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**MASS MEDIA & HEALTH PRACTICES**  
**PROJECT IMPLEMENTATION**

Academy for Educational Development

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SEMIANNUAL REPORT NO. 10

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April 1 - September 30, 1983

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## INTRODUCTION

This document is one of a series of reports prepared by the Academy for Educational Development, Inc., under its Mass Media and Health Practices Project contract with the United States Agency for International Development.

The full series includes:

Document #1	<u>Scope of Work - Technical Proposal</u>
Document #2	<u>Contract Scope of Work</u>
Document #3	<u>Semiannual Report No. 1</u>
Document #4	<u>Project Agreement with Honduras</u>
Document #5	<u>Semiannual Report No. 2</u>
Document #6	<u>Honduras Target Regional Selection Process</u>
Document #7	<u>Semiannual Report No. 3</u>
Document #8	<u>Principal Health Considerations</u>
Document #9	<u>Developmental Investigation Protocol</u>
Document #10	<u>Institutional Review Board</u>
Document #11	<u>Honduras Regional Background Paper</u>
	<u>Description of Field Investigation</u>
Document #12	<u>Description of Field Investigation Activity: Honduras</u>
Document #13	<u>Communication and Development</u>
Document #14	<u>Results of Honduras Field Investigation</u>
Document #15	<u>Implementation Plan: Honduras</u>
Document #16	<u>Semiannual Report No. 4</u>
Document #17	<u>Semiannual Report No. 5</u>
Document #18	<u>Semiannual Report No. 6</u>
Document #19	<u>Implementation Plan: The Gambia</u>
Document #20	<u>Second Year Implementation Plan: Honduras</u>
Document #21	<u>Semiannual Report No. 7</u>
Document #22	<u>Semiannual Report No. 8</u>
Field Note #1	<u>Packets: Do Visual Instructions Make a Difference?</u>
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Field Note #3	<u>The ORT Poster: Something Special for the Professionals</u>
Field Note #4	<u>Selecting Campaign Messages</u>
Field Note #5	<u>Building a Network of Effective Providers</u>
Field Note #6	<u>1982 Health Worker Training Report</u>
Field Note #7	<u>Report on the 1982 "Happy Baby Lottery"</u>

## SECTION I BACKGROUND

On September 30, 1978, the Academy for Educational Development, Inc., was contracted by the Offices of Health and Education of the Science and Technology Bureau (ST/H, ST/ED) of the United States Agency for International Development (AID) to implement a five-year project for the prevention and treatment of acute infant diarrhea in the rural areas of two developing countries. Simultaneously, Stanford University was contracted to evaluate the project.

Project agreements were signed in September of 1979 with the Government of Honduras and in December of 1980 with the Government of The Gambia. These agreements define the terms of collaboration between project personnel and the respective Ministries of Health (MOH) in both countries, and emphasize the dual goals of the program:

- 1) To strengthen the health education capacity of the cooperating countries through the systematic application of mass communication.
- 2) To contribute significantly to the prevention and treatment of acute infant diarrhea in isolated rural areas of both countries.

In January 1980 work began on the 36-month program in Honduras. The program includes resources for materials production, broadcast time, developmental research, and six person-years of long-term technical assistance. The program in The Gambia, also scheduled for 36 months, began in May of 1981 and includes resources for materials production, developmental research, and three person-years of long-term technical assistance.

In both countries, project personnel assist national health personnel in developing a public education campaign that combines radio, specialized print materials, and health worker training to deliver information on home treatment of infant diarrhea, including the proper preparation and administration of oral rehydration therapy (ORT). Other critical messages include rural water use, sanitation practices, infant feeding, food preparation practices, and personal hygiene.

On February 2, 1981, the AID Mission in Honduras amended the Academy for Educational Development's Mass Media and Health Practices contract to expand the emphasis given to water and sanitation messages. The amendment provides additional technical assistance to a separate Mission-supported program in three northeastern provinces of Honduras. This activity adds three person-years of technical assistance to the original contract and is referred to in this report as the Water and Sanitation (W&S) Component of the Mass Media and Health Practices (MM&HP) Project.

In July of 1982, the Health Office of the USAID Mission/Honduras amended the MM&HP contract a second time to provide assistance to the Ministry of Health's expanded national program of immunization, diarrhea, and malaria control. This amendment provides 24 person-months of technical assistance to a nationwide health education program aimed at strengthening the existing network of primary health care workers throughout the country. Using many of the same techniques developed by the diarrhea program financed under the original contract, the new program will further institutionalize the application of communication planning to the delivery of other critical health information. This activity is referred to here as the Primary Health Care Component of the MM&HP Project.

In June 1983 the Ministry of Health in Ecuador signed a Letter of Understanding with ST/ED-AID, which stipulated the provision of up to 18 months of technical assistance to the Ecuador National Diarrheal Division Control Program. The form of the assistance would be to add a public communication component to the government's existing DDC program and focus on three provinces of central Ecuador as a model for strengthening and expanding the national program. This activity became the first formal diffusion site called for under the MM&HP Amendment #12, signed September 30, 1982.

SECTION II  
ACTIVITIES ORIGINALLY PROJECTED FOR  
APRIL 1, 1983, to SEPTEMBER 30, 1983

A. **HONDURAS**

- o Primary Health Care Component: Develop campaign materials as indicated in Implementation Plan.
- o Water & Sanitation Component: Continue implementation of campaign, with emphasis shifting to radio materials.

B. **THE GAMBIA**

- o Redesign second-year campaign to respond to findings from first-year formative evaluation.

C. **ECUADOR**

- o Dr. Pareja takes residence in Ecuador to begin an 18-month period of assistance to the Ministry of Health to develop and expand their program of Diarrheal Disease Control using techniques and approaches developed under initial MM&HP Project.

D. **WASHINGTON, D.C.**

- o Elizabeth Booth joins the Washington, D.C., staff as Assistant Project Director taking over many of the daily technical supervisory and support functions under the contract.

SECTION III  
ACTIVITIES UNDERTAKEN

**PRIMARY HEALTH CARE COMPONENT  
PROCOMSI - PHASE II: HONDURAS**

**A. SUMMARY**

Activities during this six-month period were directed towards two fundamental objectives:

- o Institutionalizing the communication methodology within the Ministry of Health.
- o Campaign development on three new themes: malaria, tuberculosis, and immunization.

Regarding the first objective, activities concentrated on MOH personnel training through an in-service workshop entitled "Methodology for Educational Communications." In addition, regular meetings with Ministry personnel focussed on each step in the communication methodology and the results of the activities in the different zones and regions.

Also during this period, the project developed and evaluated the campaigns on diarrhea and malaria with very positive results. In addition, the educational campaign in support of the National Immunization Week was implemented. Baseline studies on tuberculosis and vaccination were made. Presently, the campaign on tuberculosis is being carried out and the materials for the upcoming vaccination campaign are under preparation.

**B. PROJECT ORGANIZATION**

The health education unit incorporated two of the PROCOMSI I employees and secured five new positions for the unit--a Technical Coordinator, three Field Coordinators, and a Radio Monitor. Four positions are filled presently and the Technical Coordinator will be selected from among current Field Coordinators next year. All project personnel work under one-year renewable contracts.

In order to expand project activities to new health themes and to promote institutionalization of project methodology, a new organization structure was designed and established which integrates existing personnel from the Division of Health Education and the PROCOMSI I staff. The group has been divided operationally into three subgroups (radio, graphics, and training) and is charged with both specific as well as general responsibilities. Support personnel trained in field investigation, instrument validation, and formative evaluation have been particularly valuable to the project.

The new organization reflects a new operational system geared to the methodology promoted by the project, allowing the health education unit to accomplish its goals according to the established plan. The present organization will be the base for a new Division of Education in the Ministry of Health.

Although the organization has been well received by high authorities in the Ministry, it has been impossible so far to create permanent positions for contract personnel because of the current government restrictions on creating new Ministerial positions.

### C. STAFF TRAINING

A module for training personnel was designed at the beginning of the period. This module—"Methodologies on Educational Communications"--consists of four workshops for theoretical and practical training:

- 1) Baseline Social Investigations
- 2) Validation of Educational Materials
- 3) Educational Radio Broadcasting
- 4) Creative Educational Graphics

The first two workshops were used to train project personnel both in the central office and in the field. Training on educational radio broadcasting focused on the regional level in order to create a regional capability for creating radio programs relevant to their specific needs and parallel to those produced at the central offices.

The first "Workshop on Educational Radio Broadcasting" was conducted in Comayagua from July 19-21, 1983. Eleven members from different health programs in the region participated under the direction of the Regional Coordinator and with the assistance of two project members responsible for radio broadcasts. The workshop included a theoretical phase covering techniques for production of radio programs and a practical phase in which the group produced three health programs using the studios of two local radio stations.

A second radio workshop was held in Choluteca August 22-27, 1983. Using the same system as the first workshop, 16 health promoters and nurses were trained, producing three radio programs at two local stations. The Choluteca region established a radio team that is currently broadcasting live programs through a local station with regional coverage. A third radio workshop is planned for Health Region No.7 using the same methodology.

The project developed an instructional manual for radio educational programming which was given to participants as a working document. This manual is progressively improved in each new workshop.

A workshop on the production of graphic materials is planned for Division of Education and project personnel. This workshop will be held later in 1983.

## D. PROJECT THEMES DEVELOPMENT

### I. Campaign on Malaria

Radio programs for the education campaign on malaria and parallel distribution of related graphic material began in April 1983, and were broadcast until May 23. A total of 6,721 spots of 30 seconds each were broadcast, as well as 37 programs of 15 minutes duration each. Two national radio stations and seven local ones broadcast the messages.

Two graphic aids were designed, validated, and reproduced in support of the radio programs. The first one was a pamphlet to accompany the work of the malaria spraying teams. This pamphlet was provided to each household sprayed during the campaign. A total of 80,000 were given to the teams for distribution the rest of the year. A second pamphlet was designed to support the educational work of voluntary collaborators associated with the malaria control program. These pamphlets were presented to patients seeking the volunteers' services. A total of 76,900 of these pamphlets were distributed during the campaign and another 20,000 were provided to voluntary groups for delivery the rest of the year. Copies of the materials are available from the Academy for Educational Development.

The formative evaluation for this campaign was made during the first week of June. A total of 257 individuals were interviewed in nine different communities of the three regions of the project. In addition, 36 malaria program employees were interviewed including sprayers, supervisors, and voluntary collaborators.

The indication of an accurate understanding on how the insecticide works was among the most significant accomplishments of the program. In the past, lack of knowledge by the village people resulted in their cleaning, painting, or lining their walls with paper after spraying because they believed the insecticide lost its power as soon as it lost its characteristic odor. Another accomplishment was a significant increase in the demand for voluntary collaborator services. This was particularly true with respect to blood sampling and preventive medication against malaria. Before the campaign, few people requested these services on time.

Parallel to these accomplishments we observed a more positive attitude towards household spraying among the population. The spraying team also reported greater public cooperation as a result of the campaign. In light of these accomplishments, the malaria control program managers decided to expand the educational work of the campaign to the rest of the country and to keep the program going the whole year. Enough graphic aids and radio tapes were provided to regional supervisors for delivery to local radio stations and collaborators.

The project overcame several administrative problems in implementing the campaign, the most important being delays in printing materials. We must point out, however, that the efficient collaboration by the Vector Control Division of the Ministry of Health was decisive for adequate implementation of the campaign.

The malaria campaign, including the results of the baseline investigation and the final evaluation, was presented by Dr. Juan de Dios Paredes, Assistant General Director of Health, and Dr. Carlos Pineda, Division Head for Vector Control, during the "Meeting of Directors of National Services for Malaria Eradication in the Americas," July 11-16 in Brasilia, Brazil.

## 2. Campaign on Diarrhea

The formative evaluation of the last part of the diarrhea campaign, developed during the first phase of the project, began parallel to initiation of the malaria campaign. This evaluation was made in eight communities of the three health regions of the project. A total of 384 mothers were interviewed including 317 individuals and 67 in six focus groups (two in each region).

Based on the results of the evaluation, the project designed the new campaign message, seeking to transmit the following concepts:

- o Children must drink Litrosol during the whole period that they suffer from diarrhea.
- o Children must drink Litrosol for all kinds of diarrhea.
- o The volume of water contained in three regular bottles of soda is equal to one liter of water.
- o Ways to recognize and deal with dehydration.
- o Breast-feeding alone provides enough nutrients to children during their first four months of life.
- o Characteristics that make Litrosol different from products on the market with similar names.

In order to deliver these messages, project staff reprogrammed two radio spots from the previous phase and designed three new ones with two versions each. The campaign workplan included reprinting the various graphic aids prepared during the first project phase. This task was assigned to the Department of Diarrheal Disease Control, MOH.

Six different versions of the three new radio spots were validated in nine communities of the three project regions. Project staff interviewed a total of 214 mothers of children less than five years old. Once appropriate changes were introduced as a result of the validation, new radio spots and 12 new radio programs were produced. The campaign began on May 24 and concluded August 22, 1983. The overall radio activity comprised 15,885 radio spots of 30 seconds each and 162 programs each of 15 minutes duration. Two radio stations with national audience and nine local stations (three in each region) delivered the messages.

With respect to graphic materials, those produced during the first project phase were reprinted in order to cover the whole country through the Diarrheal Disease Control Department, MOH. Moreover, a new edition of 16,000 Litrosol posters, 140,000 flyers, 5,000 banners with the heart symbol, and 5,000 copies of the Norms for the Control of Diarrheal Diseases were produced for the use of health centers throughout the country. Presently, 40,000 new copies of the photonovel for schools and 300 educational flipcharts on oral rehydration are being reprinted. Moreover, 50,000 calendars and 20,000 posters on breast-feeding will be printed during 1983.

A formative evaluation was conducted to measure the continuing impact of the diarrhea campaign. A total of 306 mothers of children five years or younger were interviewed in nine different communities of the three health regions assigned to the

project. This evaluation showed that 100 percent of the mothers interviewed had heard Litrosol campaign messages, thus confirming the correct selection of local radio stations. Almost all of the mothers interviewed (90%) knew the Litrosol name, how much water is needed to prepare it, and how to measure a one liter volume when lacking measuring cups. The percentage of mothers (62%) still confused about dehydration, remains high. Most mothers still say that "Litrosol is for diarrhea" rather than for dehydration, even though they say that it is not for curing diarrheas but for fortifying the child while ill. They recognize the beneficial properties of Litrosol and, interestingly, this confusion over dehydration does not significantly affect their willingness to use Litrosol.

Another concept stressed was that of providing Litrosol to children during the whole duration of the episode. (Seventy-five percent of the mothers correctly answered this question during evaluation). Some 86 percent of the mothers interviewed now indicate a belief that breast milk alone is sufficient to feed children during their first four months of life, and that breast-feeding protects their children from diarrhea and other diseases.

One of the most significant problem in developing this campaign was the limited access to rural communities because of impassable roads during the rainy season. This meant that much of the print material was not adequately distributed. The Ministry's Department of Diarrhea Disease Control, responsible for this activity, also could not use local radio stations because of inexperience in negotiating radio contracts. The Health Education Unit will assume this responsibility next year.

### 3. Tuberculosis Campaign

The baseline study on tuberculosis began the second week of June 1983. The study was carried out in two phases, each lasting approximately two weeks.

The first phase consisted of interviews with individuals and focus groups in nine different communities of the three project regions. Project staff interviewed 36 individuals, 20 "health guardians," 12 nurses, and three coordinators from the regional tuberculosis program.

During the second phase, project staff interviewed 75 persons affected by tuberculosis who were under treatment, as well as 35 of their relatives through focus groups. The interviews were difficult to conduct since the patients were scattered and participation of relatives in focus groups was not easy to arrange. In addition, 12 nurses, three epidemiologists, laboratory supervisors, and microbiologists were interviewed in each region.

Results from the study indicate that people have a very negative concept about TB. They isolate and ostracize the ill, fearing the disease is highly and permanently contagious. Most people believe that once a person has tuberculosis, he will never recover completely even though he may be diagnosed as cured. These beliefs have caused people to adopt a very defensive attitude towards those stricken with tuberculosis. Furthermore, patients adopt a fatalistic attitude which does not help them in pursuing the prescribed treatment towards a full recovery.

Project staff encountered several problems related to collecting sputum samples necessary for accurate diagnosis. Most of the problems are associated with the lack of instructions given to patients and relatives for assuring the acceptable quality of the samples.

The project developed a campaign plan including radio and visual aids. The following messages were selected as fundamental to the campaign:

- o A person affected by tuberculosis under treatment is not contagious.
- o Tuberculosis can be cured if treated in time.
- o Persons with persistent coughing for more than 15 days must visit the health center and samples of sputum should be collected if prescribed.

It was deemed necessary to provide extensive education to the ill and their relatives about the different aspects of the disease, its prevention, and treatment. The following instruments were designed to this effect:

- o Six different versions for three radio spots, as well as an identifying jingle carried a single principal message: Tuberculosis patients under treatment are not contagious.
- o To support the three fundamental radio messages, the project designed three different posters to be affixed in all health centers in the country. 5,000 copies were printed of each.
- o The project prepared instruction labels to be printed on sputum collection vessels. Sputum collection instruction labels were validated through interviews with 35 individuals in rural and semi-urban zones.
- o A flipchart was designed to provide better education on the disease to the ill and relatives; 1,000 copies are currently being prepared. In addition, a booklet on tuberculosis was designed for patients, nurses and health guardians in different communities. 20,000 copies will be printed.
- o Radio spots were validated through 180 interviews in nine communities of the three project regions.
- o A two-phase methodology was designed to validate the flipchart. Initially, the instrument was validated with 24 tuberculosis patients in two different groups and with 10 auxiliary and 10 registered nurses in two other groups at the National Thorax Institute. Subsequently, the instrument was validated in each of the three project regions with patients, relatives, and auxiliary nurses, giving a total of 91 participants among the groups.

The radio campaign began August 22 and will last through October 22, 1983. This represents a total of 38 daily radio spots (Monday through Saturday) by two national audience stations, and 185 daily spots (Monday through Saturday) among the remaining nine regional radio stations. In addition, there are 15 weekly radio segments on "The Voice of Health" program.

The fundamental problem again revolved around the timely production and distribution of printed materials, particularly in light of the short time span of the campaign. Nevertheless, this may be accomplished eventually as better capacity is developed in the different individuals and departments associated with the issue.

#### 4. Immunization Campaign

Vaccination (immunization) is the last of the four themes to be addressed in the present year. The baseline study began September 12 and concluded on September 26, 1983. A total of 275 mothers with children three years old or younger were interviewed, as well as 15 nurses and other health personnel.

The most important conclusions from this investigation are:

- o There is lack of knowledge by the mothers on the number of dosages required for each vaccine, as well as lack of information on the kind of vaccine given at any one time. The most common situation is that the children are immunized and the mothers told to return after writing on the immunization register card the name and date of the vaccine administered. Project staff found that mothers do not understand the meaning of the card, and although the visual codes used in the cards are simple for individuals with some schooling they are incomprehensible to many rural people. Such codes are never explained to mothers making the situation even more difficult.
- o There is lack of "prevention" concept regarding immunization. Shots are associated with curing illness, not prevention. Particularly important is the belief that all the shots are not really necessary.
- o Mothers need more orientation on secondary reactions to immunizations, and instructions on how to deal with them.
- o There is confusion arising from older regulations that precluded immunization while a child had diarrhea, cold, allergy, etc.

The campaign designed to address these issues includes the following radio messages, still under validation:

- o If the time has come to immunize your child but he/she is ill, take him/her to the health center and let the nurse decide on vaccination.
- o For a child to be protected, all dosages must be given for all immunizations.
- o Secondary reactions to immunizations are normal and can be managed easily.

