DARLE MAS VECES EL SEÑO.
- DARLE UNA COMIDA MAS, O SEA UN TOTAL DE 4 COMIDAS.
- EL GUAGUA DEBE TENER UN PLATITO HONDO PROPIO DE EL.
- DARLE LAS COMIDAS ESPESAS.
- COCINAR CON MANTECA O ACEITE.

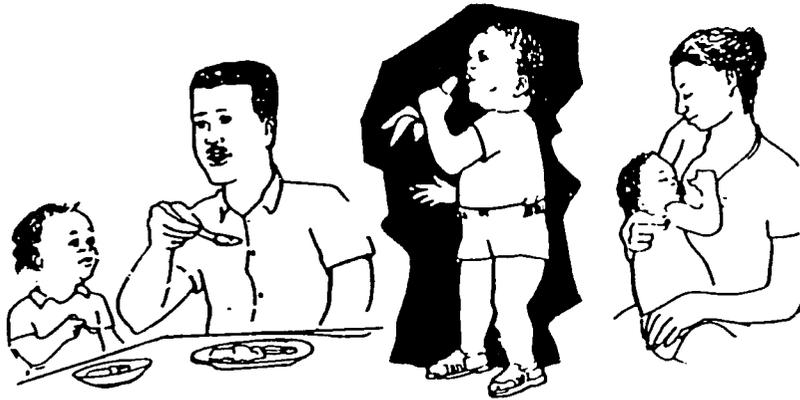
PREGUNTE Y ESCUCHE. REFUERCE LOS CONSEJOS. BUSQUE LA MANERA DE QUE LA MAMA PONGA EN PRACTICA LAS RECOMENDACIONES.

- ¿ LE DA EL SEÑO MAS VECES QUE ANTES ?
 - El médico en estos casos recomienda que es importante que le aumente el número de veces que le da el seno, para que le ayude a crecer fuerte y sano.
- ¿ CUANTAS VECES AL DIA LE DA COMIDA AL GUAGUA ?
 - Déle una comida más en el día, para que en total sean 4 comidas, a esta edad el estómago ya resiste las comidas.
- ¿ COMO PREPARA LA COMIDA PARA SU GUAGUA ?
 - Para que crezca fuerte y sano, prepare la comida para su guagua espesando las coladas y las sopas, con pedacitos aplastados de algo, por ejemplo papas, hasta que quede bien espeso, hecho puré.
- ¿ COCINA CON MANTECA O ACEITE ?
 - Cocine con manteca o aceite porque la grasa les ayuda a los guaguas a ganar peso. Y no se le debe quitar la grasa de la comida antes de dárselo al guagua.
- ¿ EN QUE LE DA LA COMIDA AL GUAGUA ?
 - Déle la comida en el platito hondo de él, para que usted sepa cuanto come y le sea fácil aplastar la comida.
- DE LO QUE HEMOS CONVERSADO AHORA, QUE VA A HACER DESDE HOY PARA AYUDAR A SU GUAGUA A GANAR PESO ?
 - Déle más veces el seno, para que crezca sano y fuerte.
 - Déle un total de 4 comidas, porque su estómago ya resiste.
 - Déle la comida en el platito hondo de él, para que sepa cuanto come y pueda aplastar.
 - Déle las comidas ESPESAS, para que crezca fuerte y sano.
 - Cocine con manteca o aceite, porque la grasa les ayuda a ganar peso.

VER LAMINA DE MADRE LACTANTE No. 17.

VER LAMINA DE "CHAPO FUERSAN" P. 18.

RECUERDE A LA MADRE LA FECHA DE LA PROXIMA CITA.



**9 - 23 MESES
NO GANANDO PESO**

**DARLE AL NIÑO LO MISMO QUE COME LA FAMILIA.
DARLE AL NIÑO UNA COMIDA MAS Y ALGO MAS ENTRE COMIDAS
EN TOTAL 4 COMIDAS AL DIA Y 2 VECES ALGO MAS ENTRE COMIDAS.
SEGUIR DANDO EL SENNO.**

**(PREGUNTAS PARA HACER A LA MAMA
EL PROMOTOR DEBE ESCUCHAR PRIMERO A LA MAMA Y REFORZAR LOS MENSAJES)**

• ¿ESTA COMIENDO SU NIÑO LO MISMO QUE COME LA FAMILIA?

**DARLE AL NIÑO LO MISMO QUE COME LA FAMILIA.
NO DEBE LIGARLA CON AGUA.**

• ¿CUANTAS VECES AL DIA COME EL NIÑO?

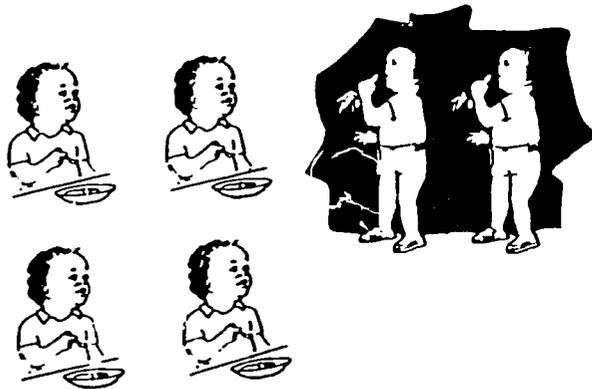
**DARLE 4 COMIDAS Y 2 VECES ALGO MAS ENTRE COMIDAS DIARIAMENTE
PARA QUE SU NIÑO GANE PESO.**

• ¿QUE VA A HACER PARA QUE SU NIÑO AUMENTE DE PESO?