Presently, six different radio spots with a total of 12 different versions have been prepared for validation in October 1983.

A new design for the immunization card has been made for distribution by the appropriate Ministry division next year. The design is based on easy-to-understand visual codes and is currently under validation.

In addition, the project designed a flipchart on immunization to be used by auxiliary nurses to instruct mothers on immunization and health care. An estimated 1,000 copies will be prepared. A pamphlet also was designed with instructions for the mother to be distributed at the time of immunization. It presents norms on hygiene and conduct to be followed to avoid secondary reaction complications by certain vaccines.

100,000 copies will be printed. These instruments are presently being validated in preparation for the campaign foreseen to last from October 22 to December 31, 1983.

#### E. OTHER ACTIVITIES

Project personnel designed and produced a campaign for promotion of the National Immunization Week held in April. The campaign included the production of five different radio spots, a television spot, and an educational pamphlet describing the week's objectives.

There was active participation by Field Project Coordinator, Jose Ignacio Mata, in the development of a Preliminary Project Proposal for Family Planning promoted by Johns Hopkins University.

The Field Project Coordinator and personnel responsible for graphic materials gave a presentation on oral rehydration and general project activities to Honduras and United States Government officials. The presentation was filmed for television delivery in the United States.

The Field Project Coordinator gave presentations on mass communications during the First National Congress on Rural Development Communications and the First National Congress on Folklore, in Tegucigalpa.

The project procured and obtained a scholarship for an intensive training program on radio dramatization to be conducted in Ecuador by the project's Educational Radio Programmer in October 1983. Two more project members are expected to be sent to Ecuador for this training next year.

**WATER AND SANITATION COMPONENT  
PRASAR - RURAL WATER AND SANITATION PROJECT: HONDURAS**

**A. BACKGROUND**

The Health Education Office of the Water and Sanitation project has been in operation since 1981. It operates independently but in close collaboration with the Ministry of Health's formal Health Education Unit. This independence is necessary because of the intense activity in a limited geographic area. The full integration of this unit with the MOH's formal unit will be accomplished by 1985. To ensure a smooth integration, the same communication methodology is being used by both staffs.

This Water and Sanitation Health Education Office has designed and developed a multimedia communications strategy for health education in which the community worker is the main direct communications element located in the community, and is backed by mass media support, specifically radio programs and spots, with the aid of educational tools such as community participation flipcharts, posters, short stories, technical flipcharts, and other graphic materials.

The approach required to implement this strategy mandates that the work be carried out in a planned fashion concentrating on four major aspects:

- o Training of Community Workers
- o Radio Programs
- o Production of Auxiliary Communications Media
- o Work With the Community

Individually these four aspects have little meaning and cannot produce the desired results; they should, therefore, be integrated so that their impact is compounded in the communities benefiting from PRASAR. The ultimate goals are greater community participation in water and latrine projects, with simultaneous promotion of improved behaviors regarding environmental sanitation and equipment maintenance.

**B. OPERATIONAL OBJECTIVES**

- 1) Ensure that the heads of households participating in PRASAR participate directly in health education activities.
- 2) Ensure that the families participating in the project make at least three observable changes in their health, hygiene, or environmental sanitation practices.
- 3) Train 100 percent of the PRASAR community workers in the development of basic aspects of health education, interactive community participation, and in the use of each of the educational materials produced by the Health Education Office.
- 4) Ensure that at least one school in the communities participating in PRASAR activities introduces the teaching of aspects of health, hygiene, and environmental sanitation in coordination with the project.

- 5) Coordinate health education activities with CESARES personnel in the communities served by the project in order to extend coverage.
- 6) Ensure the participation of organized community groups in health education activities.
- 7) Inform the public in Sanitary Regions 3 and 5 of the aims and achievements of the project through a mass media campaign.
- 8) Design educational models that are applicable nationwide.

## C. RESULTS OBTAINED IN IMPLEMENTING THE OBJECTIVES

### 1. Education of Heads of Households

Heads of families participating in PRASAR activities have received information and educational advice, and have been motivated by the community workers regarding environmental sanitation. The training given to the community worker has encouraged an educational rapprochement which increases understanding of the problems of families living in rural areas. This direct communication has been emphatically supported by radio programs which are broadcast by four stations in the project area.

### 2. Changes in Sanitary Practices

All of the educational activities being carried out through radio programs, short stories, and other printed material and those undertaken directly by the community worker in the community are directed towards changing behavior based on a change in attitude generated by a new understanding. The proposed objective specifies at least three observable changes in health, hygiene, and environmental sanitation. Along these lines five or more behavioral changes are being promoted regarding the use of water, latrine maintenance, washing of hands, personal hygiene, and payment of a family fee for the maintenance of sanitary installations.

The process of generating an understanding and of changing behavior is so complex that we cannot attribute the results to specific determining factors. Nevertheless, a previous assessment of the situation, which is attached to this one, indicates that the positive behavior observed has been influenced significantly by the activities integrated in the health education strategy carried out by the Health Education Office of PRASAR.

### 3. Training of Community Workers

One hundred percent of the community workers have received training in the fundamentals of health education and in the techniques of community and rural participation. At present, all of them are prepared to undertake a profoundly educational communal approach to be aided by the specific educational tools and materials produced by the Education Office of PRASAR. Nevertheless, the community worker should continue to be trained in order to grow professionally and to better carry out community work in the future.

#### 4. Health Teaching

The goals of this objective already are being addressed in the field where development has begun on the first educational module of programmed teaching: "The Short Story of Juanita and The Little Drop." This educational series will be developed by the teachers in the area in cooperation with PRASAR community workers. The following two modules on the protection of sanitary fountains and latrines are ready for publication. An evaluation of the results will be conducted soon.

#### 5. Coordination with CESARES

The PRASAR community workers have established coordination with personnel from the rural health centers (CESARES) of specific actions related to national vaccination campaigns carried out in the last few years.

In order to achieve a higher level of coordination, the Office for Health Education is producing graphic support materials to be distributed in the CESARES.

#### 6. Participation of Organized Community Groups

During the stage when the problems are defined and during construction and sanitary installations, community workers work in organized community groups. It is crucial at this point to maintain community action groups that, by themselves, continue to generate educational activities and maintain sanitary installations after they are turned over to the communities. Towards this end, the Office of Education is designing a training course on organization and maintenance of community action groups, while, at the same time, producing the flipchart on maintenance of sanitary installations which emphasizes the importance of paying the family maintenance fee.

#### 7. Radio Programs

(To be considered in Objective No. 7 as mass media information programs to the population in Sanitary Regions 3 and 5.) To achieve this objective, a radio program, "The Tales of Frijol the Terrible," is being broadcast in the project area by La Voz del Junco in Santa Barbara and La Voz del Occidente in Santa Rosa de Copan. The broadcast was initiated on September 14, 1982, and 48 chapters have been aired so far. It is estimated that this medium reaches approximately 40,000 inhabitants (20,000 per station). In June of this year an educational radio campaign was begun on three stations in the area: Radio Norte in San Pedro Sula, Radio Sultana in Santa Rosa de Copan, and La Voz del Junco in Santa Barbara. The campaign consists of radio spots with educational messages regarding health, water use, latrine care, payment of fees for maintenance of installations, and the institutional image of PRASAR. The first 40 spots are aired 20 times daily from Monday to Saturday. In order to be certain of the effects of this educational radio campaign on the population exposed to it, a previous assessment was conducted.

#### 8. Educational Models

To date, the Health Education Office has designed three educational models applicable nationwide:

- 1) Community participation using the community participation flipchart.

- 2) Programmed health education model for rural schools using children's stories.
- 3) Long distance mass media education.

These three models define the synthesis of the health education strategy to date, it should be noted, however, that it is necessary to develop a fourth model which will generate in the community itself a process of community action based on the organization and maintenance of community action groups by PRASAR community workers.

#### **D. PRODUCTION OF AUXILIARY COMMUNICATIONS MEDIA**

The Health Education Office has produced all of the auxiliary communications media necessary for the development of the three educational models being carried out. The production of media and material responds to the needs of the health education strategy designed to give field support to PRASAR.

#### **E. RESEARCH AND EVALUATION**

Since 1983 the Education Office has had the services of a sociologist whose specialty is Rural Sociology; this person is conducting the studies and evaluations of different aspects of the education component. At present, a research project on "Attitudes and Practices Related to Latrines, and the Storage, Conservation, and Use of Water" is being carried out.

The preliminary results of this research are quite satisfactory--74.9 percent of families' attitudes related to health practices are positive. It is expected that the final conclusions of this research will be submitted to the Coordinating Committee. In this same area, there is an ongoing evaluation of the impact of the radio programs, "Frijol the Terrible."

#### **F. ACTIVITIES UNDERTAKEN DURING THE MAY-OCTOBER 1983 SEMESTER**

The first phase of in-service training of PRASAR community workers is now completed. The auxiliary educational communications aids produced by the Education Office are now at the disposal of the community workers for use and distribution in the project area. Similarly, research was carried out on changing attitudes and sanitary practices produced by the subproject on health education regarding water systems and the disposal of excrement. The health education strategy focused on five basic aspects:

- 1) Work with the Community
- 2) Training of Community Workers
- 3) Research and Evaluation
- 4) Radio Programs
- 5) Production of Auxiliary Health Education Media

## G. OTHER ACTIVITIES

### 1. Work with the Community

The training of community workers in educational communications techniques and rural extension has given work with the community an important boost--at present the community worker spends 25 percent of his time on health education alone. At the same time there has been a substantial increase in construction of sanitary infrastructure.

Another significant aspect of work with the community has been the technical growth shown by the community worker in the development of health education activities. It is estimated that during the last semester the community workers have directly educated an average of 30,000 people using the materials and methods produced and designed by the Health Education Office.

### 2. Training of Community Workers

Training PRASAR community workers constitutes an essential element in the development of the Health Education Component in that it has allowed the technical growth of the community worker and consequently the application of an educational communications model which allows active and conscious participation of the population served by the project.

The design of the training program for community workers in educational communication, rural extension techniques, and use of the community participation booklet has had such a favorable impact that it has generated interest in the higher levels of the Health Ministry to the extent that the curriculum of PRASAR's training program has been included in the training curriculum of the Ministry of Health's community workers.

### 3. Research and Evaluation

The Research and Evaluation Unit of the Education Office carried out the following activities:

- o Conclusion of data collection for the research project, "Attitudes and Sanitary Practices" regarding water systems and disposal of excrement.
- o Tabulation of 220 research forms.
- o Analysis of the results.
- o Elaboration of a preliminary research report based on an analysis of the data.

The preliminary report has been distributed to the higher administrative levels directly involved with the operational development of PRASAR's Health Education Office.

Regarding the utility of this preliminary report, it is timely to note that the report has permitted a more objective view of the impact of health education activities aimed at changing attitudes and practices relating to water systems and the disposal of excrement by the population served by PRASAR.

#### 4. Radio Programs

The broadcasting of PRASAR's radio program "The Tales of Frijol the Terrible" has continued on the Voz del Junco station in Santa Barbara and the Voz del Occidente station in Santa Rosa de Copan with 48 chapters aired to date. During the month of July the implementation of a long distance mass media education model was completed; it consisted of radio spots with health education messages on the following themes: water use, latrine care, payment of fees for the maintenance of installations, and strengthening of institutional image of the Health Ministry, SANAA, and AID. At present, Santa Barbara's La Voz del Junco, Santa Rosa de Copan's Radio Sultana, and Radio Norte of San Pedro Sula broadcast 40 spots on these themes 20 times daily or 120 times weekly Monday through Saturday. The reports received on the radio campaign have been very favorable throughout the project area and the broadcast of the radio spots is being monitored in those sections of the broadcast area considered to be representative of the area covered by the stations. Regarding the extent of coverage, it is estimated that an average of 20,000 people per radio station are being reached, which means that 80,000 people are being exposed to PRASAR's educational radio program.

#### 5. Production of Auxiliary Health Education Media

##### a. **Education Module for Primary Schools**

As a result of this activity 160 rural schools in the project area have been reached by working in conjunction with the principals and teachers of these schools. A preliminary evaluation of the application of the educational module on Water Pollution and Decontamination at present reveals favorable results as reported by the principals and teachers of different towns in the districts of Cortes, Santa Barbara, Copan, Ocotepeque, and Lempira. It is estimated that they have directly reached 7,000 students in rural areas and indirectly reached the families of these students.

In the field, the Health Education Office has continued to produce materials and auxiliary communications media to be used by PRASAR's community health workers. Auxiliary education media produced:

- o 16,000 Posters on Latrines
- o 16,000 Issues of Juanita and the Little Drop of Water Nos. 2 and 3
- o 10,000 Issues of graphic support material on "Community Promotion"
- o 100 Issues of the flipchart on Construction of Latrines
- o 100 Issues of the flipchart on Maintenance of Sanitary Installations

##### b. **Flipchart on Maintenance of Sanitary Installations**

This flipchart was printed and is ready for distribution by the community workers. Its aim is to create a favorable attitude towards the maintenance of sanitary installations among the target population.

## H. **IMPORTANT EVENTS**

It is important to note that as a result of the work carried out by the Health Education Component there is an ever-growing interest among national and foreign institutions working in the health education field in water and environmental hygiene, as indicated below:

- o The Public Health Ministry named Prof. Luis A. Canales Director of the Subproject on Health Education.
- o The Public Health Ministry adopted the training system for community workers which was designed by PRASAR's Health Education Component and requested the collaboration of Prof. Luis A. Canales in the training sessions of all community work personnel.
- o Requests for materials have been received from 20 countries worldwide.
- o The Dominican Republic requested assistance in adapting the Education and Promotion Booklet and in training health education assistants in its use for a water and environmental sanitation project. Towards this end, the Project Field Director of the project went to the Dominican Republic during the last week of October.
- o World Relief of Honduras requested copies of the flipchart on promotion and construction of latrines to be used at La Mosquitia Refugee Camp.
- o CEDEN of Honduras is using materials from PRASAR's Subproject on Education and sent four of its community workers to be trained in the PRASAR course.
- o The Project Plan of Honduras sent five of its community workers to be trained in the community work courses of PRASAR's Subproject on Health Education and each one is using the PRASAR flipcharts.

## I. **PLANS FOR NEXT SEMESTER**

1. Provide technical assistance allowing continuity to the community work developed by the community worker.
2. Distribute the short stories, "Juanita and the Little Drop, Nos. 2 and 3" to the rural schools in the project area.
3. Train Community Workers I, II, and III in the organization and maintenance of community action groups.
4. Distribute 6,000 educational sheets on "Latrine Maintenance" to the communities.
5. Distribute 80 flipcharts on "Sanitary Installation Maintenance" to community workers.

6. Produce 44,000 posters on the following themes:
  - a. Shutting off the water 16,000 c/u.
  - b. Use of the ladle 16,000 c/u.
  - c. Washing one's hands 16,000 c/u.
7. Distribute 15,000 posters produced during the last quarter to the communities.
8. Train 50 community workers of the Public Health Ministry in educational communication and health education; to take place in the city of La Ceiba during the month of November.
9. Design two nonverbal maintenance manuals (i.e., develop the theme through illustrations alone).

## ECUADOR

### A. OVERVIEW

The following activities have been implemented since the Field Project Director's arrival in Ecuador on June 27.

- 1) Redesign of the Implementation Plan.
- 2) Design of campaign strategy which included definition of an integrated media package.
- 3) Design and production of graphics.
- 4) Design of pretesting and production of six radio spots for the Sierra area.
- 5) Design of six radio spots for the Coast area.
- 6) Design and correction of 16 radio programs for the Sierra.
- 7) Design and presentation of the educational component in the two training seminars held for doctors, nurses, health educators, auxiliary nurses, and promoters on the three DRI project areas (Salcedo, Quimiag-Penipe, Jipijapa) where the media is used in the MOH Diarrhea Control Program.
- 8) Design and presentation of the educational component for community ORT packet distributors in the Salcedo DRI project.

### B. BRIEF DESCRIPTION OF THESE ACTIVITIES

#### I. Redesign of Implementation Plan

During AED's assistance last year (October-November 1982) to the Ecuador Ministry of Health Diarrhea Control Program, preprogram research was implemented and a basic implementation plan was designed based on that research. The Field Project Director and Health Education Division then began implementation based on this plan.

Upon the Project Director's arrival, this basic plan was revised to take into account what was already accomplished. In summary, the program had been able to redesign a new plastic instructional bag which serves as a one-liter measure, but no final art had been produced, nor had all the visual instructions been defined. An instructional flipchart for community use had been designed with the participation of mothers in several Sierra communities, but only the draft art had been finished. The program had made another print of the self-teaching module but no evaluation of it had been conducted. The radio spots had been accepted, but only two radio programs had been produced. The decision had been made that the community distributor's identification flag should be metal rather than cloth but no final art had been produced.

Based on this, the first Implementation Plan was revised and presented to the various program directors and the Health Education Division. (A copy of this plan is available through AED.)

## 2. Definition of Integrated Media Package

The Implementation Plan revision emphasized the concept of an integrated media package; the content concepts were divided according to the media to be used. These content concepts had been primarily selected from the baseline research, but a more dynamic integrated presentation was necessary to show the complementarity of the several media.

The content was divided into two phases. Phase One emphasizes treatment behaviors, Phase Two prevention behaviors. The treatment behaviors in Phase One include:

- a) Signs of dehydration: recognition, association with diarrhea, and action to be taken.
- b) Introduce SUERO ORAL:
  - o Benefits.
  - o Where to obtain it free.
- c) Mixing of SUERO ORAL:
  - o Liter measure.
  - o Clean cold boiled water.
  - o One packet, thorough mixing.
- d) Administration of SUERO ORAL:
  - o In a cup, with spoon.
  - o Offer to child continuously day and night.
  - o Stop for 15 minutes if child vomits. Continue afterwards with spoon and cup.
- e) Feeding Regime:
  - o Continue breast-feeding during diarrhea episodes.
  - o If child eats, give soft foods after six hours of use of SUERO ORAL.

Phase Two—Prevention Behaviors:

- a) Breast-feed exclusively during child's first four months.
- b) Boil drinking water for small children.
- c) Wash hands after latrine use, before cooking, after changing child's diaper.
- d) Use protective covering for food.

- e) Corrective treatment behaviors identified after Phase One Formative Evaluation.

Many of the messages will be taught through all of the media; however, there is a difference in the intensity of the messages per medium. For example, radio spots will state that soft foods should be given to a child during diarrhea episodes, but details regarding the types of soft foods will be emphasized in the longer radio programs and during the training sessions of ORT distributors. The revised campaign strategy was presented to the Program Director and accepted.

### 3. Graphics Component

The graphics include:

- o Metal logotype
- o Plastic instructional bag
- o Flipchart
- o Module
- o Signs of dehydration poster

#### a. **Metal Logotype**

This 35 x 25 cm. metal plate shows the program's logo: two red circles, one of which shows a mother and a child with diarrhea in the upper circle and a mother giving the child an unidentified solution with a spoon in the lower circle. The reason for this was the Program Director's decision not to limit the program image with only the SUERO ORAL salts.

This design was first obtained during the community flipchart production. Mothers described to the artist how a child with diarrhea should be drawn. The result: a mother frowning with worry at her child on her lap while she holds his legs and cleans and wipes him. This image was to be the program logo. The Field Project Director suggested that an additional circle be added to show the same mother doing something concrete about the problem, such as giving the child an oral solution (see logo attached).

The metal plate also includes the phrase: "Child with diarrhea, give him SUERO ORAL." The name's diagram was suggested to maintain symmetry with the circles as follows:

SUERO-  
ORAL

The metal plate contains a fourfold message: logo of the program - "Child with diarrhea - give him SUERO ORAL" - SUERO ORAL is available at the house where the plate is placed. This last message is implied because similar metal plates are used widely by small stores to announce the sale of soft drinks and popular medicines. It is explicit by the fact that the radio spots will be referring to it as "the plate of the mothers of the red balloons: (el letreo de las madres de las bombitas rojas)". It also will appear inside the flipchart in one of the pages where a mother is receiving the SUERO ORAL from a community distributor upon whose house door is hung the metal plate.

One hundred fifty plates are to be made: 24 already have been distributed to 20 community distributors, four have been distributed to Health Centers.

**b. Plastic Instructional Bag**

This plastic bag has four messages:

- o The program logo and the name SUERO ORAL.
- o Explanation of what dehydration is and how to treat it.
  - o Visual and written instructions on how to prepare and administer SUERO ORAL.
  - o Feeding regime.

The visual instructions were obtained during the community design of the flipchart. Mothers helped to define the images that showed the mixing and administration steps easily. The text was submitted for technical revision and the final art was produced (samples of the final product are available from AED).

Each plastic bag will contain two O.R. packets and will be given to mothers by the health center's medical personnel and community distributors.

The use of the bag as a measuring device as well as an instructional sheet has been practiced in groups and individually by medical personnel, auxiliary nurses and community distributors during the training seminars.

The radio spots give explicit instruction on using the bag as an educational graphic and as a measuring device. Five radio programs treat these messages in depth. Of the 60,000 plastic bags produced, 6,000 have been distributed to two DRI Project Coordinators, and 1,500 to 26 community distributors.

**c. Flipchart**

Much of the 20-page flipchart was already planned when the Project Director arrived. His intervention was in helping with the final design, particularly the rearrangement of the pages for a more coherent internal structure and in helping to choose a color for each page.

The flipchart is divided into five sections:

- o Causes and prevention of diarrhea.
- o Dehydration: theory and signs.
- o SUERO ORAL: preparation, where to obtain it, administration.
- o Feeding regime: breast-feeding during diarrhea, soft foods.
- o Medical control after use of SUERO ORAL.

The flipchart will be printed on cloth pages of approximately 40 x 60 cms. It will be used by community distributors, auxiliary nurses, and health educators. Five hundred flipcharts have been ordered for the Sierra. Though the final art has been completed and is available in reduced photocopies, none have yet been printed. Some of the photocopies have, however, been distributed to the Sierra community distributors.

A similar version for the Coast has been developed with local community participation. Although the content is the same, the images of each particular situation vary enormously from those of the Sierra. Those differences were expected, however, and were the reason for designing two different flipcharts. The Coast flipchart is in draft form; final production should begin soon. The use of the flipchart was originally conceived as a participatory community educational activity. It contains almost no words with the exception of SUERO ORAL, dehydration, and administration regime by cups according to age in months and years. The reason for the absence of text is to encourage community participation in the instruction. The person using the flipchart is instructed to stimulate mothers to participate in deducing the content of each page through questions such as, "What do you see here? What does it mean? How can this problem be solved?" The answers are "guided" to the content shown by each page and mothers are encouraged to state the conclusion in their own words. Most of the flipchart content is a summary of what a community leader/distributor learns in the ORT training seminar. It also expands on the content of the instructional bag and the radio spots and programs.

#### **d. The Module**

The self-teaching module was already in existence upon the Project Director's arrival. It contains basic information on how to diagnosis diarrhea, signs of dehydration, the preparation of SUERO ORAL, a detailed explanation of the feeding regime, some causes of diarrhea, and prevention messages. The module is used in training courses. An animator helps the participants through theoretical exercises. It has been used for at least two years with positive anecdotal feedback. The module is somewhat disorganized, however, poorly designed (handwritten and in block size pages, cumbersome to handle), has an excess of print, and lacks conciseness. It should be subject to a comparative test with a revised version to determine whether it should be redesigned.

The program has printed over 5,000 modules and approximately 3,000 reportedly have been distributed to auxiliary nurses and community distributors.

#### **e. Signs of Dehydration Poster**

This poster will show a dehydrated child with the signs clearly marked so that the poster itself becomes a teaching aid. The principal signs to be included are: sunken fontanelle, sunken eyes, crying with no tears, dry mouth, skin turgor, and no urine. The text, suggested by the working groups during the training seminars, will say "This child is dehydrated and is in danger of dying. He needs SUERO ORAL."

Eight thousand posters are planned to be printed. Three attempts have been made to photograph dehydrated children, but so far none of them fit the image desired. Nevertheless, enlargements of the best of those pictures were used for the auxiliary nurses and the community distributors training courses. It is intended that each community distributor will have one of these posters in order to be able to teach a mother when her child is dehydrated by diarrhea. They also will be distributed to health centers in the project areas.

#### 4. Design and Production of Radio Spots

##### a. **Sierra Radio Spots**

The Project Field Director was responsible for seeking out the candidates that competed for the writing and production of the radio package. These candidates presented a bid and an example of their radio production. An MOH committee heard their examples and studied their bids as well as the Director's recommendation of the best candidate.

The new radio staff person was given an intense and thorough briefing of the diarrhea problem, its consequences, outreach, the essential components of the program, the educational goals sought by the media package intervention, and the content of both the radio spots and the radio programs. He used the content guide list, which also suggested the formats compatible with such content, and produced an initial draft of 12 radio spots for the Sierra (characterized by Mestizo and Indian culture). A new radio personality, Zoila, was created as a potential source of information. Zoila converses with the doctor of the health center, her neighbors, the auxiliary nurse, or the community distributor for SUERO ORAL.

The 12 draft spots were corrected in conjunction with the technical committee responsible for the program. A detailed revision also was made to unify the messages since several spots appeared to vary. Once these corrections were made, the 12 spots were recorded for pretesting.

The spots were pretested with the aid of regional health educators who had attended the training seminars and two members of the central office health division. The design of the pretesting instrument, as well as the training of interviewers, was implemented by the Project Director.

The results, as in most pretests, were enlightening. Mothers best understood and remembered the content of the spots in which the doctor or the nurse appeared. It was decided that to take the advantage of this, a doctor should be created. The MOH radio coordinator suggested several generic health names; the majority chose the name, Dr. Benigno Sabesanar (Dr. Who-knows-how-to-heal). Dr. Sabesanar will deliver most of the technical information to be communicated by the program to the mothers.

To avoid saturation and an excess reliance on doctors, it was decided to include an auxiliary nurse in one of the spots without changing the text. The result was a more balanced presentation—the doctor appears in three of the six spots, the nurse in two, and two mothers in one spot.

The radio spot messages are:

- Spot 1: Diarrhea is loss of liquids and can be fatal.
- Spot 2: Loss of liquids is replenished by SUERO ORAL.
- Spot 3: The benefits of SUERO ORAL and where it can be obtained.
- Spot 4: How to prepare SUERO ORAL.
- Spot 5: How to administer SUERO ORAL.
- Spot 6: Feeding regime while using SUERO ORAL.

Another salient result of the pretesting was the identification of several particularly clear phrases in various spots. These phrases were then included in the final scripts.

The pretesting also confirmed that the text of the theme song had communicated its message: "Diarrhea is loss of liquids that can kill a child, nothing better for this than SUERO ORAL." Mothers had no difficulty in restating what the message was; they also confirmed that they liked the music and made no suggestion as to changing it.

The final version of the six spots that will be aired has been professionally recorded and distributed to five local radio stations at two sites:

Salcedo:	Radio Nuevos Horizontes Radio Nuevos Exitos - (Radio Latacunga)
Quimiag Penipe:	Radio Central Radio Atenas Radiofonicas

Each spot will be aired six times daily during the hours of highest target audience listening: early morning hours, mid-day, and late afternoon. These radio stations were also the ones most frequently mentioned by mothers during the baseline investigation. Radio Latacunga was mentioned but no contract was formalized because it did not appear to be one of the favorites at the time of the baseline investigation. It has acquired increased popularity since then because it airs a daily program made by INCCA. It was therefore arranged for the project spots to be included in the daily program and the weekly news program produced by the campesinos with the guidance of CIESPAL-DRI.

The spots were distributed to the stations the last week of October, thus no formal report can be made on the actual airing of the spots nor on the schedule because the charts have not yet been made. The monitoring system still needs to be designed with the regional health educators who will be responsible for its implementation.

#### **b. Coast Radio Spots**

The 12 Coast radio spots have been drafted and corrected but have not yet been pretested. Pretesting should be completed by the end of November, and actual airing begun by December. The radio stations chosen by mothers include Voz de Jipijapa where the offices of the DRI project are located and La Voz de Puerto Viejo. The listening hours coincide with those of the mothers of the Sierra; the six final spots will also be aired three times each daily.

### **5. Radio Programs**

Parallel to the production and airing of the radio spots, 16 radio programs, eight minutes each, have been programmed to be written, produced, and aired. The content of the 16 programs corresponds with the content of the spots' but in more depth.

The themes are:

- o Most frequent community diseases.
- o Diarrhea: a community problem.

- o Diarrhea: a dangerous loss of liquids.
- o Diarrhea: loss of liquids is dehydration.
- o Loss of liquids must be replenished.
- o SUERO ORAL is the best way to replenish lost liquids.
- o Where to obtain SUERO ORAL.
- o How to mix it (two programs).
- o How to administer it (three programs).
- o Testimonials of its efficacy.
- o Breast-feed during episodes of diarrhea.
- o Soft food regime.
- o Summary of all themes.

Each program briefly summarizes the preceding programs so that a mother will be able to hear a summary of the former programs plus the new program content.

The structure of the program is a soap opera telling the story of a family whose child is severely ill with diarrhea. The family goes to the health post and receives detailed instructions on why diarrhea is dangerous, the dehydration process, the need to replenish the child's lost salts and liquids, the benefits of using SUERO ORAL to do this, how to prepare and administer SUERO ORAL, and a feeding regime. The story is narrated by the father and mother of this child who in turn act out the scenes at the health post. Thus the impersonal third person narrator is substituted by the actors themselves who use distinctive Sierra cultural semantics and vocabulary. The 16 draft scripts have been completed and final corrections are being made. As soon as they are finished it is expected that the programs will be recorded and distributed to the radio stations by the end of November. The programs for the Coast should be produced during December. Each radio station will air each program three times a week at the three peak listening times. The contracts for the broadcast time of these stations already have been made.

## 6. Educational Component of ORT Training Seminars

Two types of training seminars were designed and implemented based on the different needs, policy, and training objectives: one for professional personnel and another for community based-distributors.

### a. Professional Personnel

This training seminar included doctors, professional nurses, auxiliary nurses, and health educators of the MOH hospitals and health centers of the three regions where the DRI projects are located. The two seminars reviewed in detail the theoretical concepts of diarrheal diseases, the rehydration process (its dynamics and chemistry), the components of the oral rehydration salts, and the rehydration regime.

The presentation of the educational component had three particular objectives:

- o Inform medical professionals on the methodological components to be used in the program.
- o Explain the integrated use of the media through group work with the educational materials.
- o Provide hands-on opportunity to use the educational materials.

These educational objectives permitted the medical professionals to obtain first-hand experience with educational materials that will eventually be found in the field. Understanding the concept of an integrated media package, the presence of community-based trained personnel, and the need for mothers to be able to use, mix, and administer SUERO ORAL properly was obtained most effectively through actual manipulation of these elements in dramatizations of real life situations.

The educational component was presented to the doctors during the second day of the four-day seminar and to the auxiliary nurses, health educators, and other regional personnel during the fourth day.

The objectives for the auxiliary nurses of the health centers focused on the use of each piece of the educational package. The dynamics of the training included group work with individual demonstration mixing of the ORT packets using the plastic bag and using the bag to instruct mothers.

#### **b. Community Distributors**

Following the training seminars for the medical community, each region organized a community distributor's seminar for which a community-elected person from each of the project areas was invited. These community-elected representatives of the Sierra DRI project areas, Salcedo and Quimiag-Pemipe, were brought together in two seminars.

The seminar goals included:

- o Train the elected person to become a community ORT packet distributor including instruction of mothers in the mixture and administration of SUERO ORAL.
- o Teach the distributor to diagnose signs of dehydration and to refer the child with these signs to the nearest health center or hospital.
- o Teach the use of the educational materials: I.D. metal plate, instructional plastic bag, dehydration poster, radio spots and programs, flipchart.

The seminar dynamics were similar to those used with the auxiliary nurses: demonstration, individual mixing practice, group dynamics, and sociodramas, including a mother seeking assistance, recognition of signs of dehydration, and teaching mothers with the aid of the educational materials. These activities were evaluated by the group. Packets and educational materials were distributed.

The Sierra community-based training seminar has been implemented; the Coast seminar is still being planned. The Field Project Director's participation in the training activities primarily concentrated on the draft design of the educational component. He was additionally responsible for presenting the methodology used in the production of the media material, the supervision of working groups, and photographing some of the activities.

## C. OTHER ACTIVITIES

### 1. Communication Family Planning Seminar (August 21-23)

Johns Hopkins University and AED jointly implemented an AID-sponsored Latin American Seminar on Communications and Family Planning in Quito, Ecuador. Seventeen countries were represented by family planning directors and educators of the various family planning institutions.

The Project Director participated as a guest lecturer on the "Usefulness of Baseline Research in Programs Using Communication." This lecture used the data and experience of the Honduras Mass Media and Health Practices Project. He also acted as a group facilitator to stimulate active group participation in outlining practical conclusions of the seminar.

### 2. Technical Assistance to Peruvian MOH (September 17-21)

AED has offered the Peruvian MOH a technical assistant in the implementation of their Plan de Alfabetizacion Sanitaria, a massive national nonformal educational campaign applying mass media to several topics including diarrheal disease control.

Dr. William Smith and Reynaldo Pareja traveled to Peru to participate in discussions with AID and MOH and to begin designing a communication strategy emphasizing three major topics the first year: diarrhea control, immunization, and family planning.

The primary implementor will be a Peruvian advertising agency; the Academy technical assistant will assist the MOH in orienting and supervising the advertising agency's activities to follow sound social marketing techniques and principles.

The overall proposed strategy and tentative one-month chronogram of activities of AID Mission, MOH, and AED's intervention was translated and presented to the MOH director who made minor changes and gave it an official written approval.

The follow-up seminar on social marketing to the chosen ad agency was scheduled for the first week in November.

## THE GAMBIA

### A. PROJECT MANAGEMENT

#### 1. Third-Year Extension

The Mass Media project's extension for a third year in The Gambia was formalized during this reporting period through an amendment to the project's country agreement approved by the AID Mission and the Medical and Health Department in Banjul and by the AID project monitor in Washington, D.C. (Office of Education, Bureau for Science and Technology).

The amendment was drafted by the Project Director, Dr. William Smith; the Field Director, Mark Rasmuson; and Dr. Phil Gowers of the Medical and Health Department during Dr. Smith's visit to The Gambia in January. At the request of the AID Mission, it was expanded by the Field Director before final approval in May to specify more fully how the project's educational methodology would be institutionalized within the Medical and Health Department during the third year, which is one of the year's major objectives.

#### 2. Third-Year Implementation Plan

The project's Third-Year Implementation Plan was written in late March and early April by the Field Director in consultation with Dr. Smith, Dr. Gowers, Dr. Michael Rowland of MRC-Fajara, and Paul Robson and Sekou Dibba of the Health Education Unit. Copies of the plan are available from the Project Director or Field Director.

### B. RAINY SEASON CAMPAIGN

The major project activity during this period has been the planning and implementation of Phase IV of the project's five message phases outlined in the third-year plan. This phase gives primary emphasis to the proper feeding of a child with diarrhea and secondary emphasis to oral rehydration and faeces disposal. Feeding has been given special prominence both because malnutrition is an important corollary of diarrhea during the rainy season in The Gambia and because recent evaluation data indicate that the project's first-year feeding advice has not been nearly as widely accepted as the oral rehydration messages. (See Stanford University Evaluation Unit Quarterly Report #6, February 28, 1983.)

The rainy season feeding campaign encompassed the following activities.

#### 1. Message Development

Specific feeding messages were developed in consultation with Dr. Gowers; Dr. Rowland; Mr. Nigel Taylor, nutritionist in the Medical and Health Department; Dr. William Lamb, MRC-Keneba; and field staff at the MRC Keneba Station and several rural health centers.

The major shift in emphasis from last year's feeding messages is from recommending solid foods for a child with diarrhea to recommending them for a child recovering from diarrhea. This shift is intended to increase the credibility and acceptability of this message to mothers whose children suffer anorexia during a bout of diarrhea, a not uncommon occurrence, and resist any attempt at feeding. In addition, a number of specific energy-rich Gambian dishes are recommended. A separate paper on the development of these messages ("Field Note on Development of Rainy Season Feeding Messages") is available from the Field Director.

The final list of feeding messages is as follows:

- o Keep breast-feeding as always.
- o Give sugar-salt solution to prevent dehydration and restore appetite. Remember the 3/8/1 Julpearl bottle formula.
- o Try to give the child small, frequent feeds even if he has little appetite.
- o Add some sugar or milk to the child's pap at the time of feeding to increase its palatability.
- o Once the child's appetite has returned, give solid foods like nyankatango (mbahal), nyelengo (nyeleng), futo (chere), and mani fajiringo (malo bunye bahal) to restore weight and power.
- o Oil, sugar, milk, and pounded groundnuts add extra power to foods. Add some of these to your child's food to increase its power.
- o Give an extra meal to the child for at least two days after the diarrhea has ended, and keep giving extra food until his weight and power are fully restored

## 2. Radio Production

A series of eight new radio spots were written and produced in cooperation with the staff of the Rural Broadcasting and Adult Education Section of Radio Gambia. These included five spots on feeding a child with diarrhea and one each on mixing the sugar-salt solution, when to take a sick child to the health center, and encouraging men to assist with child care during the rainy season. Formats included the **expert's advice**, **traditional drumming announcement**, and **griot's song** formats used during the past year, as well as a "commercial jingle" which the project contracted the local commercial radio station, Radio SYD, to produce.

Pretesting of four of these programs with a total of 22 women in the Western Division communities of Sukuta, Brufut, Bandunka, and Jambur took place during the weeks of June 6 and August 15. A separate report of the results of this pretesting is forthcoming.

Broadcast of the new spots and a selection of spots on mixture and administration of sugar-salt solution and faeces disposal produced last year began in June at the rate of approximately 30 broadcasts per week.

As in the past, the Radio Gambia spots have been produced mainly in the Senegambia's two major languages, Wolof and Mandinka. Several spots, however,--most notably a new song by a prominent griot reminding mothers how to mix the sugar-salt solution--also have been recorded in Fula and Serehule for broadcast in programs addressed to those audiences. We are again requesting that Radio Gambia play some of these programs from its relay station in Basse to reach the large upcountry Fula and Serehule communities. In addition, a special series of three programs reviewing the use of the sugar-salt solution and introducing the rainy season feeding messages has been broadcast in the main Jola language magazine program.

### 3. Graphic Materials Production

The project has produced two new graphic materials for the rainy season feeding campaign. The first of these is a 60 x 72 cm. color poster illustrating the full set of feeding messages. This poster is intended for use in the training of health workers and posting at health stations. One thousand copies have been printed.

The second graphic piece is a 30 x 42 cm. color flyer intended for distribution to mothers at the rural health stations. The flyer illustrates two of the messages: "Give solid foods like nyankatango...etc., when your baby is recovering from diarrhea," and "Add oil, sugar...etc., to your child's food to increase its power." They are being used in the same way that the sugar-salt solution mixing flyer was used last year (i.e. taught and distributed by health workers with instructional support from the radio). One of the rainy season radio spots specifically tells mothers to pick up one the flyers from her health center and then fully explains the meaning of the flyer. Fifty thousand copies are being distributed. The printing of both the poster and the flyer was done, as last year, at the Imprimerie St. Paul in Dakar.