SEGUIR DANDO EL SENNO.

DARLE AL NIÑO LO QUE COME LA FAMILIA PORQUE NECESITA DE TODO PARA CRECER.

**DARLE UNA COMIDA MAS Y ALGO MAS ENTRE COMIDAS.
EN TOTAL EL NIÑO DEBE COMER 4 COMIDAS Y 2 VECES ALGO MAS ENTRE COMIDAS.**



targeted recommendations (for a particular condition of children in one of the target age groups), the printed side of the card also has a list of questions the health worker should ask the mother to tailor the advice to her situation. The illustrations on the front of the card give mothers reinforcement of what the health workers have said.

The ANEP project was concerned that mothers should be given a reminder of the advice to take home with them. The project developed such a material by adopting the Action Poster developed for the Nutrition Communication and Behavior Change Component (see Griffiths, "Nutrition Education: Can Its Promise Be Kept?"). The adaptations are: 1) the worksheets are given only to the mothers of children who fail to gain weight; 2) they are printed with one color ink on newsprint so they are extremely inexpensive and therefore more disposable; 3) they are meant to be marked on to show the mother the ideal and what she will try to do if less than the ideal exists. The worksheet below indicates that the mother should try to feed her child four times a day. But if during the counseling the mother says that because of economic hardship she has restricted the number of times she feeds her child to twice a day, the health worker might ask the mother to try adding just one more meal, so that the child will eat three times a day. By circling three of the four pictures the health worker adapts the recommendation. It will be an improvement over what the mother has been doing but will be shy of the ideal which is beyond the mother's means.

Both ANEP and PEM-PAAMI have developed additional materials to supplement the information on the individual counseling cards when mothers have had more questions than usual, or to meet special situations, such as strong resistance to changing certain practices. The PEM-PAAMI project produced a series of radio spots for the sierra and another for the coast region. ANEP produced a series of materials (silkscreened cloth flipcharts and tape-recorded stories) for mothers' club meetings.

Results

Unfortunately, the educational strategy of UPGK has never been thoroughly evaluated. But the positive results of the NCBC project in Indonesia (see Griffiths, op. cit.) indicate the usefulness of pairing growth monitoring with nutrition education. Both the ANEP and PEM-PAAMI projects have undergone preliminary qualitative assessments of the usefulness and effectiveness of the messages and communications strategies, particularly of the individual counseling messages and materials. Some quantitative information on nutritional status is now being made available on the ANEP project. To summarize these findings:

1) PEM-PAAMI: The auxiliary nurse training consisted principally of a thorough explanation of the messages and of the purpose and use of the cards plus role playing. Careful supervision was provided on the job for three months after training. This combination worked well in the project area where it was implemented correctly. It prepared the nurses to run the monitoring plus counseling system. During the first months of use, the auxiliary nurses reported that they liked having the cards to work with and that mothers also seemed to like them. A number of the nurses reported that they knew of many instances of mothers modifying their practices and of children growing better. In the coastal region success in persuading mothers

to continue breastfeeding beyond the first month and not to use feeding bottles was noted.

Growth monitoring through government-sponsored programs is done in health centers. For that reason, the PEM-PAAMI project's planners have experimented with how to fit the growth monitoring and nutrition education activities into the health center routine. They think that it would be better to combine the growth monitoring and counseling in the "preconsulta" meeting (when the nurse weighs the child and completes records before mother and child see the doctor) than to divide the two activities: growth monitoring in the "preconsulta" and education in the "post-consulta," which is standard practice now. By the time the mother has finished seeing the doctor she wants to go home, not stay for a counseling session by the nurse, however short.

2) ANEP: Several process evaluations have led to minor modifications in the counseling materials, such as the addition of cards to differentiate between children not gaining weight one time or more than one time, and the use of worksheets to remind mothers of what they have agreed to try. The community workers like the counseling cards and feel that the cards lend more authority to their advice. Overall, the community workers have been observed handling the cards competently, although some tend to read, rather than discuss, the messages printed on the backs of the cards. They spend a maximum of five minutes on counseling mothers whose children are gaining weight. Some community workers have been observed spending as much as 15 minutes with mothers of children who have not gained weight. It is largely because of the intensity and quality of the community workers' efforts that the project personnel feel that they are beginning to see positive changes in the nutritional status information they have been collecting over the past several years. These nutrition data indicate that children participating in the program are maintaining or improving their nutritional status, while those not in the program are slowly declining as the economic situation of the country worsens.

The program experience described here provides sufficiently clear guidelines and enough evidence of impact to indicate that more programs should try the combination. It is hoped that the notion of growth monitoring as merely a data collection system has been laid to rest and that the pitfalls of growth monitoring in the absence of an action program are clear. Drawing on the strength of growth monitoring to spot problems and on the immediacy it conveys to health and nutrition education messages may well make the difference to child survival.

Footnotes

1. Growth monitoring is the process of routinely measuring children at intervals of a month or two to evaluate their growth over time. Growth monitoring should not be confused with nutritional surveillance for which growth data are collected less frequently in order to document the nutritional status of a population. Nor should it be confused with nutritional screening, which also measures children less frequently in order to establish who is at risk based on nutritional status.