The design of the two pieces was a collaborative effort involving Mr. Taylo, Mr. Robson, Dr. Rowland, the graphics staff at the Ministry of Education's Book Production Unit, and a prominent Gambian artist, Momodou Ceesay, who did the art work for the poster. Final layout was done at the Book Production Unit. Pretesting carried out in the development of the flyer will be described in a forthcoming report.

The poster and the flyer have been introduced and distributed to health workers at the in-service training sessions to be described next and during subsequent treks to health stations throughout the country.

### 4. Training

In July and August the project sponsored a series of four in-service training sessions for rural health staff for the purpose of reviewing oral rehydration therapy and introducing the rainy season feeding messages.

Again this year, training was focused on those health staff most likely to disseminate messages to rural mothers: **Health Inspectors**, whose work includes vaccination of children and compound visits for education on environmental hygiene, and **Community Health Nurses**, who make home visits and give talks to mothers at clinics under the MCH program and who are also the supervisors of Village Health Workers and Traditional Birth Attendants under the Primary Health Care Program. The entire **Primary Health Care Training Team** also was included in this year's training effort to ensure that the project's messages are incorporated into future trainings on VHWs and TBAs.

A total of 95 health staff were trained as follows:

- o 8 Health Inspectors
- o 39 Community Health Nurses
- o 35 Community Health Nursing Students

- o 8 Primary Health Care Trainers
- o 5 Leprosy Inspectors

In addition to introducing the feeding messages and demonstrating how to use the flyer to teach mothers, the training sessions reviewed the overall project campaign to date and presented some of the initial evaluation data to participants. Problems encountered by health staff in teaching oral rehydration therapy were also thoroughly discussed. These included the persistent expectation among many mothers that sugar-salt solution will stop diarrhea, confusion between the volumes of water used to mix the solution and the volumes of solution which should be given to children of different ages, uncertainty about when a child should be taken to a health center for treatment, and over-reliance among some health workers on the sugar-salt solution (e.g., recommending sugar-salt solution instead of the UNICEF solution for a dehydrated child).

These training sessions also afforded the Health Education Unit the opportunity to provide two days of training on face-to-face teaching methods. Participants were introduced to the methods of role-playing, giving a health talk, leading a discussion, and using visual aids, and every participant had the opportunity to be videotaped in a small group practicing one of these methods. Videotaping was conducted by the staff of the Department of Information's Film Production Unit.

Trainers for the session included Mr. Dibba, Mr. Robson, Mr. Rasmuson, the Primary Health Care Trainers, and the project's Training Coordinator, Yahya Sanyang, who also provided overall logistics support. Two of the sessions were held at the Rural Development Training Center in Jenoi and two at the Peace Corps Training Center in Fajara.

### C. RESEARCH METHODS WORKSHOP

During the week of July 4, the project sponsored a six-day workshop on research methodology for a select group of participants from the Medical and Health Department and Radio Gambia.

This workshop was one of the main activities identified in the Third-Year Implementation Plan designed to ensure the institutionalization of the project's educational methodology. Different types of field research—the project's initial developmental investigation, formative evaluation, materials pretesting, and summative evaluation—have been key elements of the methodology.

In an abbreviated fashion obviously required by the brief duration of the workshop, the participants went through the full process of planning and conducting a simple study. The topic sequence was as follows:

- 1) Specifying the problem of study.
- 2) Research design: design and measurement alternatives.
- 3) Questionnaire construction.
- 4) Preparation for interviews.
- 5) Sampling.
- 6) Analysis of data.

The workshop was conducted by Dr. Robert Homik, a professor at the Annenberg School of Communications at the University of Pennsylvania and a long-time consultant on evaluation to the Mass Media Project. The workshop was planned to coincide with Dr. Homik's visit to The Gambia to supervise the work of three of his graduate students who are conducting research studies in The Gambia in collaboration with Stanford University's evaluation of the Mass Media Project. Two of these students assisted him in the workshop.

Workshop participants involved:

Medical and Health Department

K.O. Jaitoh  
Maggie Forster  
Kerafa Sanneh  
Matthew Baldeh

Radio Gambia

Ismaila Senghore  
Ebrima Njie  
Abdul King  
Sam Taylor

Mass Media Project

Yahya Sanyang  
Musa Saine

#### D. RADIO GAMBIA MINI-STUDIO

In April the project helped Radio Gambia to construct and equip a small recording studio at Radio Gambia's Mile 7 station. A formal request for this studio was made by the Director of Information and Broadcasting in January at the time the project's third year was being negotiated to help alleviate Radio Gambia's chronic problems of overbooked studios and equipment failure.

The studio is a small "self-operated" unit upstairs at Radio Gambia where producers can tape and edit all or parts of their programs without the assistance of a sound engineer and the problems of scheduling time in the heavily used main studios downstairs. The project supplied funds for minor renovation (soundproofing) and furnishing of the studio room and to purchase equipment including one reel-to-reel recorder, two studio turntables, one sound mixer, one cassette tape deck, and two microphones.

The studio is already being extensively used and has significantly enhanced Radio Gambia's overall production capability as well as the project's. Radio Gambia gives priority in use of the studio to the Rural Broadcasting and Adult Education Section which produces the project's programs.

#### E. MEETINGS

##### I. Mass Media Project

Both project implementation and evaluation field directors attended a meeting in the Washington, D.C., area during the week of March 21 to review overall project experience to date in both The Gambia and Honduras, the other project site. The meeting was attended by the project directors from AED and Stanford, evaluation and implementation field directors from both The Gambia and Honduras, and the AID/Washington project monitors.

Discussions at the five-day meeting sought to compare and synthesize experiences from the two project sites before the completion of the Honduras component in June, and to determine how to best disseminate the results of the project. In the latter regard, initial plans were made about how to present the project at the International Conference on Oral Rehydration Therapy (ICORT) held in Washington, D.C., the week of June

## 2. Radio Gambia Planning Seminar

The project implementation and evaluation field directors were invited to attend a special planning seminar held by Radio Gambia the week of June 6 as part of Radio Gambia's 21st anniversary celebrations.

The Mass Media Project was prominently featured in several of the presentations given at the seminar, which reviewed problems and made recommendations for the future of each of Radio Gambia's five sections (News and Current Affairs, Schools, Rural Broadcasting and Adult Education, Local Languages, and Religious Broadcasting). The project was profiled in a color videotape on the history of Radio Gambia made by the Film Production Unit, which opened the seminar along with an address by Vice President Bakary Darbo. The project also played a large part in several papers presented to the seminar by the Rural Broadcasting and Adult Education Section. One of these reviewed the substantial role that the project had played in the Section's overall 1982 programming, while another was a proposal for a promising restructuring of the Section's rural programming adapted from the "country hour" approach suggested last year by project consultant Esta de Fossard.

## 3. Diarrheal Disease Control Committee

A newly reconstituted Diarrheal Disease Control Committee met at the Medical and Health Department on August 17 to discuss the use of funds which have recently been received from WHO to support training activities under the country's National Diarrheal Disease Control Program.

In light of the Mass Media Project's extensive training of Gambian health staff in oral rehydration therapy during the past year, the Committee decided to use the funds for a series of training sessions for senior nursing personnel on clinical management of moderate and severe dehydration, including intraperitoneal and intravenous therapy. The Medical and Health Department's policy on diarrhea management recommends IP or IV therapy for case of severe dehydration. The Project Field Director has been invited to be a member of the planning committee for these training sessions.

## F. BRIEFING

The Project Field Director gave briefings on the project to the following individuals during this reporting period:

- o Chris Hollis, Training and Extension Consultant to the AID Mission's Crop Protection Program from Cornell University.
- o Margot Zimmerman and Pamela Green, Project PIACT.
- o Tony Agboola, Project Support Communication Unit, Ministry of Social Development, Nigeria, and Christine Myers, UNICEF, Nigeria. Mr. Agboola and Ms. Myers visited The Gambia specifically to seek lessons from the Mass Media Project for a possible national ORT project in Nigeria.

- o Bob Adams, Nutrition Planning Consultant to the AID Mission.
- o Dawn Liberi, Office of Health, USAID/Dakar.
  
- o Judy McDevitt, Sikandra Spain, and Jeff McDowell, graduate students from the Annenberg School of Communications, University of Pennsylvania.
  
- o Dr. Olivier Fontaine, ORANA, Dakar; Dr. Jean-Pierre Beau, Farn Hospital, Dakar; Mr. Issakha Ndiaye, Ministry of Health and Radio Senegal, Dakar.

This last group of visitors deserves further mention. Drs. Fontaine and Beau and Mr. Ndiaye first visited the Mass Media Project in early March because they were familiar with the project and were interested in starting an oral rehydration teaching program using mass media in the Dakar area. They already had conducted a survey of 2,000 women in the Dakar suburb of Pikine and informed us that many of these women reported learning about the sugar-salt treatment of diarrhea from the project's programs on Radio Gambia. After several days of enthusiastic discussion, the group returned to Dakar with a full set of project graphic materials, examples of radio scripts, etc.

In June we received a further gratifying communication from Dr. Fontaine: he sent us the proofs of two handsome posters that he had adapted in French from the Mass Media Project's "Management of Diarrhea" and "Special Diet for Diarrhea" posters for use in his program. He asked us to review and critique the proofs, which we did through the Health Office in USAID/Dakar. We look forward to sharing further information with the Dakar group in the near future.

## DISSEMINATION ACTIVITIES

An essential part of the MM&HP scope of work includes the dissemination of the program's fundamental methodology in other areas of the world. The strategy for reaching this goal includes presentations, conferences and seminars, travel to selected countries, and the regular publication of articles, reports, and field notes on key parts of the program's approaches. In this regard, the following activities were completed this quarter.

### A. HONDURAS

Dr. William Smith visited Honduras from September 19-23 to review the project status and to plan a possible extension of both the Water and Sanitation and the Primary Health Care Education Components. Because of the excellent progress and desire of the MOH to extend their assistance, a detailed plan for an 18-month extension was discussed and left with the MOH and USAID representatives.

### B. PERU

Dr. Smith visited Peru September 12-16 to help to analyze an MOH proposal to USAID for funding of a 12-theme "Health Literacy" campaign planned for late 1983. Along with Jack Porter of Porter, Novelli & Associates, Dr. Smith met with the Minister of Health, various MOH division heads, and USAID personnel. Dr. Pareja joined the team on June 13. As a result of the visit, it was agreed that: (1) the 12 themes would be reduced to three (diarrhea, immunization, and family planning), (2) a local ad agency would be selected to carry out the design and media placement for the campaign, (3) a workshop would be held with the agency and MOH to orient them to working together and to the special demand of "social communications," and (4) Peru would be considered a formal diffusion site for MM&HP with Dr. Pareja providing regular assistance to the MOH and the agency over a period of some 15 months. A formal Letter of Agreement was to be negotiated October or November of 1983. The collaboration and participation of the Population Communication Services project, headed by Johns Hopkins University, was critical to the overall success of the planned activity. PCS would fund several population experts as well as support the cost of the MOH/Agency workshop.

### C. SWAZILAND

Discussions continued with the USAID Mission and the Ministry of Health in Swaziland to provide long-term assistance to the MOH diarrheal disease program. Dr. Z.M. Dlamini visited the Academy on June 16 and Mr. T.M.I. Zwane, principal secretary of MOH, visited on October 13. Dr. Clifford Block visited Swaziland in July 1983. It was agreed that Swaziland would be the first African diffusion site. Mark Rasmuson will travel to Swaziland in October to help with an emergency campaign for December and January. Swaziland's counterpart will visit The Gambia in December or January and Dr. Smith will visit Swaziland with Mr. Rasmuson in January or February to prepare the Letter of Understanding and to plan the diffusion activity with the USAID Mission and MOH colleagues. The cooperation of AID's CCCD programs was crucial to the activity's success. Dr. Joe Davis, CCCD project manager, and various members of the Center for Disease Control implementation team participated in discussions and lent their support to the MM&HP assistance.

## D. CONFERENCES

### 1. International Conference on Oral Rehydration Therapy, June 7-11, 1983, Washington, D.C.

Dr. Smith, MM&HP Project Director, was a member of the conference advisory committee. Three papers were presented and a full panel organized to discuss the role of public communication in ORT promotion. The papers, prepared by MM&HP staff and consultants, are available from AED/Washington upon request and include:

Educating the Public about Oral Rehydration Therapy  
Dr. William A. Smith

Evaluation of Oral Rehydration Therapy  
Dr. Dennis R. Foote

Behavioral Analysis Applied to Training Rural Health Care Providers in Honduras and The Gambia  
Paul E. Touchette, Ed.D.

### 2. National Council on International Health, June 15 - 18, 1983, Washington, D.C. The NCIH conference included a panel on the MM&HP project during which the following papers were submitted:

The Cultural Context and How It was Investigated  
Dr. Carl Kendall, Dr. Dennis Foote, Ms. Elizabeth M. Booth

Cost: The Practical Side of Mass Media Education in a Traditional Context  
Dr. Clifford Block, Dr. Anthony Meyer, Dr. William A. Smith

Delivering Oral Rehydration Therapy to the Village  
Dr. William Smith, Mr. Mark Rasmuson, Ms. Elizabeth Booth, Mrs. Amie Joof-Colle, Mr. Hector Valadares, Mr. William Novelli

Educating the Public About ORT: Does Village Research Really Help?  
Dr. Reynaldo Pareja

Using Behavioral Analysis in Planning a Program to Alter Health Practices in Rural Honduras  
Paul E. Touchette, Ed.D., Dr. Clifford Block, Dr. William A. Smith

Evaluating the Impact of Health Education Systems  
Dr. Dennis Foote, Dr. Carl Kendall, Dr. Peter Spain, Dr. Reynaldo Martorell

Formal presentations were made by Dr. Smith at a conference at the University of Connecticut (May 20), at Save the Children Foundation (July 26), and at the University of Maryland (April 25).

## E. PUBLISHED ARTICLES

A series of articles appeared in various newsletters on MM&HP including:

Teaching Mothers Oral Rehydration  
Anthony J. Meyer, Clifford H. Block, and Donald C.E. Ferguson

HORIZONS, April 1983  
Health Education and Mass Media-An Interview  
Dr. Anthony Meyer and Dr. William Smith  
AID Resources Report, May/June 1983

Promoting ORT: Integrating Mass Media, Print, and Visual Aids  
Dr. William Smith  
Diarrhoea Dialogue, Issue 14, August 1983

Getting the Health Message Across the Airwaves  
Mark Rasmuson  
Africa Health, August/September 1983

Happy Baby Lottery  
Dr. William Smith  
Project Support Communications Newsletter  
Information Division, UNICEF, Volume 7, Number 1, April, 1983

Juanita y La Gotita  
Oscar Vigano  
Action, World Association for Christian Communication Newsletter, Number  
83, September 1983

Health Education by Radio  
Dr. Anthony Meyer  
International Exchange News, Spring 1983

Beyond Campaigns: A New Approach to the Media and Education  
Dr. William Smith  
Academy for Educational Development, April 1983

These articles are available from the Academy.

## F. OTHER

### 1. Instructional Pamphlets

A pamphlet entitled Oral Rehydration in the Village: Eight Myths was prepared for distribution at various conferences and will be part of the final methodological handbook stipulated in the contract. The pamphlet is in English, Spanish, and French and includes not only a description of the methodology but also evaluation data, photographs of key project activities, and anecdotes illustrating how mass media can be used effectively to support the oral rehydration program.

### 2. Summary Methodology

To ensure the growing demand for a generic presentation of the publication model, a paper was prepared entitled "Beyond Campaigns: A New Approach to the Media and Education." The focus here is to strengthen the role of systematic research and the integration of various communication channels around a single set of appropriate behaviors.

The annual AID Project Review was held on May 6.

**SECTION IV**  
**ACTIVITIES PROJECTED FOR PERIOD**  
**OCTOBER 1, 1983 - MARCH 31, 1984**

**A. HONDURAS: PRIMARY HEALTH CARE**

1. Formative Evaluation of PROC OMSI II multitheme campaign.
2. Preprogramming and Implementation Plan development for 1984 campaign, adding Family Planning Component.
3. Extension of technical assistance through September 1985.

**B. HONDURAS: WATER AND SANITATION**

1. Complete production of media materials.
2. Analyze training needs for field promoters.
3. Reprogram activities for 1984.
4. Extend technical assistance through September 1985.

**C. ECUADOR**

1. Monitor ongoing campaign.
2. Formative evaluation of three sites activities.
3. Reprogram for 1984.

**D. PERU**

1. Conduct ad agency/MOH seminar.
2. Sign Letter of Understanding.
3. Prepare research protocol.
4. Provide regular assistance for research and programming of planned campaign.

**E. SWAZILAND**

1. Rasmuson's visit to plan December - January campaign.
2. Smith and Rasmuson visit to plan assistance and draft Letter of Understanding between MOH and ST/ED-AID.
3. Begin assistance in March/April 1984.

**SECTION V**  
**ADMINISTRATIVE REPORT**

1. **Expenditures to September 30, 1983**

<u>Category</u>	<u>MM&amp;HP</u>	<u>W &amp; S</u>	<u>PHC</u>	<u>TOTAL</u>
Salaries & Wages	567,020	114,630	51,437	733,087
Employee Benefits	119,185	28,647	13,230	161,062
Consultant Fees	34,073	2,945	--	37,018
Travel & Transportation	168,361	26,629	16,720	211,710
Overseas Allowances	69,531	39,046	--	108,577
Other Direct Costs	307,065	29,702	24,460	361,227
Equipment	32,365	923	1,270	34,558
Overhead	<u>306,093</u>	<u>52,089</u>	<u>27,357</u>	<u>385,539</u>
Total	<u>1,603,693</u>	<u>294,611</u>	<u>134,474</u>	<u>2,032,778</u>

2. **Amendments**

#12 dated 9/30/83 - added \$700,000 to the MMHP contract increasing the total contract amount to \$2,782,581 and expanded the scope of work to include an additional year of assistance to The Gambia, and five technical assistance/campaign activities (ta/ca activity) to ensure continued diffusion of the program's methodology to countries other than Honduras and The Gambia.

#13 dated 3/31/83 - fully obligating the contract funds.

3. **International Travel**

William Smith - September 12 - Peru to discuss possible collaboration with MOH on the development of a second diffusion site in (ta/a) in Peru. Focus of assistance would be within context of large-scale, three theme (diarrhea, immunization, family planning) mass media campaign managed by local ad firm. MMHP would help link ad agency and MOH.

Reynaldo Pareja - September 14-17, 1983 traveled to Lima, Peru for diffusion activities for possible MM&HP project.

Attended and participated in the National Conference on International Health - June 13 - 15, 1983, Washington, D.C.

Attended and participated in the International Conference on Oral Rehydration Therapy - June 6 - 10, 1983, Washington, D.C.

APPENDIX A  
LETTER OF AGREEMENT - ECUADOR

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MASS MEDIA AND HEALTH PRACTICES: (LETTER OF AGREEMENT)

I. This Letter of Understanding is entered into by and between the Ministry of Health (MOH) of the Government of Ecuador, and the Agency for International Development (A.I.D.), an agency of the United States of America, to define the responsibilities of each party under a shared activity called the Mass Media and Health Practices Project (MM&HP).

It is understood that this agreement concerns a research and development project funded by the Development Support Bureau of AID/ Washington and is distinct from the normal USAID/Ecuador program in that the project includes the specific requirement and resources to disseminate information about project activity and results to a broad community of international development professionals.