2. Some programs have food or medical help on hand, but these are exceptions.

3. UPGK is the Indonesia National Family Nutrition Improvement Program. It operates at the village level. Its health workers, or kader, are women who come from the communities they serve. The kaders' tasks include weighing children each month, counseling mothers, and running a nutrition center where they hold food demonstrations and occasionally supply mothers with supplementary food for children.

4. In Haiti a national primary health care program has been started. The Haitian growth card resembles Indonesia's and the education package includes messages for individual counseling.

5. Dominican Republic (ANEP): The Applied Nutrition Education Program (ANEP) is a collaborative effort between CARITAS and Catholic Relief Services to demonstrate that nutritional status improvements can be achieved by the community through educational and community action activities. The program does not use food donations. The program has a promoter in each community who is from that community and is responsible for weighing at risk children every month, weighing all children every six months, counseling mothers, conducting group discussions, and initiating community projects.

6. Ecuador (PEM-PAAMI): This project was begun by the Ministry of Health's Institute of Nutrition (ININMS) to evaluate and test ways to improve the current nutrition program, whose main activity is to distribute food supplements. PEM-PAAMI is a health-center-based project whose educational activities, in conjunction with growth monitoring, are conducted by auxiliary nurses.

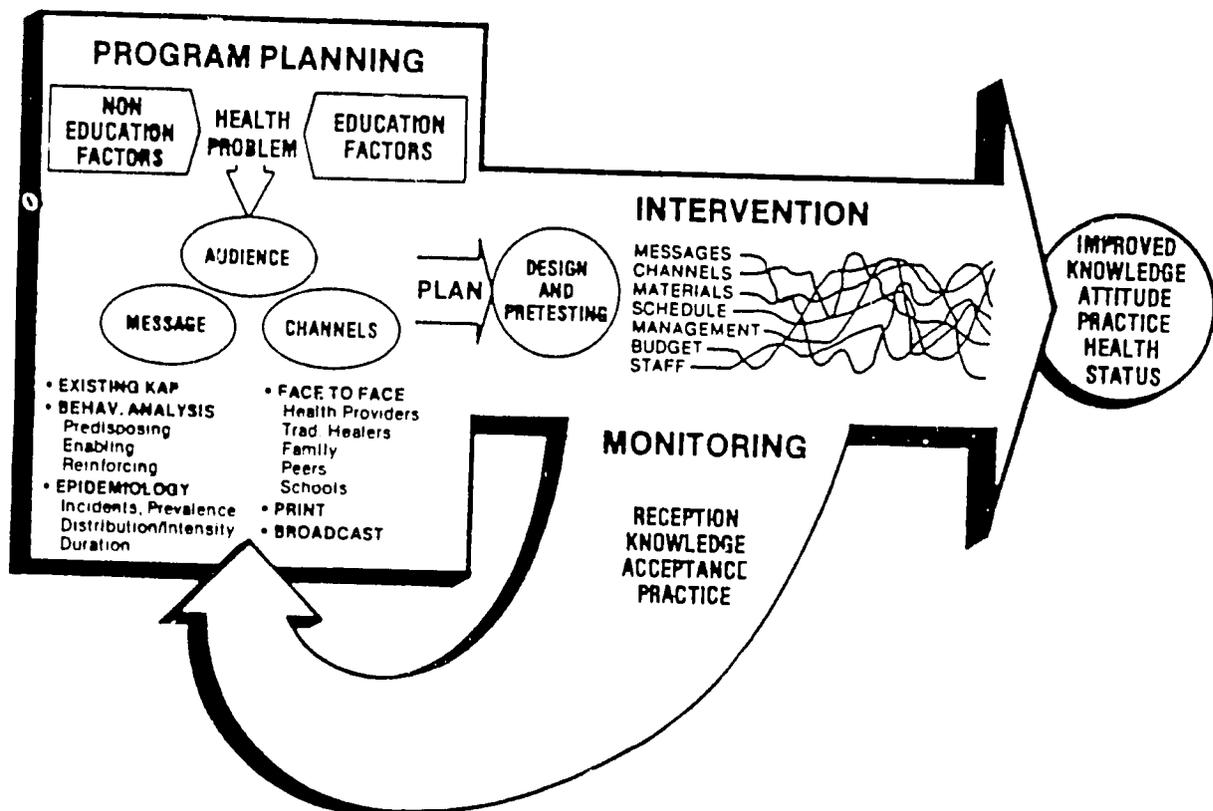
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The Health Communications Approach

The particular health communications strategy developed by HEALTHCOM is part of a growing genre of health education activities referred to generally as social marketing or health communications. This approach attempts, in a pre-defined period of time, to change a particular set of behaviors related to a specific problem in a large-scale target audience. During the past two decades dozens of campaigns on topics as varied as forest fires, mental retardation, energy conservation, smoking, alcoholism, littering, seat belts, venereal disease, malaria, breastfeeding, latrine construction, population control, and infant diarrhea have attempted to inform, motivate, and often change the behavior of a large audience in a short time. Experience has shown that the short-term campaign which relies too heavily on media alone has been little more effective than traditional programs which rely solely on direct patient education through health workers. The program is using many of the lessons learned from short intensive campaigns but is integrating them as part of a long-term, consistent health communication strategy designed to promote health priorities such as diarrheal disease control, immunization, improved infant nutrition, malaria control, and family planning.

The approach is illustrated in the following diagram which shows the relationships among three key stages in the strategy: pre-program planning and development, the instructional intervention, and monitoring and evaluation of knowledge, attitudes, and behavior.

PUBLIC COMMUNICATIONS MODEL



From: HEALTHCOM, Lessons From Five Countries, Academy for Educational Development, October, 1985

The **planning and development stage** emphasizes the collection of information needed to prepare an effective program design. This information answers important questions such as: (a) Who in the total population should be selected as the principal audience? (b) What communication channels are most appropriate for these people? (c) What behaviors should be advocated? (d) What resources are needed to conduct the program? The final program plan, including budget and resource requirements, is based upon the results of this investigation.

The **intervention** is divided into discrete cycles. Each cycle covers the same basic information with a slightly different approach. These cyclical changes reduce audience fatigue and permit a continued renewal of audience involvement. From an administrative perspective, the cycle approach is more important because it permits program planners to design segments of the program sequentially. This means they can work with fewer production facilities over a longer period of time. More importantly, they incorporate results of the earlier phases into the planning of later phases.

In order to reach large numbers of people, mass media, particularly broadcast media like television and radio, play a central role. **But it is the integration of broadcast, print, and face-to-face support which is essential to campaign success.** Women hearing health messages on the radio also hear the same advice from a health worker, receive printed information from their children's school, participate in a community health fair, and see related posters.

Monitoring and evaluation permit the planner to detect problems and make important iterative changes in educational strategy. A monitoring system which permits the regular sampling of select segments of the audience is developed. Planners know: (a) how a microcosm of their intended audience feels about the advice they are receiving; (b) whether or not they are taking that advice; and (c) what obstacles they are encountering. These monitoring devices can also point out important logistics problems such as a breakdown in delivery of printed matter or the use of inappropriate broadcast times for reaching target audiences. This type of on-going evaluation is essential for making corrective changes in future cycles as well as for providing program administrators with a clear idea of their overall potential success.

The working premise which makes this model relevant to the prevention and treatment of infant diarrhea is the belief that lives can be saved by altering the way in which rural people now behave. Improvement does not necessarily require significant new investments in health infrastructures such as water systems, latrines, or new health centers. This project is not attempting to install new mechanical technologies nor promote sophisticated cognitive conceptualizations. The task is to increase the likelihood of people doing things which are well within their capacities but which are currently unlikely. The emphasis is on **behavior**. Attitudes, even those which may contribute to what people do, are of secondary interest.

From a behavioral perspective, there are five circumstances which singly or in combination account for absent behavior. First, necessary materials or implements like ORT packets may be unavailable. Second, prerequisite skills, discrimination, or knowledge may be lacking. For example, rural mothers may know that boiling water is good but may not understand that it actually kills the parasites they fear. Third, there may be no incentives such as immediate improvement in their child's health for adopting the behavior. Fourth, there may be incentives to adopting inappropriate behavior like giving kaolin or purges. And fifth, there may be punishing consequences which discourage the desired pattern. A child may vomit when ORS is administered, for example, or his diarrhea may actually appear to increase. An understanding of these

factors on the part of program personnel is absolutely critical in the development of an effective instructional intervention.

Behavioral analysis also makes an important contribution to our understanding of how to change behavior patterns, whether it be altering an existing pattern or creating a new one. Many health messages, for example, carry an implicit or explicit threat. This approach has been shown to be less effective than providing **rewards for approximations** of the desired behavior. The use of approximations requires the identification of relevant existing behavior which is desirable and which can be reinforced. This may mean including a few behaviors in the instructional campaign which the audience is now doing correctly. For example, rather than telling mothers to stop bottle-feeding, it may be better to praise mothers each time they breastfeed their babies.