II. PROJECT DESCRIPTION

This project will contribute to the overall health objectives of Ecuador by:

1. Promoting the adoption of practices among rural people which will alleviate the most serious consequences of infant diarrhea and

CONVENIO DE PROYECTO PARA EL PROGRAMA DE COMUNICACION MASIVA APLICADA A LA SALUD INFANTIL

I. Este Convenio de Proyecto se efectúa entre el Ministerio de Salud (MDS) del Gobierno de Ecuador y la Agencia para el Desarrollo Internacional (A.I.D.), una dependencia del Gobierno de los Estados Unidos de America, para definir las responsabilidades de cada parte bajo la actividad compartida llamado el Programa de Comunicación Masiva Aplicada a la Salud Infantil.

Se entiende que el presente convenio corresponde a un proyecto de investigación y desarrollo originado por la División de Apoyo al Desarrollo de la USAID en Washington, diferenciándose del programa de la USAID/Ecuador en cuanto a que este proyecto incluye los requisitos y recursos específicos para la divulgación de las actividades y los resultados del proyecto a una comunidad amplia de profesionales mundiales.

II. DESCRIPCION DEL PROYECTO

Este proyecto contribuirá al logro de los objetivos generales de salud de Ecuador, mediante:

1. La adopción de prácticas entre la población rural que alivian las consecuencias más graves de la diarrea infantil y que influyen en el

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which influence infant nutrition. This implies a strong emphasis on prevention and treatment of infant diarrhea and includes advocacy of some oral sugar-electrolyte solution.

2. Strengthening the health education system through the in-service training of health educators in the design, execution and evaluation of mass communication systems.

3. The production of a series of radio programs especially directed at rural people concerning the treatment and prevention of infant diarrhea. These programs will be supported by graphic materials and specific training for health professionals and community volunteers including midwives, health representatives and primary health care workers.

The purpose of this agreement is to assist the Ecuadorean government to apply a methodology for the use of mass media (especially radio and print media) and face-to-face intervention to obtain the widespread adoption of practices conducive to the treatment and prevention of infant and early childhood diarrhea. An important aspect of this program is the adoption and integration of long-term systematic communication planning

estado nutricional del niño. Esto implica un énfasis particular en la prevención y el tratamiento de la diarrea infantil incluyendo el uso de una solución glucosada-electrolita administrada en forma oral.

2. El fortalecimiento del sistema de educación para la salud mediante el adiestramiento en servicio a un grupo de educadores de salud, en el diseño, ejecución y evaluación de sistemas de comunicación masiva.

3. La producción de una serie de programas radiales especialmente dirigidos a la población rural sobre la prevención y tratamiento de la diarrea infantil. Tales programas serían apoyados con material gráfico y adiestramiento específico para personal de salud y personal a nivel comunitario. (Parteras, guardianes y representantes de salud.)

Este convenio tiene como fin asistir al Gobierno de Ecuador poner en práctica un sistema coordinando el uso de los medios de comunicación masiva (especialmente radio y material impreso) y contactos interpersonales para lograr la adopción de actividades que conduzcan al tratamiento y prevención de la diarrea infantil. Un aspecto importante de este programa es la adopción e integración de la comunicación masiva como forma sistemática

and design procedures into the health education system of Ecuador.

### III. PROJECT OBJECTIVES

The objectives of this project are to:

- Conduct a multi-media intervention in three provinces of Ecuador aimed at the adoption of salutary health practices and the prevention of infant and early childhood diarrhea.
- Develop an educational system and methodology for the use of mass media by Ministry professionals in health education.
- Disseminate the findings of the project to the professional community inside and outside of Ecuador.

### IV. PROJECT EXECUTION

The executing agent for the Mass Media and Health Practices project for AID will be the Academy for Educational Development. The Ministry of Health, cooperating in this project, will provide:

- 1) two full-time staff members for carrying out the objectives of this project; and
- 2) a minimum of \$45,000 for implementation of the pilot DDC program in the three selected areas.

para lograr la educación en salud en Ecuador.

### III. OBJETIVOS DEL PROYECTO

Los objetivos de este proyecto son:

- Conducir una campaña de comunicación masiva por medios múltiples en tres provincias del Ecuador dirigida a la adopción de prácticas para el tratamiento y la prevención de la diarrea infantil.
- Desarrollar un sistema y una metodología educativa utilizando los medios de comunicación masiva para fortalecer la educación en salud.
- Difundir los resultados del proyecto a la comunidad profesional en Ecuador y en el exterior.

### IV. EJECUCION DEL PROYECTO

El agente ejecutor del Programa de Comunicación Masiva Aplicada a la Salud Infantil representando a la AID será la Academia para Desarrollo Educativo. El Ministerio de Salud cooperará con este proyecto proporcionando:

- 1) dos personas a tiempo completo para llevar a cabo los objetivos del proyecto; y
- 2) un mínimo de US \$45,000 para la implementación del programa piloto DDC en las tres áreas escogidas.

The Academy will provide one consultant over a period of 18 months.

The Academy has the authority and responsibility for the final selection and/or termination of their personnel.

Both the Ministry and the Academy reserve the right to report inadequacies to the respective authority and to request that corrective measures be taken which will promote the overall success of the project.

The Director General of Health will designate the Division of Diarrhea Control as the executing agent and will provide general project coordination and specific technical support for the health related project decisions, the training of health personnel, the formulation of radio programs, and the formative evaluation.

The Ministry of Health will provide the air-time required to meet the broadcast schedule selected by the Academy and the Ministry jointly. It is understood that this schedule will be based upon the results of the community research phase and will be designed to reach the target population at those times of day and on those radio stations

La Academia proporcionará un consultor durante un período de 18 meses.

La Academia tendrá la autoridad y responsabilidad final para la selección y/o terminación de su personal.

Tanto el Ministerio como la Academia se reservan el derecho de dar a conocer las inconsistencias que surjan durante el desarrollo de la actividad y solicitarán la aplicación de medidas correctivas cuando el caso lo amerite.

El Director General de Salud designará como unidad ejecutora a la División del Control de Diarreas quien proporcionará la coordinación y el apoyo específico para la buena marcha del proyecto. Esto implica participación activa en la investigación comunitaria, la formulación y producción de programas radiales y material de apoyo, el adiestramiento de personal de planta y la evaluación formativa.

El Ministerio de Salud proporcionará los recursos necesarios para completar el tiempo de transmisión requerido a fin de alcanzar el calendario de difusión definido conjuntamente por la Academia y el Ministerio. Se entiende que este calendario de transmisión estará basado en los resultados de la fase correspondiente a la investigación de la comunidad y

which will ensure maximum reception.

#### V. PROJECT ACTIVITIES

A. The following activities will be conducted in coordination between the Academy and Ministry counterparts:

1. Determination of health advice to be advocated by the campaign along with a specific plan for acquiring, distributing, and monitoring the resources (pre-packaged electrolyte solution, home-mix ingredients, clinic contact, health worker visits, etc.) needed to make that advice practical.

2. Production of pilot materials (sample radio programs, draft graphic materials, and preliminary training designs) for pilot testing with representative members of the target population.

3. Pilot testing of draft campaign materials with representative members of the target population, using both individual and small group testing situations.

estará diseñado para alcanzar a la población deseada a la hora del día y en las estaciones de radio que aseguren una máxima recepción.

#### V. ACTIVIDADES DEL PROYECTO

A. La Academia y la contraparte del Ministerio llevarán a cabo, en forma coordinada, las siguientes actividades:

1. Determinación de los consejos sobre la prevención y el tratamiento de la diarrea infantil a ser propuestos por la campaña, además de un plan específico para la adquisición, distribución, y control de los recursos (solución electrolítica preparada en paquetes, ingredientes de preparación casera, contactos clínicos, visitas de personal de salud, etc.) que resultan necesarios para llevar a la práctica esos consejos.

2. Producción de material de prueba (programas piloto de radio, material gráfico de prueba y diseños preliminares de adiestramiento) para efectuar pruebas piloto con miembros representativos de la población.

3. Pruebas piloto de material gráfico y grabado con miembros representativos de la población, aplicadas en ambientes de prueba tanto a individuos como a pequeños grupos.

4. Revision of draft materials based upon results of pre-testing and final production of campaign materials.

5. Development of a broadcast and distribution schedule for all campaign elements.

6. Pre-campaign preparation of health personnel, including orientation of health workers, distribution of materials to decentralized distribution points, final scheduling of radio broadcasts, and development of a plan to monitor campaign implementation.

7. Implementation of the campaign activities, transmission of radio programs, distribution and placement of graphic materials, contact between health workers and target population, and monitoring of all campaign elements, which will include educational, environmental change and treatment aspects.

#### VI. RESPONSIBILITIES OF THE PARTIES

A. AID Washington hereby agrees to carry out its responsibilities in support of this project by providing the following through

4. Mejoramiento de material de prueba en base a los resultados obtenidos.

5. Desarrollo de un calendario de transmisión y distribución de materiales para la campaña.

6. Preparación del personal especializado en salud antes de iniciar la campaña, incluyendo la orientación de personal de salud, distribución de materiales a fin de descentralizar los puntos de distribución, calendario final de las transmisiones de radio, y desarrollo de un plan para el control de la implementación de la campaña.

7. Implementación de las actividades de la campaña, transmisión de programas de radio, distribución y ubicación de materiales gráficos, contacto entre los trabajadores de salud y la población a ser alcanzada, y control de todos los elementos de campaña, los cuales incluirán aspectos educacionales, de cambio ambiental y de tratamiento.

#### VI. RESPONSABILIDADES DE LAS PARTES

A. La oficina de la AID en Washington se compromete, por este medio, llevar a cabo sus responsabilidades en apoyo a este proyecto

a contract with the Academy:

1. One senior staff member in the United States who will serve as International Project Director;
2. One advisor in Ecuador over a period of 18 months;
3. Medical, communication, evaluation and education consultants, as necessary, up to three person/months;
4. On-the-job training in Ecuador for a minimum of two counterpart personnel including on-the-job training of additional personnel at the request of the Ministry;
5. Cooperate with the Ministry of Health by providing technical assistance for the design of a long-term national production system for oral electrolyte solutions.

B. The Ministry hereby agrees to carry out its responsibilities in support of this project by providing the following:

proporcionando mediante un contrato con la Academia lo siguiente:

1. Un miembro de su personal, ubicado en los Estados Unidos, quien cumplirá las funciones de Director Internacional del proyecto;
2. Un asesor en Ecuador durante un período de 18 meses;
3. Consultores médicos y otros consultores en comunicación, evaluación y educación, según sean necesarios, hasta un máximo de tres meses/persona;
4. Adiestramiento en servicio, en Ecuador, para un mínimo de dos personas de la contraparte y, si el Ministerio lo requiere, personal adicional;
5. Cooperar con el Ministerio de Salud proporcionando asistencia técnica para el diseño de un sistema de producción nacional de sueros electrolitos a largo plazo.

B. El Ministerio por este medio acuerda llevar a cabo sus responsabilidades en apoyo a este proyecto, proporcionando lo siguiente:

1. Establishment of this project as a national priority of the Ministry of Health;
  2. Public support and endorsement of the project and the health objectives being advocated;
  3. Two full-time counterparts through the Diarrhea Control Unit. It is expected that these counterparts will include one middle-level person with one-to-two years experience in radio program design and production, and one middle-level person with experience in graphic design and poster testing;
  4. Office space, including utilities, furniture, and telephone lines for the project advisor in addition to counterpart personnel;
  5. Access to health clinics and health personnel, including sponsorship of meetings and seminars with the national medical community;
  6. Release time necessary for health personnel to participate in training programs;
1. Establecimiento del proyecto como una prioridad del Ministerio de Salud;
  2. El apoyo y promoción por parte del sector público para el proyecto y los objetivos de salud que se pretenden lograr;
  3. Dos personas de contraparte a tiempo completo de la División del Control de Diarreas. Se pretende que las contrapartes a tiempo completo incluirán una persona de nivel medio con uno o dos años de experiencia en diseño y producción de programas de radio, y una persona de nivel medio con experiencia en diseño gráfico y pruebas de afiches;
  4. Oficinas, incluyendo servicios, muebles, líneas directas de teléfono para el asesor del proyecto además del personal de contraparte;
  5. Acceso a los servicios y al personal especializado en salud, incluyendo el auspicio de reuniones y seminarios con la comunidad médica nacional;
  6. Autorizar el tiempo necesario para que el personal en salud pueda participar en programas de adiestramiento;

- |  |   |
|--|---|
| <p>7. Cooperate with project personnel in gaining access to rural communities for the purpose of conducting the developmental investigation;</p>   | <p>7. Cooperar con el personal del proyecto para que pueda llegar a las comunidades rurales a fin de conducir las investigaciones del desarrollo;</p>             |
| <p>8. Use of Ministry print and audiovisual facilities as necessary;</p>   | <p>8. Uso de las facilidades del Ministerio de imprenta y audiovisuales según sea necesario;</p>  |
| <p>9. Duty free clearance in accordance with the general agreement between the two governments for all materials and goods for the project and for the Academy personnel;</p>                      | <p>9. Entrada libre de impuestos según el convenio general entre los dos gobiernos para todo el material y bienes del proyecto y del personal de la Academia;</p> |
| <p>10. Information on new national activity in the project region which might influence diarrheal disease and/or related measures of health status or behavior during the life of the project;</p> | <p>10. Información sobre nuevas actividades nacionales en la región correspondiente al proyecto, que podría tener influencia en la incidencia de diarrea;</p>     |
| <p>11. Permission to use and publish materials and reports developed during the project, including evaluation data, outside Ecuador.</p>   | <p>11. Permiso para usar y publicar fuera del Ecuador material e informes elaborados durante el proyecto, incluyendo datos sobre evaluación.</p>                  |

VII. USAID MISSION CONTRIBUTION

The Aid Mission will cooperate with the project by providing the project and its staff the services customarily provided to personnel and projects contracted by the Mission.

VII. CONTRIBUCIONES DE LA MISION DE LA AID

La Misión de la AID cooperará con el Proyecto proporcionando al personal del mismo los servicios ofrecidos regularmente al personal y projectors contratados por la Misión.

VIII. CONCLUDING STATEMENT

IN WITNESS THEREOF, the parties hereto have caused this agreement to be executed by their duly authorized representatives in Quito this day.

VIII. CONCLUSION

EN FE DE LO CUAL, las partes interesadas, actuando por medio de sus representantes autorizados firman este convenio en Quito en el día y fecha.



APPENDIX - B

PUBLISHED ARTICLES ON MASS MEDIA AND HEALTH PRACTICES PROJECT

# HORIZONS



TEACHING MOTHERS  
HOW TO CARE FOR THEIR CHILDREN  
WITH THE HELP OF A MANUAL

TEACHING MOTHERS

SPECIAL REPORT:  
AID Meets on Growth in Africa



# TEACHING MOTHERS ORAL REHYDRATION

The battle against death due to diarrhea continues.

*by Anthony J. Meyer,  
Clifford H. Block and  
Donald C.E. Ferguson*

**D**iarrhea is one of the world's leading killers. Every year, 5 million children under the age of 5 die due to diarrheal dehydration. Children in developing countries normally have diarrhea several times a year. When a mother realizes that the condition is more severe than usual, local practices often lead her to purge the child, withhold food or stop breastfeeding. The mother does not realize that dehydration, caused by the diarrhea, is the problem; she simply wants to relieve her child's suffering. Dehydration advances rapidly. The child loses his or her appetite and the capacity to absorb vital liquids through the gut. Death can follow within hours.



and a national emblem  
The emblem of the people of...

Honduras and The Gambia are reducing the odds. Working with the Ministry of Health in each country and drawing upon experts in health, communications, anthropology and behavioral psychology, AID's Bureau for Science and Technology and its contractors developed a health education methodology that integrates mass media and health providers. The project uses radio, graphics and the training of village health workers to teach mothers how to treat and prevent diarrheal dehydration.<sup>1</sup> Others, especially WHO (World Health Organization) and the AID-assisted International Center for Diarrhoeal Disease Research in Bangladesh, have demonstrated that lost body fluid and electrolytes can be replaced with an orally administered solution. The treatment is popularly known as ORT—oral rehydration therapy.

Oral rehydration "salts" can be prepackaged (using glucose, sodium chloride, potassium chloride and bicarbonate of soda) or simply made from sugar and salt at home. The ingredients are mixed with water and administered at the rate of about a liter a day. AID efforts in Honduras and The Gambia are showing that semi-literate audiences, contacted primarily through mass media, can be taught to mix and administer ORT. In addition, the campaign includes teaching a number of preventive measures.

### Printed Literacy

The Gambian government chose to use ORT packets prepared according to the WHO formula at health centers as a backup to the simpler

home-mix solution. Honduras chose to package their own ORT salts, following the WHO formula, for use both at health centers and in the home.<sup>2</sup> In each case, proper mixing and administration of ORT ingredients is critical. Too much salt can cause harm; in rare cases, death. Too little sugar interferes with absorption of water and salt; too much sugar can prolong and intensify diarrhea. Too little of the solution will not keep pace with fluid loss through continued diarrhea.

Graphics or pictures can be important in teaching complex skills, in this case, the mixing and administration of ORT. But in The Gambia, few people can "read" pictures due to lack of familiarity with print material of any kind. Preliminary tests revealed that mothers understood and remembered what the pictures meant only if they were interpreted.

Solving the problem required some unconventional thinking. The Ministry of Health came up with the idea of a national contest which kicked off with the distribution of 200,000 copies of a flyer carrying mixing instructions to nearly 2,000 Gambian villages. Using the alliterative, poetic cadence of Wolof and Mandinka, The Gambia's two major languages, repeated radio announcements told mothers to gather and listen to contest instructions. The radio announcer led listeners through each panel of the color-coded flyer which told them how to mix and administer ORT. Radio interacting with a graphic taught mothers how to "read" the mixing instructions.

"Eight Julpearl soda bottle caps of sugar, one Julpearl bottle cap of salt, three Julpearl bottles of water as



clean as you can find."<sup>3</sup> Over and over, the mothers were told how to mix the formula, how to administer it, what to do in the case of vomiting and when to know they were getting results.

Finally, the announcer told them about the mothers with "happy baby" flags over their homes who could help them. These "happy baby" mothers, almost one to every three villages, had been selected by village authorities and trained by health workers who had been trained by the project.

Every week for four weeks, the radio announced the names of 18

1. "Mass Media and Health Practices," Project 451-1018, sponsored and managed by the Office of Education (Development Communications Division) and the Office of Health, Bureau for Science and Technology, Agency for International Development. Contracts were competitively let to the Academy for Educational Development to provide assistance to two countries to implement the project and to Stanford University to evaluate the in-country programs. The authors wish to acknowledge the assistance of U.S. and host country staff, particularly Dr. William Smith, Academy for Educational Development, and Dr. Dennis Foote, Stanford University, and the collaboration of the AID missions in Honduras and The Gambia and their respective Ministries of Public Health and Health.

2. The Gambian government decided that they could not afford the recurrent costs of a program that relied predominantly on packets. The WHO formula for ORT solution is:

30 mg glucose  
1.5 mg sodium chloride  
2.5 mg bicarbonate of soda  
1.5 mg potassium chloride  
1 liter water

A formula for home-mix which approximates the WHO formula:

4 heaping teaspoons of sugar  
1 level teaspoon of salt  
1 liter of water

3. Boiled water is preferable for ORT as is for all drinking water. But ORT can be administered safely with the water that is routinely used as good drinking water, and this is preferable to not administering ORT. Three Julpearl bottles provide 900 ml of water; sugar and salt proportions are adjusted for this amount of water.



Gambian mothers are taught how to "read" color-coded pictorial mixing instructions.

randomly selected villages. To enter the contest, mothers simply went to the nearest village. A health worker judge, wearing a "happy baby" T-shirt, visited villages on scheduled days. Any mother could win a prize—a plastic liter container or bar of soap—by mixing the ORT solution correctly. Winning the contest was associated directly with correct performance.

Eleven thousand women attended the 72 village contests. Of the 6,580 who entered the mixing competition, 1,440 won a chance to compete and 1,097 won prizes for correct mixing.