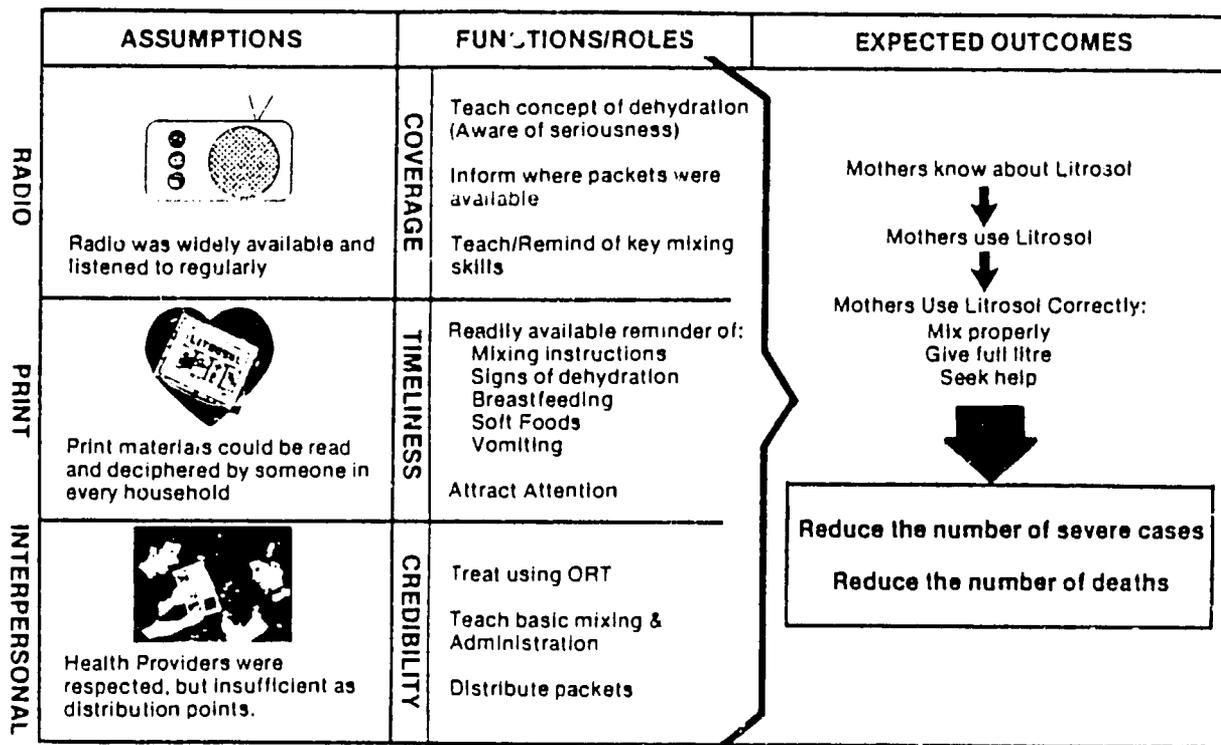
Another important point to emphasize is effective **delivery of positive consequences or rewards**. Behavior does not change unless rewards are actually applied to the desired behavior pattern or some reasonable approximation of it. It is not sufficient, for example, for nurses to tell mothers how important it is that rural mothers be praised for administering ORT. One must be certain that the nurses are in fact praising mothers and that the mothers perceive the nurses' actions as praise or support. The project may be one of the first efforts to use mass communication primarily to support positive existing behaviors rather than to extinguish negative patterns or create entirely new ones.

The success of a public communication approach depends upon its ability to provide a sufficiently large number of people with practical and important new information. It must make an impact on the consciousness of the intended audience by rising above the everyday clutter of advice and suggestions to become an important new priority in their lives. It must change what people do as well as what they think and believe. This cannot be achieved by the mere repetition of simple slogans, the exhortation to do the right thing, or the indiscriminate use of mass media alone. It requires:

- A sensitive understanding of how people are affected by specific health problems
- Articulate crafting of useful and practical educational messages
- A coordinated distribution network that reaches each individual through various channels simultaneously

The following section describes the specific project activities in Honduras and The Gambia, showing how these principles have been applied to the real-life conditions existing in each country. The illustration below defines the programmatic assumptions and the specific functions and roles and the expected outcomes for each of the three primary communication channels used in both countries.

Radio is used to provide widespread coverage of key new skills and as a regular reminder of critical mixing, administration, and feeding advice. **Print materials** are used for more detailed instructions and so they are available in a timely way—when the mother needs to know how to mix ORS, how to give ORS, and how to monitor her child's progress. **Interpersonal channels**, physicians and health workers, provide overall credibility for the new health technology and constitute the primary distribution system for packets in Honduras and mixing advice in The Gambia. The following model is a graphic presentation of the Diffusion Model developed for the Honduran Diarrheal Disease Control Program.



DIFFUSION MODEL

The Campaign In Honduras

The Problem

Honduras reported that 1,030 infants died from diarrheal dehydration in 1977. This accounted for 24 percent of all infant deaths and represented the single greatest cause of infant mortality in Honduras. The most commonly available treatment for diarrheal dehydration in Honduras was intravenous therapy. Intravenous therapy is expensive, requires trained medical personnel and a relatively sterile environment, and is available only in fixed health facilities which serve a small portion of the country's population.

Communication Objectives

The campaign in Honduras had the following main objectives:

- Substantially reduce the number of deaths from diarrheal dehydration among children below the age of five.
- Extend rehydration therapy to isolated rural areas where it is not now available.
- Substantially reduce the per-patient cost of rehydration therapy in Honduras.
- Introduce several diarrhea-related prevention behaviors to a significant number of rural people living in isolated areas.

Audience Definition

The audience in Honduras was divided into two main groups:

- The primary audience is rural mothers and grandmothers responsible for the care of children under the age of five and primary health care workers called guardianes.
- The secondary audience includes physicians, nurses, auxiliary nurses, midwives, fathers of children under five, rural school teachers and school children, and regional health promoters.

Communication Strategies

The project was designed to teach the primary audience:

- To properly prepare pre-packaged oral rehydration salts and administer them to infants (less than one year) as soon as the child gets diarrhea and to toddlers (older than one year) as soon as the child loses appetite or becomes listless.
- To seek outside assistance if the child does not improve after administering the above regimen.
- A cluster of behaviors associated with breastfeeding, infant food preparation, and personal hygiene.

The secondary audience was taught to support the primary audience through:

- Physicians and nurses using oral therapy in all fixed facilities.
- Fathers and midwives understanding and approving oral therapy.
- Rural schools teaching prevention measures.
- Regional health promoters distributing ORT packets.

Message Tone

The tone of the campaign was serious and straightforward. It sought to promote a mother-craft concept which supported what mothers were already doing and added several new components to "being a good mother." ORT was presented as the latest achievement of modern science: **a remedy for lost appetite and an aid to recovery**. ORT was not presented as a remedy for diarrhea.

Execution

The following diagram illustrates the various project inputs over time, including the different evaluation instruments used by Stanford. The evaluation data reported later in this paper reflect the time period from February 1981 through February 1982. As illustrated, some 20,451 radio spot broadcasts and some 200,000 print materials plus 150,000 packets of oral rehydration salts were produced and distributed.

The campaign took two years and was divided into four sequential phases timed to coincide with the peak seasons of diarrhea. Phase I, which preceded the first diarrheal peak, stressed face-to-face training of health workers and medical professionals in the proper application of oral rehydration therapy for mild, moderate, and severe cases. Phase II, during the first diarrheal peak, shifted from an intensive face-to-face effort to a media-based mass campaign directed at rural mothers and grandmothers. Messages during this period focused on diagnosis, the procurement, mixing, and administration of ORT, and recovery. A few prevention concepts were addressed during this phase. Phase III shifted to a prevention focus, but selected treatment messages were broadcast to reinforce therapy compliance. This period preceded the next diarrheal peak season and prepared mothers to apply useful prevention techniques. Phase IV, during the second diarrheal peak time, re-emphasized ORT treatment. During this phase, media was used to reinstate treatment behaviors elicited during Phase II and to provide continued reinforcement to selected prevention measures.

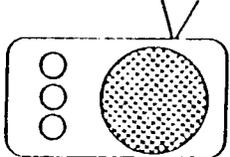
A message pattern was developed which differentiated messages by specific audiences. The treatment pattern was built around a core cluster of treatment behaviors which was either expanded for audiences like physicians, nurses, and **auxiliares**, or selectively chosen for groups like school children and midwives. This means that physicians learned how to treat severe dehydration with oral therapy in addition to the moderate rehydration therapy being taught to rural mothers. School children were not taught the entire core cluster of oral therapy behaviors directed at mothers but focused on early diagnosis and alerting mothers to a possible problem.

Prevention messages were also differentiated by target audience. For example, breastfeeding was emphasized with physicians, diaper storage with **guardianes**, and general environmental sanitation in school programs.

EVALUATION LEGEND

- B = Baseline
- A = Anthropometry
- M = Morbidity
- C = Communication
- N = Nutrition & Breastfeeding

HONDURAS ACTIVITIES

		RAINY SEASON										RAINY SEASON																													
		PHASE I					PHASE II					PHASE III					PHASE IV					PHASE V																			
		OCT 1980	NOV	DEC	JAN 1981	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN 1982	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN 1983	FEB	MAR										
MESSAGE SEQUENCE																																									
INTERPERSONAL 	DIRECT																																								
	INDIRECT																																								
RADIO 	SPOTS																																								
	VOZ De SALUD																																								
PRINT/GRAPHIC PACKETS 	POSTERS/ DISTRIBUTION																																								
	FLYERS																																								
	WITH LABELS																																								
	WITHOUT LABELS																																								
EVALUATION		B					A					M					C					N					A					M					C				

1,200
43,696
93,000
300,000

Radio was the principal means of initial contact with most rural mothers. While simple print materials such as posters and graphic pamphlets were distributed widely, it was expected that many mothers would receive only the radio messages. Word-of-mouth was expected to be an important secondary source of information for mothers. The primary contact points for mothers were **guardianes**, local **alcaldes**, rural clinics, children's hospitals in Tegucigalpa, and rural primary schools. Schools were added to the communication network because they offer a relatively simple way to provide structured information to a large number of rural homes. The **guardianes** were reached by an intensive preliminary training effort and supported through regular bi-monthly meetings, radio broadcasts, and simple print materials. Secondary audiences such as physicians, nurses, and health promoters were reached principally through print media, although regular news items were important motivators for these groups.

Institutionalization

By 1985, the Health Education Unit of the Ministry of Health had expanded from a two-person team, to a national office with seven professionals organized into radio, graphic arts, and planning and research sections. From distributing paper and magic markers to clinic staff and sending technical briefs to radio stations, the Unit is now planning four integrated public health communications programs a year. Each of these programs includes designs for radio and print materials, health provider training, conducting regular field research to test materials, and developing monitoring systems with division chiefs of the Ministry. A national budget, including five new full-time staff positions, has been created by the government, and formal plans to further strengthen the health education activities of the Ministry have been approved.

The Campaign In The Gambia

The project in The Gambia lasted three years. It was divided into a six-month pre-program development investigation and the actual execution, monitoring, and revision of the public education program. The project had modest financial resources to develop and produce radio, graphic, and in-service training materials. The project also provided one expatriate technical assistant to the Health Education Unit of the Medical and Health Department.

The Gambian Ministry of Health provided one full-time counterpart and office space, and the national radio system provided all radio broadcast time. As in Honduras, a coordinating committee was established by the Ministry to review project activities and to ensure that the project was consistent with the government's overall health priorities.

The Problem

The Gambia reported that gastroenteritis and malnutrition accounted for 21.3 percent of all deaths in children under five years old in Banjul where health statistics are most reliable. It is estimated that rural areas of the country experience comparable or more serious mortality rates due to the same two causes. This represents the most significant cause of death for children of this age group. Existing methods of prevention and treatment vary widely within the country and are generally considered inadequate to meet the problem.