Winning mothers' names were included in a later drawing for 15 radios. There also was a community prize each week—a 50 kilo bag of sugar and a 100 kilo bag of rice—for the village turning out the most mothers for the contest. The "happy

baby" contest came to an exciting conclusion when the Gambian President's wife, Lady N'Jaimeh Jawara, drew and announced the names of the grand prize winners in a special one-hour radio broadcast.

After eight months of campaign activities, the number of mothers who reported using a sugar-salt solution to treat their children's diarrhea rose from 3% to 48% (within the sample of some 750 households).<sup>4</sup> The number of women who could recite the formula jumped from 1% to 64%.

The Stanford University evaluation includes ethnographic and survey research, direct observation, and mortality study elements. Cognitive/attitudinal, behavioral and health status variables are being examined. This article includes early data from the survey. The survey design entails a sample of 750-NRI families distributed over 18-20 communities in each country. The unit of analysis is the household. Households were randomly selected. Villages were purposely chosen to reflect the range of characteristics in the rural environment, particularly the availability of health care facilities, general accessibility and ethnic diversity.

## A Mother's Image

In each country several local practices and beliefs that contributed to dehydration were singled out for modification. These included the practices of purging and withholding food, and the belief, in some cases, that breastmilk causes diarrhea. The project approached these changes through positive concepts and images and concentrated on reinforcing established behavior that approximated new practices being advocated.

For example, the concept for "dehydration" was totally unknown in Honduras, but in The Gambia, the Wolof word *lappa*—dryness or wasting resulting from diarrhea and undernutrition—is universal. There, the project was able to present ORT and the continuation of breastfeeding as a remedy for *lappa*.

In Honduras, the keynote poster for the campaign featured a loving mother, complete with rose, laurel and heart, breastfeeding her child, a portrait that reflects the country's devotional and artistic history. The poster was distributed simultaneously with the airing of the first phase of radio spots and programs. The featured spot, a 60-second song, soon became a nationally popular tune. A gentle voice accompanied by soft guitar music urged:

*Mother,  
that little one who kicked your  
tummy has finally arrived.  
His little eyes are now looking at  
you and smiling.  
His little hands, still have no  
strength, Mother, but they squeeze  
anyway.  
He, that is so tiny, depends on you  
to grow, Mother.  
Care for your child from the  
moment he's born.  
Give him your breast so he will  
grow.  
Give him the vigor that only your  
breast can give, Mother.*

Follow-up announcements shifted attention to child care during diarrhea, encouraged administration of "Litrosol"—the name of locally

packaged ORT salts—and the importance of continuing breastfeeding during diarrhea.

Within a year, dramatic results had occurred:

- 93% of the mothers knew that the radio campaign was promoting Litrosol;

- 71% could recite the radio jingle stressing the administration of liquid during diarrhea;

- 42% knew that Litrosol prevented dehydration.

Forty-nine percent of all mothers in

program, but posed a problem: Which of the 109 behaviors should be selected for the campaign?

An index of 10 criteria, each assigned a value of 0 to 5, was developed to discuss the relative merits of each behavior. Two of these criteria—approximation of the promoted behavior to already established behavior and the extent to which the promoted behavior could be publicly reinforced—already have been described. Other criteria included the importance of the behavior to diarrhea

In Honduras, hand washing before or after various tasks related to child care, such as feeding, was strongly encouraged to reduce the incidence of diarrhea and fit well with local folk beliefs about disease. According to local belief, one of the causes of diarrhea is the disruption of *lombrices* (worms) that normally inhabit a sac called *la bolsa* in the gut. The worms become agitated, wander from the sac and disrupt normal digestive and intestinal operations.

One radio spot featured a humorous conversation between "Lombrecio" and "Lombrolo," two worms, discussing the effects of filth and poor food preparation on the child they inhabited. Through this and other themes related to *la bolsa*, personal hygiene was linked to local beliefs as well as to less familiar information about infant diarrhea.

#### Training the Trainers

Teaching people complex skills, such as how to mix and administer ORT is best achieved through face-to-face instruction. Because such instruction is at a premium in developing countries, the project chose to use the minimum amount necessary and to stretch its impact through the training of trainers and the use of mass media.

In Honduras and The Gambia, primary health care workers in the project areas—about 150 in The Gambia, covering the entire country, and about 113 in Health Region I in Honduras—were given 4-8 hours of ORT training. The training focused on *performance*: mixing and administering ORT salts and teaching village assistants to do likewise. The trainees performed the mixing behaviors repeatedly and at increasing speed during a training game which allowed them to demonstrate their new skills and win praise from their friends. High speed performance of behavior has been found to improve recall and accuracy of performance after training.

The trainees then became trainers. In The Gambia, every trained health



Honduran village resource mothers are trained by health workers to mix ORT.

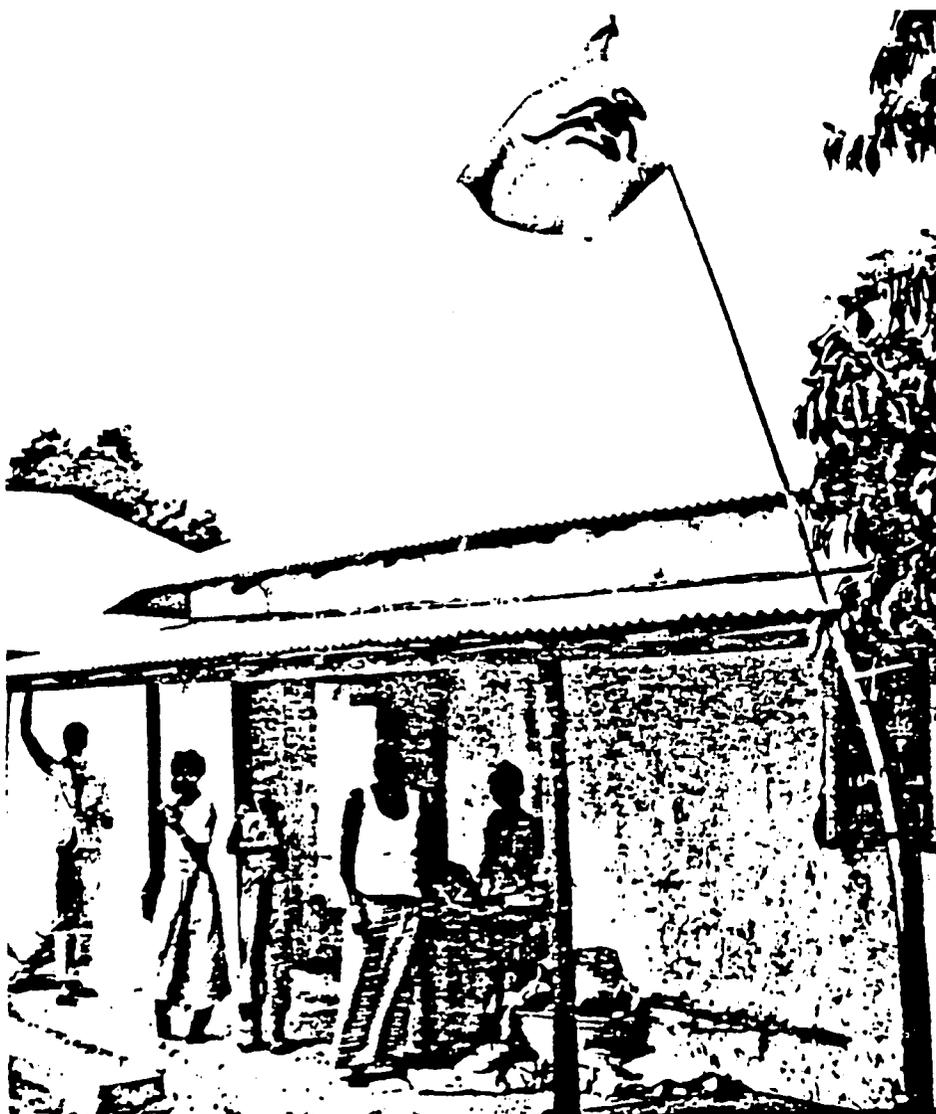
the sample had tried Litrosol at least once during the first year of the campaign.

#### Which Behaviors to Choose

In Honduras, several months of pre-campaign investigation linked 109 behaviors to the treatment and prevention of diarrhea. The behaviors were identified as a result of "focus groups"—structured discussion groups—with village mothers discussing every aspect of diarrhea, food preparation, infant feeding and family behavior during child sickness; in-depth interviews with health professionals at all levels; and direct observation of mothers in their homes during episodes of infant diarrhea. The investigation was important to the development of each country's

in the local setting; the *feasibility* of doing it; the extent of *cultural readiness* or resistance to adopting the behavior; and the extent to which the behavior had *observable effects* that could reinforce its performance.

Application of these criteria led to different objectives for Honduras and The Gambia. Preventive objectives selected for the campaigns illustrate this. In The Gambia, a Moslem country, human and animal waste in the family compound significantly contributed to diarrhea. At the same time, Moslem beliefs emphasize cleanliness. As part of the campaign, the Imam, or priest, of Banjul broadcast repeated exhortations to view the floor of the compound as a place of prayer, to be treated with respect and kept free of fecal matter.



In The Gambia, mothers know they can receive help from homes that fly the "happy baby" flag.

worker was responsible for 10 villages where he or she and the village authorities would select a mother to receive training. In Honduras, the health worker trained village auxiliaries already linked to the health system. Flags were provided to be flown over the homes of trained ORT mothers.

Instructional posters were used in the mothers' training. Later, the posters could be used as a refresher or reference in teaching others. At every point, graphics provided support for teaching, remembering and repeating the most complex skills of the campaign.

At the same time, frequently repeated radio spot announcements

reinforced the instruction, repeating the same information told by the health workers, and encouraging mothers to seek out the "happy baby" flag or Litrosol flag homes for further instruction. This interaction among the complementary functions of radio, print and face-to-face instruction is essential for obtaining maximum impact in campaigns of this kind, particularly when the training chain is so extended.

Initial results of this approach to training are encouraging. After one year of broadcasting in Honduras, 49% of the mothers in the sample reported having tried Litrosol: 94% of this group knew the correct mixing volume and 96% knew to use the

entire packet. Smaller percentages of those who had tried Litrosol could respond correctly about details of the administration regime: 60% knew that an entire liter in one day was required and 32% knew that unused solution should be discarded after 24 hours.

### The Multiple Facets of Radio

Honduras and The Gambia have contrasting media environments. Honduras has a high saturation of print materials; there are virtually none in The Gambia. Honduras has more than 100 radio stations, most of them private; The Gambia has one government station.

Costs, production skills, the accepted style of print and radio material and audience listening patterns also differ tremendously. In Honduras, approximately \$30,000 dollars was spent on air time and production to broadcast 25,000 messages during the first year of the campaign. In The Gambia, the government provided free time for some 1,800 messages on the country's single station, reflecting the relatively greater significance of radio in a media-deprived environment.

Through these differences, radio, interacting with audience expectations and listening patterns, was used in essentially the same way. It *informed*. It *legitimized* the campaign and won popular support. It *shifted attitudes* about a variety of practices. It helped *standardize information* and *reinforce instruction* from print or face-to-face sources. For some, it was the primary source of instruction for the new skills and practices.

The process of relating these functions to a campaign plan, phased with shifting objectives through time and fit to characteristics of the audience and media environment, can be as much art as science. One of the major features of the project in Honduras and The Gambia was *pretesting* messages as they were developed and *monitoring* radio station performance and audience reaction as the campaign progressed. Good campaigns

are not born of whole cloth; they are pieced together by coaxing intractable components into a quilt—and then changing the size and pattern several times to fit the user.

Radio programming in Honduras was originally designed to emphasize how to mix and administer Litrosol. But interviews with rural mothers conducted after the first phase of programming, turned up several serious concerns. Mothers wanted to know if they could give Litrosol with other medicines, if adults could use it as well as children, if it worked with severe diarrhea. Radio was a practical channel to answer these questions accurately and quickly, before they became major obstacles to acceptance. In a sense, radio, in conjunction with systematic feedback, opened a dialogue with mothers, speaking directly to their concerns and answering their questions.

In Honduras, radio stations had never been monitored. The station owners and the Ministry of Health, which had an annual radio budget of \$10,000, were quite surprised when the project's volunteer monitors early in the campaign reported serious delinquency with the frequency and timing of spots and had listening logs to prove it. The situation was corrected—at least three times—with the Ministry acquiring a healthy respect for monitoring in the process.

#### The Transfer of Methodology

Institutionalization has many faces. The public health education perspective on a program such as this asks what percent of a population has permanently adopted a new set of practices about diarrhea and what impact it has had on their health status. Some Honduran data are available on adoption and health status. Sixteen months into the campaign, 39% of all cases of diarrhea within the previous two weeks among the sample households were being treated with Litrosol. This and the previous data indicate that the campaign is approaching the target of 40-45% audience acceptance of Litrosol,

which the diffusion of innovation literature suggests is the percent diffusion required to assure eventual acceptance by an entire population.

While the numbers involved in the project's mortality study are too small to rely on at this time and the annual variation in diarrhea mortality has yet to be discussed, an encouraging trend is emerging. Mortality of children under 5 in the 18 study communities shows a drop in the pro-



*Spot radio announcements encourage breastfeeding.*

portion of deaths attributed to diarrhea from 28% in 1981 to 14% in 1982. More complete reports and data for both countries are being prepared.

Institutional acceptance of both ORT and the project methodology is also encouraging. The Honduran Ministry of Public Health, pleased with campaign results, has extended the program to a national one. In The Gambia, the project already is national. (Project resources have provided technical assistance to El Salvador, Ecuador and Senegal. Resources are available to meet some additional requests.)<sup>3</sup>

But these positive indications of campaign success and national acceptance only set the stage for a program outcome that is far less certain: the transfer of methodology. The success of a single intervention is less impor-

tant in the long run than the adoption by developing country governments of the underlying approach to public education:

- preliminary field investigation as a basis for defining objectives, messages and the use of training and media;
- development of a plan for the integrated use of health personnel, print materials and radio based on the application of learning and communication principles;
- pretesting of as many messages, materials, and procedures as possible;
- monitoring and modification of the campaign as it progresses.

Too often planners expect dramatic results without paying the necessary price. Successful application of the above outlined educational methodology implies shifts in budget, an openness to failure and change and an esteem for health education personnel and activities.

The AID program has provided extensive technical assistance to Honduras and The Gambia. The U.S. and in-country technical staffs have pared the methodology to key components. Relationships between ministries and cooperating institutions, such as radio stations and production facilities, have been clarified. The process of bureaucratization is underway.

But, as each ministry turns to related maternal/child health efforts, to malaria and other problems, the question remains: Will a mature educational methodology continue to support each successive campaign? ■

The authors, all of whom are in AID's Bureau for Science and Technology, make up the AID management team of the Mass Media and Health Practices Project. Anthony J. Meyer and Clifford H. Block are with the Office of Education; Donald C.E. Ferguson is with the Office of Health. Meyer specializes in communication and preventive medicine; Block in psychology and educational technology; and Ferguson in public health and behavioral medicine.

<sup>3</sup> AID missions wishing technical assistance in designing programs similar to those conducted in Honduras and The Gambia should contact Dr. Anthony Meyer, AID/ST/ED, RPC III, Washington, DC 20521 (703) 235-4696.

# AID Resources Report

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OFFICE OF TECHNICAL REVIEW  
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BUREAU FOR SCIENCE  
AND TECHNOLOGY



## INTERVIEW

### Health education and mass media

Through an approach to health education integrating radio, print materials, and instruction by village-level health workers, mothers in Honduras and The Gambia are learning how to treat and prevent diarrheal dehydration in their children.

AID's Office of Education and Office of Health are nearing completion of an innovative two-year project in Honduras designed to promote use of oral rehydration therapy (ORT)—a method of replacing body fluids lost during attacks of diarrhea. A similar program in The Gambia is starting its second year.

ORT consists of an inexpensive, effective, simple solution that can be prepared and administered orally to children. The solution can be made from a home mixture of sugar, salt, and water or by mixing water with prepackaged "salts."

The project is achieving some impressive results. (See box.)



Dr. Anthony Meyer from the Office of Education and Dr. William Smith of the Academy for Educational Development (AED), which is providing technical assistance to the Honduran and Gambian Ministries of Health, were recently interviewed by *AID Resources Report*.

**RR:** How is this project different from others?

**WS:** What we are really trying to do is go beyond the old question of what is best:

health workers, print, or radio. We are much more concerned with how each of these channels works to support the others. How can you get radio to support health workers, print materials to promote the same messages that are being broadcast over the radio, and, at the same time, combine these media with effective person-to-person contact at the village level?

**AM:** All these channels of communication must be integrated. It's the radio messages integrated with the graphics, integrated with the outreach, integrated with the political will. We are talking about systematic communications, we are not talking about traditional audiovisual teaching aids.

**RR:** Do you need a widespread network of health workers to implement this type of project?

**WS:** Yes and no. Yes, you need existing health workers to understand, believe in, and support ORT vigorously. But no,

you do not need a trained health worker in every village. With only about a \$100,000 annual budget in Honduras and less than half that in The Gambia, we could not afford to train hundreds of new primary health workers. We did extend the face-to-face outreach though by setting up a system of volunteer mothers.

Health workers, nurses, primary health care workers, and auxiliaries were asked to contact at least ten mothers in their areas and to give them a few hours' training in ORT. They also gave the mothers a campaign flag to fly over their homes indicating that they were a source of instruction for ORT.

These mothers helped villagers carry out two key campaign instructions. One was to mix the ORT solutions correctly and the other was to recognize the signs of dehydration and when and where to go for further help.

**RR:** Could this sort of radio campaign be replicated elsewhere?

**WS:** Let me say again it's not a radio campaign—it's an integrated use of radio, print, and health workers. Yes, we do have a set of principles, guidelines, and skills which we think can be applied in other countries. We don't believe that the particular set of messages or the specific

## RESULTS

Dr. Dennis Foote of Stanford University, which conducted an evaluation of the project, prepared these data from random sample surveys in 740 households in each country.

**Honduras.** After one year, 93 percent of the sample mothers knew that the radio campaign was promoting the Honduran ORT packet and 49 percent had tried it at least once. Also, 71 percent could recite

the radio jingle stressing the administration of liquid during diarrhea.

At the end of 18 months, 39 percent of all cases of diarrhea within the previous two weeks among the sample households were being treated with ORT.

**The Gambia.** After eight months, 48 percent of sample mothers reported using the promoted sugar-salt-water solution to treat their children's diarrhea.

implementation activities which we used in Honduras or The Gambia should be just taken to another country and applied without adaptation, however.

**RR:** *Did you have a basic model for the project design?*

**WS:** Yes, and the model is fairly straightforward. Investigate the audience: What do they believe? Who is credible as a source of health information? What advice are they able to accept and apply?

**AM:** The project in each country began with several months of assessment using focus group discussions (a structured group interview process), direct observation of diarrhea treatment in the home, and interviews with health system personnel at all levels.

**WS:** The next step was to develop a comprehensive, but modifiable, plan. It included regular monitoring of the campaign as it progressed to allow for mid-course corrections. In Honduras, for example, regular monitoring led to the discovery that mothers did not perceive the graphic print labels on the ORT packets as instructions. To compensate, we used special radio programs, developed in just a few weeks, to get the message "the label contains the instructions" to thousands of mothers.

**RR:** *How did you manage to get mothers to change behaviors which are often based on traditional cultural beliefs?*

**WS:** Many health educators tell people, "You are doing something wrong." Our approach was: "You are doing a lot of things right." We identified and built upon traditional beliefs and systems. In Honduras, we promoted ORT as a tonic to restore appetite, because appetite was important to mothers. We also made no attempt to discourage use of local remedies such as herbal teas to supplement proper ORT use.