Communication Objectives

The main objectives of the campaign in The Gambia were the following:

- Substantially reduce the number of deaths among children below the age of five from diarrheal dehydration.
- Establish one sugar/salt rehydration regimen as a standard for village-based prevention of dehydration.
- Adapt the village level management of diarrheal disease to meet the different requirements of the wet and dry seasons and the diarrhea/ malnutrition complex.
- Establish a regular feces clean-up campaign within a significant number of rural family compounds.

Audience Definition

The audience in The Gambia was divided into three main groups:

- The primary audience was rural mothers, grandmothers, and older female siblings of children under five.
- The secondary audience included Rural Health Inspectors, Community Health Nurses, Health Peace Corps Volunteers, Leprosy Inspectors, Maternal Child Health teams, and Primary Health Care Workers.
- A tertiary audience included general physicians, dresser/dispensers, local leaders (alkalos), and rural fathers of children under five.

Communication Strategies

The campaign was designed to teach the primary audience:

- To properly mix the simple sugar/salt rehydration solution.
- To administer the solution along with breast milk and solid foods during episodes of wet season diarrhea.
- To administer the solution intensively along with breast milk during episodes of dry season diarrhea.
- To seek outside assistance if the child shows signs of listlessness and/or dark sunken eyes.
- To identify one member of the family to regularly clean up human, primarily infant, feces from the family compound floor.

The campaign hoped to teach the secondary audience:

- To properly mix and administer the sugar/salt rehydration solution.

- To properly manage moderate and severe dehydration in the health centers using ORT packets.

The tertiary audience were motivated to support and praise mothers who properly used the sugar/salt solution for diarrhea.

Message Tone

The tone of the campaign was serious and straightforward. It sought to promote a remedy, the basis of which builds upon existing widespread recognition and concern over "dryness" in small children, which offers mothers a powerful new diet for "dryness." The sugar/salt solution will be presented as part of this "diet for dryness" which includes specialized feeding and continued breastfeeding.

Execution

Radio, print, and health worker training were combined to provide the same messages over multiple channels. Radio spots, mini-programs, and magazine format radio programming delivered a seasonally structured series of messages. A national rural lottery which used radio to teach the audience how to use a color-coded mixing flyer was a central element in the program to teach sugar/salt mixing to rural women. This was strengthened by trained Traditional Birth Attendants (TBA) identified by a special "happy baby flag" in a significant percentage of rural villages. These TBAs provided back-up support for mothers by helping them remember how to mix sugar/salt solution. Simultaneously, packet rehydration was introduced at rural health centers as the preferred treatment for moderate and severe rehydration. A feces clean-up campaign relying heavily on radio was conducted to link the concept of cleanliness during prayer, advocated by Islamic principles, to the need to maintain the floor of the family compound as a clean place upon which to pray.

The first year was divided into three sequential phases timed to coincide with the seasonal variations in diarrhea.

Phase I, which preceded the wet season diarrheal peak (characterized by prolonged, debilitating bouts of diarrhea) emphasized the relationship between diarrhea, dryness, and malnutrition, establishing the concept that "dryness," or dehydration, can be prevented through a special diet of sugar/salt solution, breast milk, and adult cereals given to young children during bouts of diarrhea. Phase I included an intensive face-to-face training program for rural health workers (Health Inspectors, Community Health Nurses, Peace Corps Volunteers, Leprosy Inspectors, and Maternal and Child Health teams) in the proper management of diarrhea including sugar/salt solutions, UNICEF packets, and intravenous/intraperitoneal therapy. These health workers in turn trained mothers in 1,000 villages in the proper mixing and administration of the sugar/salt solution, leaving a happy baby flag on the hut of the trained women as an identifying marker.

Phase II, which corresponded to the wet season diarrheal peak, emphasized proper mixing of the sugar/salt solution in the home along with administration and feeding advice. During this period a national rural lottery was operated to publicize and popularize the sugar/salt mixing instruction.

Phase III, which immediately preceded and coincided with the dry season diarrheal peak (characterized by short, intensive, and rapidly dehydrating bouts of diarrhea) reinforced the sugar/salt mixing behavior promoted in Phase II and emphasized the rapid,

systematic administration of the sugar/salt solution from the on-set of the diarrheal episode in children under five.

Following the initial emphasis on popularizing the home mix solution, the program's messages shifted to stress infant feeding after bouts of diarrhea, promoting solid foods as "power" foods for children recovering from diarrhea and restoration of weight as a goal in post-diarrhea treatment. Specific local dishes were studied and recommended to mothers, and locally available ingredients such as groundnuts, sugar, milk, and oil were suggested as particularly important to the recovering child. This second phase again combined radio, print, and health worker training but did not rely on a single, high-impact intervention like the lottery to carry the primary message.