It was interesting to us that not all these beliefs came from traditional sources. In Honduras, when we asked mothers why they didn't feed their babies during diarrheal attacks, 75 percent said they were following doctor's orders—to take the infant off breastmilk or solid foods and to let the child's stomach rest.

**RR:** *When you leave these two countries will the programs continue?*

**AM:** Apart from running a successful oral rehydration program, we were committed to institutionalize this approach to health education within The Gambian and Honduran bureaucracies. They have now seen a positive result, a very powerful and low-cost new package of learning tools. Several people have been trained, but most important, they have guided and experienced every phase of the program.

Their challenge now is twofold: where to put these skills within their own bureaucracies so that they are available to other health programs, and how to scale them down without losing their effectiveness.

☆☆☆☆

A pamphlet describing the campaigns in Honduras and The Gambia is available to all *AID Resources Report* readers. ■

# Promoting ORT: integrating mass media, print and visual aids

## Delivering the goods

Many communities are still unaware of the benefits of ORT. The Ministries of Health in Honduras and The Gambia have taken up the challenge and are promoting ORT through an integrated educational campaign. William Smith reports on this exciting initiative.

Since 1981, a widespread educational programme — the *Mass Media and Health Practices Project* — has been underway in Honduras and The Gambia, showing thousands of villagers how to recognize the signs of dehydration and to prepare and give oral rehydration therapy (ORT) correctly at home. These two countries were chosen because of their contrasting cultures and environments, to make it easier for techniques developed to be used in other countries later on. By combining specially designed radio programmes, simple graphic materials and targeted advice for health workers, the governments of both countries are using mass media to improve the delivery of ORT services, showing that semi-literate communities can be taught to mix and give ORT safely.

### Unique approach

In both Honduras and The Gambia, village attitudes, beliefs and practices guided the project design. Mixing trials, home observations, focus groups and individual interviewing helped select the key audiences and define the most effective educational messages. Each country has developed its own unique approach to ORT delivery and village education. In Honduras, the government is providing locally produced oral rehydration salts called *Litrosol* for both home and clinical use.

In The Gambia, packets are available at health centres but a simple sugar and salt solution is also promoted for home use because it is too costly to make the packets available in every home. The Gambian medical and health departments developed a standard formula for this home-administered solution, using a local soft drink (*Julpearl*) bottle and cap for

measurements. One litre of fluid is made up from three *Julpearl* bottles of water, eight caps of sugar and one cap of salt. The correct way of preparing and giving the solution was broadcast to mothers on Radio Gambia (the national radio station). Printed material was distributed to reinforce the message and health workers talked with mothers to make sure they had understood.

### Radio

Radio is an important aspect of the *Mass Media Project* in both countries because it reaches more people, more quickly and more often than any other medium being used. It has four particular purposes:

1. Convincing rural people that diarrhoea is a serious problem.
2. Teaching and reminding them how to mix the oral rehydration solution.
3. Answering common questions identified during village visits.
4. Leading people to sources of additional help.

In both Honduras and The Gambia, many people own radios so these can be used effectively for public education. The *Mass Media Project's* radio broadcasts in The Gambia are chatty and informal conforming with popular programming style there. The broadcasts answer health questions quickly and accurately and open a dialogue with mothers. The Gambian government has provided free time for hundreds of diarrhoea-related messages on Radio Gambia.

In Honduras, the project took advantage of a large network of commercial radio stations. The radio spots were short and catchy and intended to compete with high quality commercial advertisements. The

featured spot, a 60 second song, became a nationally popular tune. Follow-up announcements emphasized child care during diarrhoea, encouraged administration of *Litrosol* and stressed the importance of continuing breastfeeding during diarrhoea.

### Graphics

The graphics used by the *Mass Media Project* to illustrate the health messages are simple and clear. The main materials interact directly with the radio messages and health workers to teach the important skills of mixing and giving oral rehydration solution at village level. This is particularly important in The Gambia because rural women are unfamiliar with printed material of any kind and need help with interpreting pictures. It was necessary, for example, to develop an appropriate visual way of showing the difference between sugar and salt and illustrating the *Julpearl* bottle and cap needed for correct measurement. A colourful 8" x 11" poster was developed which shows the bottle and cap being used to mix the rehydration solution. The "mixing pictures" of sugar, salt, and water are colour coded and linked to explanations given over the radio.

In Honduras, early field research indicated that mothers associated child care with loving images. This attitude was shown visually by a large red heart surrounding a picture of a breastfeeding woman. The heart was also later associated with *Litrosol* and a young family added to the picture to reinforce the role of the husband in giving ORT.

### Integration of communication techniques

The project's radio programmes strengthened the visual symbols in both countries through special jingles and romantic songs about motherhood, as well as providing basic information.

In Honduras, for example, the programme told mothers where to get *Litrosol*, how to mix it in the proper volume of water and how to measure it in containers easily found everywhere. Radio was also used to identify a special network of health workers and village contacts — *red heart ladies* — who had been trained to mix *Litrosol*. Some 1,200 *red heart ladies* flew a red

heart flag above their homes to attract village women to this local resource. The integration of the different methods of communication is a key feature of the *Mass Media Project*.

### Happy baby lottery

To encourage more Gambian mothers to participate in the project and to maximize the integration of radio, printed material and input by health workers, a national contest was launched to popularize the home-administered rehydration solution. Known as the *Happy baby lottery* the contest helped to begin the distribution of some 200,000 "mixing pictures" to mothers throughout the country. Radio Gambia broadcast repeated programmes to rural mothers on how to use the posters as entry tickets for the contest. The programmes also taught mothers how to interpret the mixing instruction on the poster. Health workers were trained to use the posters to teach mothers how to mix the formula as well as giving UNICEF ORS packets to severely dehydrated children in rural clinics.

### Village contests

Distribution of the posters was followed by a month of 72 village contests. Every week, the radio announced the names of 18 villages to be visited by a judge wearing a "happy baby" t-shirt. To enter the contest, mothers went to the nearest village displaying a happy baby flag and, if they mixed the solution correctly, won a prize — either a plastic litre cup or a bar of locally made soap. These prizes were chosen because they were appealing, locally available, inexpensive and consistent with project goals. The cup, for example, is a common container for drinking water and a convenient one litre measure for the sugar and salt solution.

The response to the lottery was enthusiastic. More than 11,000 mothers attended the village contests. Over 6,500 entered the mixing competition, while hundreds more watched, listened and learned the new advice on treating diarrhoea. Winning mothers' names were included in a later draw for 15 radio-cassette players. A single community prize of rice and sugar was given each week for the village turning out the most mothers for



SI EL NIÑO YA COME OFRECERLE COMIDAS SUAVES COMO SOPAS, JUGOS, TÉS, NUEVO TRHO, DESPUÉS DE SEIS HORAS DE ESTAR TOMANDO LITROSOL.



RESUME A LA MADRE QUE LE DE LA ALIMENTACIÓN ALOSUMIADA AL NIÑO CUANDO LE PASA LA DIARREA.

Pictures from the health workers' manual used in Honduras. These emphasize correct feeding during diarrhoea.

the contest. Radio was used regularly to publicize the winners and to reinforce the mixing formula. The lottery ended when the Gambian president's wife drew and announced the names of the grand prize winners in a special radio broadcast.

The lottery is only one part of the Gambian government's use of mass media to fight infant diarrhoea. Special *happy baby* flag ladies, like those in Honduras, have been trained to give mixing advice to village women. Regular radio broadcasts include traditional songs, drama and popular personalities to explain the dangers of dehydration and to stress the importance of breastfeeding during diarrhoea.

### Conclusion

There has been an encouraging acceptance of ORT in both countries. During the first 12 months of the project in Honduras, half of the mothers reached were using *Litrosol*. In The Gambia, after eight months of the campaign, half of the mothers reported using the recommended sugar and salt solution to treat diarrhoea. An extensive three year evaluation is continuing in both countries.

Three elements have been critical to the success of the project:

1. Education and an effective delivery system. An effective delivery system for the UNICEF packets and instructions on the sugar/salt mixing were combined with practical and widespread education on how to use the new remedy.

2. Flexibility. Regular information from the field was used to make changes in methods and materials so that mothers' questions could be quickly answered.

3. Rural beliefs and traditions formed the basis for the educational campaign.

Resources are available to provide modest assistance to other countries interested in developing a mass media programme of this sort. Much has yet to be learned, but a systematic use of mass media integrating radio, print and dialogue between health workers and mothers can significantly improve the outreach of many health education programmes.

Further information on the project is available from Dr William Smith, Vice-president, Academy for Educational Development, 1414 Twenty-second Street, NW, Washington DC 20037, USA.

\*The project is sponsored by the Office of Education and Office of Health, Bureau for Science and Technology, US Agency for International Development.

# GETTING THE HEALTH MESSAGE ACROSS THE AIRWAVES

HEALTH education is now recognised as a key aspect of health. MARK RASMUSON, Field Director of a project in The Gambia reports on the excellent results of a media campaign.



Diarrhoea is one of the world's most serious infant health problems. Diarrhoeal dehydration kills some 5 million children every year. In most developing countries children experience numerous bouts of diarrhoea each year. Local customs often lead others to employ measures which actually speed up dehydration rather than curing or preventing it.

Combined with improved environmental and personal hygiene, more health education and training can considerably reduce the risks associated with diarrhoeal disease. The International Center for Diarrhoeal Disease Research in Bangladesh has demonstrated that lost body fluid can be replaced with an orally administered solution, popularly known as ORT — oral rehydration therapy. ORT has become part of a WHO recommended programme against diarrhoeal disease. Yet many developing countries are finding it difficult to deliver this new medical idea to widespread, often illiterate, isolated villagers who have deep-set beliefs about the causes and treatment of diarrhoea. Many mothers, for example, believe that breastmilk actually causes diarrhoea and they will thus deprive their children of a vital source of important nutrients.

## Spreading the word

The Government of The Gambia has begun to address this problem directly by attempting to show that mass communication can improve the delivery of ORT services. Through an innovative educational project, thousands of mothers are learning to recognise the signs of dehydration and to prepare and administer the ORT solution correctly in their own homes.

The Mass Media and Health Practices Project, as the programme is known, combines the use of radio, simple graphic materials, and village health workers to spread the word on curing and preventing infant diarrhoea. The project has been operating in The Gambia since 1981 and is also underway in Honduras. Sponsored by the US Office of Education and the Office of Health, Bureau for Science and Technology, Agency for International Development, it was initially developed to apply mass media to the control of diarrhoeal disease. Implementation is through the Academy for Educational Development, a US based non profit educational organisation.

The Gambia was chosen as a project site for several reasons. Following a visit in 1979 by Project staff to several developing countries, it was found that village conditions were representative of other African areas, and because of The Gambia's size (Africa's smallest country with a population approximately 640,000) the Project could be more easily managed and tested there. Additionally, because of an already existing and significant commitment to diarrhoeal disease control. The Gambian government was willing to commit their resources — particularly radio air time — and Ministry of Health support to implement the Project. Other co-operating Gambian institutions with the program include Radio Gambia, and the Ministry of Education's Book Production Unit.

In its efforts to reach the most village mothers and to have the most effect, the Mass Media and Health Practices programme has relied heavily on careful village investigation to develop and use local vocabulary and concepts familiar and credible to rural Gambians. Working with the Medical and Health Department, experts in health, communications, anthropology, and behavioral psychology agreed that the ideal solution to reduce diarrhoeal death was to have UNICEF ORT packets widely available in rural clinics to treat moderate to severe dehydration and at the same time teach mothers to mix a simple sugar and salt solution in the home to help prevent dehydration.

## Reinforcement

A standard formula for the home administered ORT solution was developed using a local soft drink (Julpearl) bottle and cap for measurement: 1 litre — the necessary daily dosage — is made using three Julpearl bottles of water, eight caps of sugar, and one cap of salt.

The Gambian Government chose to use radio programmes broadcast on Radio Gambia, print materials, and the face-to-face reinforcement by local health care workers, to teach rural women how to mix this ORT

66

solution. Correctly mixing and administering ORT ingredients is important. Too much salt can cause harm. Too little sugar interferes with the absorption of water and salt; too much sugar can prolong the diarrhoea. If a mother given too little of the solution, the child's system will not keep pace with fluid lost through prolonged diarrhoea.

Radio in The Gambia serves as a practical channel for public education. Two-thirds of the rural compounds in The Gambia have a working transistor radio. The Project's radio programmes are chatty and informal, but emphasise the seriousness of diarrhoea, answer commonly asked questions, lead villagers to sources of help, and actually teach and remind the mothers how to mix the home ORT solution. The broadcasts answer health questions accurately and quickly, and essentially, open a dialogue with mothers, speaking directly to their concerns and answering their questions. The programmes are delivered in The Gambia's native languages of Wolof and Mandinka.

The graphics used by the Mass Media Project to illustrate the health lessons are simple and straightforward. It was necessary for example to develop an appropriate visual way to discriminate sugar from salt and to illustrate the Julpearl bottle and cap needed for correct measurement. A colourful 8 in x 11 in handbill evolved depicting the Julpearl bottle and cap being used to mix the rehydration solution. These "mixing pictures" of the sugar, the salt, and water are colour-coded and cued to verbal explanations given over the radio.

Approximately 150 local health workers were trained to provide on-hand instruction and assistance to the village women. Health worker training focused on mixing and administering ORT salts, both the UNICEF packets and the home mix. Local physicians also participated in a national medical seminar on ORT and provided their professional support to the programme.

### Happy Baby Lottery

To encourage more mothers to participate in the Project, a national women's contest was launched as a practical and novel means for popularising the home-administered rehydration formula. Known as the Happy Baby Lottery, the contest was designed to provide a structure for an intensive educational campaign.

The contest also provided a means for launching the distribution of some 200,000 copies of the handbills — or "mixing pictures" — to mothers all over the country. Before the lottery began the radio broadcast repeated programmes to rural mothers on how to use the handbills as contest-entry "tickets".

Distribution of the handbills was followed by the lottery's core activity — a four week period of 72 village contests. Every week for four weeks, the radio announced the names of 18 randomly selected villages to be visited by a judge wearing a "happy baby" teeshirt. In each of these villages, any mother who could mix the ORT solution correctly won a prize — a plastic litre cup or a bar of locally made soap. (These prizes were chosen because they were appealing, locally available, inexpensive, and consistent with project goals. The cup, for example, is a common vessel for drinking water and a convenient one-litre measure for the sugar-and-salt solution). Winning was directly associated with correct performance.

The response to the lottery was remarkable. During the four weeks, more than 11,000 mothers attended the village contests.

### Flag-ladies

Winning mothers' names were included in a later drawing for 15 radio-cassette players and a community prize was given each week for the village turning out the most mothers for the contest. The community prizes consisted of a 50-kilo bag of sugar and a 100-kilo bag of rice. Radio was used regularly to publicise the winners and reinforce the mixing formula.

The lottery came to a conclusion when The Gambian President's wife, Lady N'Jaimeh Jawara drew and announced the names of the grand prize winners in a special one-hour radio broadcast.

The lottery is only one part of the Medical and Health Department's use of mass media to fight infant diarrhoea. Special "happy baby" flag-ladies have been trained to give mixing advice to village women. Regular radio broadcasts include traditional songs, drama, and popular rural personalities to explain the dangers of dehydration and stress the importance of breastfeeding during bouts of diarrhoea.

Institutional acceptance of both ORT and the project methodology is encouraging. In The Gambia, the project is already national. The Honorary Ministry of Public Health has extended the programme to a national one and project resources are also available to provide technical assistance to other interested countries.

Much has yet to be learned, but the indications are that a systematic use of mass media, integrating radio, print, and face-to-face reinforcement can significantly improve the outreach of health education.

Further information on the Mass Media and Health Practices Project can be obtained by contacting Dr William A Smith, Vice President, Academy for Educational Development, 1414 22nd Street NW Washington DC 20037.

# EASING THE DIABETIC DILEMMA



*CHAIRMAN of a sister diabetic club discusses cultural prejudices affecting diabetic patients.*

by William R Brieger MPH, E Bosede Oke SRN ADHE and C Bola George, SRN, ADHE.

COPING with chronic disease conditions poses a special hardship for patients. Major responsibility for self-care is needed if patients are to avoid the risk of crises and early death. Compliance difficulties result from many factors including poor understanding of the disease condition, additional financial demands, complicated drug regimens coupled with side effects, unfamiliar and untasty diets, inconvenient activity schedules and ridicule and rejection by friends and relatives.

In fact it is the latter, a lack of social support, that exacerbates all the other problems. Therefore the development of social support mechanisms, in the form of family counselling, group discussion among patients and formation of disease-specific clubs, comprises one of the basic health education strategies to assist sufferers of chronic illness.

Diabetic patients at Adeoyo Hospital in Ibadan, Nigeria, experienced a variety of social and behavioural problems typical to their chronic condition. Not only were dietary restrictions unpleasant, but these new requirements brought resistance from spouses. Expenses incurred for insulin injection, urine testing equipment and purchase of drugs which were not always available free at the hospital, put much strain on most families. In fact one patient noted that: "Atogbe (Yoruba name for diabetes meaning so much urination



Project Support Communications **Newsletter** • Information Division, UNICEF, New York, N.Y. 10017

# Happy Baby Lottery

*Popularizing Oral Rehydration Therapy in the Gambian Villages*

by **William Smith,**

**Academy for Educational Development—Washington, D.C.**

Diarrhoea is one of the world's most serious infant health problems, and dehydration is its most serious consequence. To help combat this critical problem, the Medical and Health Department in The Gambia recently launched a national contest as part of its efforts to educate rural mothers in the proper treatment of this disease. Known as the "Happy Baby Lottery," the contest provided a structure for an intensive period of public education on oral rehydration. Through the combined use of graphic materials, radio programmes and health worker support, thousands of rural mothers were taught to correctly prepare and use a simple sugar-and-salt solution in the home.

In cooperation with Radio Gambia (the country's national government radio station) and the Ministry of Education's Book Production Unit, the Medical and Health Department promoted not only correct home use of the rehydration solution but special messages on proper feeding of infants during bouts of diarrhoea and specific hygiene measures to help prevent the disease. This activity is part of a two-year, two-country (Honduras and The Gambia) project called Mass Media and Health Practices (MM&HP). The MM&HP project is intended to demonstrate new ways of using mass media to support health

care workers and control diarrhoeal disease. This project is sponsored by USAID's Bureau of Science and Technology and is implemented through a contract with the Academy for Educational Development. Stanford University has been contracted independently to conduct a thorough evaluation of the project.

The "Happy Baby Lottery" is only one element of this comprehensive programme. It was a practical and novel means for popularizing a correct new formula for home-administered rehydration. The formula developed in The Gambia uses a local soft drink bottle and bottle cap for measurement (8 capfuls of sugar, 1 capful of salt, and 3 bottles of water). In preparation for the lottery, the project staff prepared and distributed 200,000 colourful educational handbills to health centers and dispensaries throughout the country. The handbills, or "mixing pictures", not only served as tickets for participating in the lottery, but also depicted the mixing instructions in colour-coded drawings.

At the same time, a special publicity campaign about the lottery began on Radio Gambia in four local languages, not only telling mothers where to get the lottery "ticket", but referring to the colour-coded drawings on the ticket; repeated evening broadcasts actually taught mothers to

# Happy Baby Lottery

(continued from page 11)

interpret the mixing instructions on the handbills. Rural health personnel also were trained to use the handbill and teach mothers to mix the 8-1-3 formula as well as administer UNICEF packets to severely dehydrated children in the rural clinics. The promotion of a single message via radio, print, and face-to-face contact was considered a key to mothers actually learning the mixing formula.