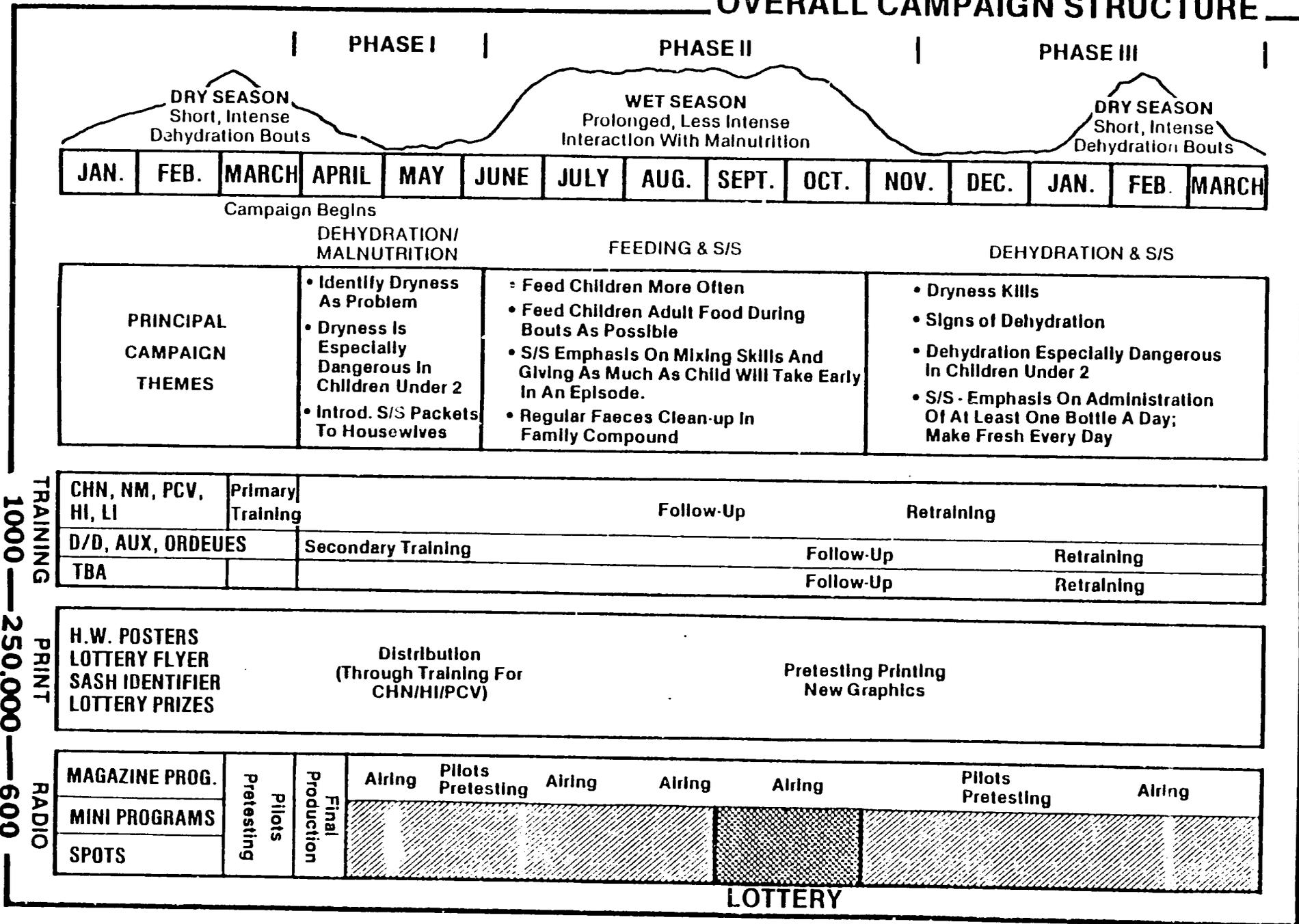
Institutionalization

Several positive indicators of institutionalization in The Gambia have resulted since the Academy staff left in 1984. The Gambian Government continues to distribute the lottery flyer and instructional guides to mothers in rural villages. Selected radio programs have been rebroadcast, and several new radio programs have been created since the end of the second phase of project activity. New primary health workers have been trained, using the Health Worker's Guide developed by the project. Forty senior nursing personnel have been trained in clinical management of diarrheal disease. A recent MOH Primary Health Care Review reported that 75 percent of mothers in PHC villages and 44 percent in non-PHC villages said they treated diarrhea with ORS. Division of Education staff have presented The Gambia experience at international health conferences in Senegal, Malawi, and Kenya.

Despite these positive signs of institutionalization, there is less expansion of the methodology than hoped for. Severe economic constraints and conflicting demands on the health education staff have prevented them from concentrating with the same precision on a single set of health problems. Further deterioration of the country's precarious economic situation has required the Ministry of Health to ration gasoline and other essential resources, thereby interrupting its maternal and child health outreach services. The Ministry of Information has cut back Radio Gambia's daily broadcast hours by 50 percent. The government, however, has recently requested assistance to apply the HEALTHCOM public health communications methodology to family planning and nutrition and to establish a surveillance system to replace the one developed by Stanford University but discontinued at the end of the project. The Health Unit plans to follow up and reinforce established ORT behaviors and plans a study on current ORT knowledge and practices among Gambian health workers and rural mothers to identify areas of needed programs and materials reproduction. Institutionalization remains a possibility in The Gambia, but without additional support it is doubtful that the government alone will be able to continue with the same level of effectiveness as that noted during the earlier phase of the program.

THE GAMBIA

OVERALL CAMPAIGN STRUCTURE



-111-

TRAINING 1000
PRINT 250,000
RADIO 600