To ensure that large numbers of mothers also practised the new mixing formula, public lottery contests were held in 72 villages over a period of four weeks. Each week the radio announced the names of 18 randomly selected villages where contests were conducted by travelling judges. Any village mother in one of these areas who had a mixing picture was given a chance to demonstrate her mixing ability and to win a small prize—generally a bar of soap or a plastic drinking cup. These prizes were chosen because they were locally available, inexpensive, appealing to the contestants, and consistent with project goals. The plastic cup, for example, was a common vessel for drinking water and also a convenient one-liter measure (required for the sugar-and-salt solution).

Eleven thousand women attended the 72 village contests. Of 6,580 women who entered the mixing competition, 1,440 won a chance to compete and 1,097 won prizes for correct mixing. Winning mothers' names were included in a later drawing for 15 radio-cassette players. A community prize was also given each week for the village turning out the most mothers for the contest. The community prizes consisted of a 50-kilo bag of sugar and a 100-kilo



*A Gambian mother demonstrates the correct method for mixing the sugar-and-salt solution using the educational flyer or "mixing picture" which also served as "ticket" for entering the "Happy Baby Lottery."*

bag of rice. Radio was used regularly to publicize the winners and reinforce the mixing formula.

The "Happy Baby Lottery" came to an exciting conclusion when the Gambian President's wife, Lady N'Jaimeh Jaware, drew and announced the names of the grand prize winners in a special one-hour radio broadcast, and expressed the hope that it would become an annual event. In a random sample of some 750 households interviewed three weeks after the lottery, the number of mothers in The Gambia who reported using a sugar-and-salt solution to treat their children's diarrhoea rose from 3% to 48%.

The lottery is only one part of the Medical and Health Department's

use of mass media to fight infant diarrhoea. Special "happy baby" flag ladies have been trained to give mixing advice to rural women. Regular radio programmes use traditional songs, drama, and popular rural personalities to explain the dangers of dehydration and stress the importance of continued feeding during bouts of diarrhoea. The programme has relied heavily on careful village investigation to develop vocabulary and to use concepts familiar and credible to rural people. Much has yet to be learned, but early results indicate that a systematic use of mass media which integrates radio, print, and face-to-face support can significantly improve the effective outreach of health education.

For further information on the programme, contact Dr. William Smith, Academy for Educational Development, 1414 22nd Street, N.W., Washington, D.C. 20037, U.S.A.

# ACTION

World Association for Christian Communication Newsletter

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Comic books are helping children in rural western Honduras to become message-carriers to teach villagers important health lessons about clean water and sanitation. Juanita y La Gotita (Juanita and the Little Drop) is a popular comic which reports the conversation between a little girl and a drop of water. To Juanita's amazement, La Gotita tells her that she causes people to become sick because she is full of germs. In the sequence above, Juanita asks how she can help La Gotita to become safe for people to use. The drop replies, 'Put the bucket on the fire and get me boiling for about 15 minutes.' 'But you will get burned,' Juanita replies. In the end Juanita boils the water and everything ends on a happy note. The comic is the first programmed module on water and sanitation education under a project of Academia para el Desarrollo Educativo in Tegucigalpa, Honduras. Lilliana de Moncada is administrator.

# INTERNATIONAL EXCHANGE NEWS



Best Available Copy



Ami Joof tapes one of several programs she helped develop to carry oral rehydration and related health and nutrition messages into the Gambian countryside. AID photograph.

## Health Education by Radio

### Child Diarrhea Deaths Fall as Mothers Learn. ORT

In different parts of the city, two women in their 30s wake up simultaneously and go about getting their children ready for school. A few hours later, they leave for their respective jobs at the local radio station. One is an executive producer of the government-owned facility, the other is the country's leading female broadcaster/announcer.

The city is Banjul; the country, The Gambia; the women, Ami Joof and Maimuna Bah. Both work for "Radio Gambia," and are part of a health success story being played out in the tiny northeastern African country.

Nearly 20 million people in Third World countries are affected by diarrhea-induced dehydration every year. Repeated and prolonged attacks of diarrhea are common in developing countries due to

unsanitary conditions and lack of clean water. Diarrhea interacts with lack of food and poor feeding practices to increase malnutrition and further debilitate small children already at risk of death.

THE GAMBIA contributes its share to this dreadful reality. In 1980, the Gambian government decided to improve the picture and sought assistance from the U.S. Agency for International Development (AID). AID has 67 projects or activities with diarrheal disease components in 30 developing countries. AID officers, working with health and communications experts, behavioral psychologists and anthropologists from the Washington-based Academy for Educational Development (AED) and Stanford University in California, developed the "Mass Media and Health Practices" project, which uses

radio, graphics and village health workers to teach mothers how to treat and prevent diarrheal disease.

THE TREATMENT is oral rehydration therapy (ORT) and is recommended by the World Health Organization. ORT restores body fluid and replaces essential salts lost during bouts of diarrhea. Effective, inexpensive and simple to mix and administer, ORT can be prepackaged or made from table sugar and salt. It offers an alternative to intravenous therapy which must be administered in hospitals or clinics, something financially and geographically out of reach for most rural people in developing countries. The "what" of the problem was a lot easier than the "how."

In The Gambia, health personnel are over-worked and health facilities out of

the reach of many women. If ORT was to be effective, mothers had to give it in the home and that meant learning how to mix sugar, salt and water in exactly the right proportions. Most Gambian women are illiterate; they traditionally learn by word of mouth. But the mixing instruction must be precise—eight bottlecaps of sugar, one bottlecap of salt and three small bottles of water. To teach this formula, the Ministry of Health decided to use the nation's greatest educational resource—radio.

BAH'S SPECIAL broadcast talents helped make the approach a success. A production assistant in the broadcasting section, she is the "voice" of women throughout The Gambia. One of her programs is "Hospital Request," in which she visits rural hospitals and conducts spot interviews with patients. It is the only means for most patients to communicate with their families, often miles away. Bah also does a show for "women only," during which she provides practical advice about such subjects as child care and personal hygiene. Her credibility with rural women and her understanding of their experiences transformed monotonous mixing instructions into lively, interesting programming.

Ami Joof had already won one international broadcast prize for excellence and as executive producer she was determined to make these programs prize winners too. She worked for three weeks with an equally talented Australian radio specialist, Esta de Fossard, a consultant provided by AED. The three women put aside the old broadcasting formulas and developed short, punchy programs, filled with local drama, music and stories. Joof took charge of finalizing and translating scripts, locating talent, taping, editing, field testing and broadcasting dozens of programs.

JOOF ALSO was a key member of the team that developed the answer to the program's biggest problem—how to get enough women to listen to and remem-

ber the mixing instructions. A team made up of representatives from the Ministry of Health, "Radio Gambia" and AED came up with the idea of a national

**The success of a public education 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 mass 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, and a coordinated distribution network that reaches each individual through various channels simultaneously.**

*Dr. William Smith  
Academy for Educational Development*

radio contest.

The contest kicked off with the distribution of 200,000 flyers with printed instructions on how to mix the ORT solution. Each flyer acted as a lottery ticket, permitting women from randomly selected villages to win simple prizes if they mixed the solution correctly. The real purpose of the lottery was to get the flyers into as many homes as possible to serve as a handy reminder of the ORT advice health workers and radio broadcasters were giving. There were as many as 40 ORT broadcasts a week, most between the hours of 5 pm and midnight—the prime time for reaching women, the main target of the project.

In one program, two mothers—Mariam and Fatou—talk about the large number of "sick and dry (dehydrated) children" in their village.

Mariam: "Surely diarrhea is not dangerous."

Fatou: "Do not underestimate the dangers of diarrhea. It can lead to dehydration or malnutrition...There is a special diet for children with dryness and this has saved lives."

Mariam: "Is this not our everyday pap?"

Fatou: "No, that is not very good. To prevent dehydration/malnutrition and subsequent death, these things are very important—sugar, salt and water solution, continuation of breastfeeding and solid

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#### COVER

Radio Gambia's Maimuna Bah—known as the "voice" of women throughout Gambia—interviews a mother. Her radio program is teaching people in remote villages how to prevent and treat diarrhea. AID photograph.

adult foods. Even when the diarrhea stops and the child wants to eat, give him extra adult food for two days — this gives power.”

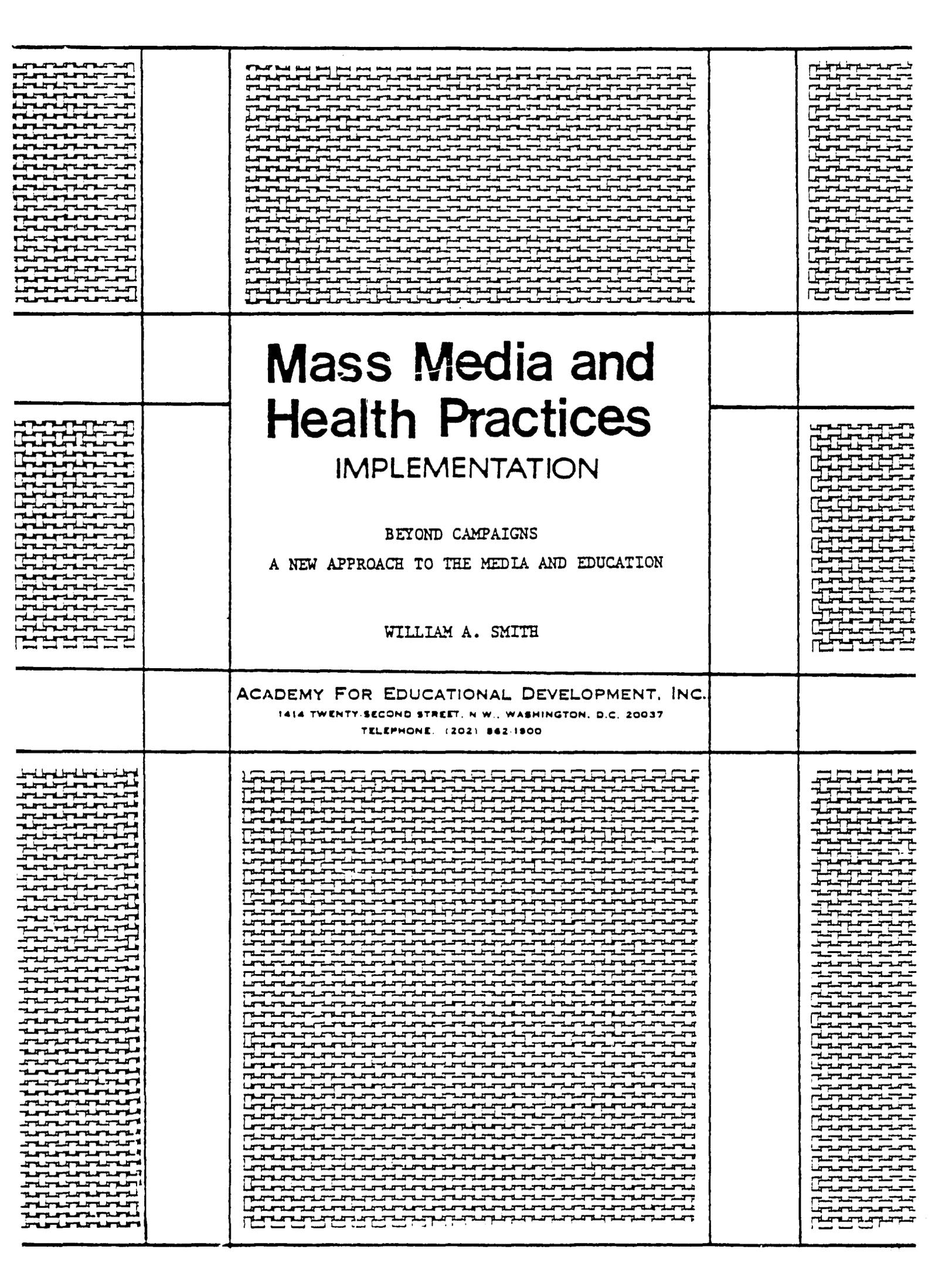
THE BROADCASTS are not limited to promoting proper mixing and administration of ORT. A “Diet for Dryness” campaign promotes the feeding of soft foods and breast feeding along with ORT. A companion clean-up campaign motivates men to keep living areas free of human and animal waste. Talk shows, including interviews with experts, doctors and local clergy, who emphasize the Muslim principle of cleanliness, focus on related health issues.

The message is reaching Gambian households, two-thirds of which have access to radios. In a sample of 750 families throughout the country, the number of mothers who reported using a salt-sugar solution to treat their childrens’ diarrhea rose from 3% to 48% after only eight months. The number of women who could recite the correct formula jumped from 1% to 64%.

A lot of things contributed to these results: The Ministry of Health’s commitment to promoting simple messages rural people could understand; the collaboration of hundreds of health workers all over the country; the systematic way the program was developed, relying on careful testing of concepts, materials and programs; the integration of radio, print and health workers around a single set of useful messages; and the talent and dedication of professional women like Joof, and Bah and Fossard.

Readers with a professional interest in AID’s “Mass Media and Health Practices” should direct their inquiries to Dr. Anthony Meyer, AID/ST/ED, RPC 603, Washington, D.C. 20523 USA

More detailed information on Oral Rehydration Therapy (ORT) for Childhood Diarrhea is available from the Population Information Program, the Johns Hopkins University, 624 North Broadway, Baltimore, Maryland 21205, USA. The AID-sponsored health information program offers a 75-page booklet on the subject in English, French, Portuguese, and Spanish. Professionals from developing countries can secure copies of the publication in any quantity without cost. The order number is L-2.



# Mass Media and Health Practices

## IMPLEMENTATION

BEYOND CAMPAIGNS  
A NEW APPROACH TO THE MEDIA AND EDUCATION

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## BEYOND CAMPAIGNS: A New Approach to the Media and Education

### A. DEFINITIONS AND ORIGIN

The public education or public communication campaign is an approach to large-scale popular education that attempts, in a predefined period of time, to change a particular set of behaviors in a large-scale target audience with regard to a specified problem. 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 to change the behavior of a wide audience in a short time.

Not all of these experiences have been positive, indeed much has been disappointing. In a recent review of public education, entitled Public Communication Campaigns, Dr. Ronald Rice concludes:

After the early belief in the power of the media to persuade any audience faded, communication researchers were generally pessimistic about the probable success of such campaigns. But the mood of communication researchers has, for the most part, changed, as indicated by the title of the journal article, "Some Reasons Why Information Campaigns Can Succeed." (Mendelsohn, 1979).\*

This change in mood is a result of two factors. First, we now have several documented successes. Secondly, we have a growing realization that public education is no "quickfix," but rather a useful, if complex and not well understood, new tool of popular education. Gradually the concept of a campaign is giving way to the idea of regular, operational programming built upon the concepts of careful message definition, integrated delivery systems and mid-course monitoring and correction.

This paper attempts to outline the salient features of the public education approach as applied to health problems in developing countries around the world. These countries, while quite different in social, cultural, and linguistic systems, are characterized by large, often illiterate and isolated rural populations. These populations typically lack regular access to adequate health care facilities or providers. Traditional belief systems often contradict recommended medical practice and fragile family economies permit only the most modest innovation in life style patterns. The public education approach is also considered applicable to many other development sectors and to the social and behavioral problems of industrial as well as Third World countries. Health issues in developing countries have been selected for discussion here because they represent areas in which public education experience has been documented and at the same time include some of the most difficult development problems being addressed.

Experience with public education for health is extensive. In the population control area, for example, at least half a dozen projects with three years' experience or more have improved contraceptive availability, increased sales of contraceptive products, spread knowledge and stimulated wider use of the methods promoted, at a cost below that of most traditional programs.

Mendelsohn, H. (1973) "Some reasons why information campaigns can succeed."  
Public Opinion Quarterly 37:50-61.

The following list of selected programs, in the U.S. and internationally, have contributed to our understanding of public education, and have demonstrated both the inherent problems and real potential of the approach. These experiences form the basis for the model recommended in this paper.

### In the U.S.

- o Stanford Heart Disease Prevention Program
- o National High Blood Pressure Education Program
- o Breast Self-Examination Program
- o National Cancer Institute's Asbestos Awareness Alert
- o Drug Abuse Prevention Campaign
- o Driver Safety Education Campaign

### Internationally

- o Man Is Health Campaign - Tanzania
- o Masagana 99 - Philippines
- o Have a Heart Campaign - Jamaica
- o Model Family Planning Program - Iran
- o Jamu Project - Indonesia
- o Preethi Marketing Program - Sri Lanka
- o Aprofam Family Planning - Guatemala
- o Mass Media vs Direct Education Program - Mexico
- o Dr. Hakim Program - Tunisia
- o Mass Media Nutrition Education Campaign - Philippines
- o Nutrition Mass Communication Project - India
- o Breastfeeding Campaign - Trinidad and Tobago
- o Soybean Utilization Program - Bolivia
- o Mass Media and Health Practices Project - Honduras and The Gambia

## B. OVERALL CAMPAIGN STRUCTURE

The success of a public education approach depends upon its ability to provide a sufficiently large number of people with practical and important new information. It must make an impact upon the consciousness of the intended audience by rising above the everyday clutter of advice and suggestions and 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 repetition of simple slogans, the mass 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 educational messages which are both useful and practical, and a coordinated distribution network which reaches each individual through various channels simultaneously. In essence, the planners of such an approach will need answers to the following questions:

1. Which of the many behaviors that we could advocate changing are important enough to make a difference and are also susceptible to change? Susceptible to change means people must:

- o Have ready access to any new resources required to adopt the behavior.

- o See positive benefits from adopting the behavior.
  - o See no serious negative effects from adopting the behavior.
2. What must we do to ensure that people:
    - o Believe that the behavior we are advocating is the best alternative to solving a problem which they perceive as important?
    - o Understand how to perform accurately the behaviors so that the positive rewards we are predicting come about?
  3. How will enough people become exposed to the advocated behaviors to make a difference in the problem?
  4. How will we provide long-term reinforcement of the behaviors to ensure continued adoption?
  5. How do we know what level of success we have achieved?
  6. How can all this be done at a cost we can afford?

The program structure being proposed here (See Graph 5.) reflects the importance of these elements as applied to a health problem. It includes a preprogram planning and development phase, an instructional intervention, and an ongoing monitoring and evaluation system with clear results in knowledge, attitude, and behavior.

The planning and development stage emphasizes the collection of critical 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 critical for these people? (c) What behaviors should be advocated? (d) What resources are needed to conduct the program? The final program planning, including budget and resource requirements, is based upon the results of this investigation.

While it is impossible to predict the results of the preprogram research, it is possible to suggest certain basic features that might be included in any effective public education program. In order to reach large numbers of people, mass media, particularly broadcast media like television and radio, will play a central role. Three components—broadcast media, print materials, and face to face community outreach activities—are structured in a coordinated whole so that one reinforces the information provided by another. Woman hearing health messages on the radio should also hear the same advice from a health worker, receive printed information from her child's school, participate in a community health fair, and see related posters.

The intervention is divided into discrete cycles. Each cycle covers the same basic information but with slightly different approaches. These cyclical changes reduce audience fatigue and permit a continued renewal of audience involvement. From an administrative perspective, the cycle approach is important because it permits program planners to design segments of the program sequentially. They do not need to design the entire program at once. This means they can work with fewer production facilities over a longer period of time; more importantly, they can incorporate results of the earlier phases into the planning of later phases. In essence, it permits the planner to make important iterative changes in educational strategy.

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These changes must be made in response to information on the acceptance and efficacy of project activities. It is the purpose of the monitoring and evaluation component to ensure that this information be available at relevant and timely intervals. A monitoring system which permits the random sampling of selected segments of the audience will be developed. Planners will know: (a) how a microcosm of their intended audience feels about the advice they are receiving; (b) whether they are taking that advice; and (c) what obstacles they are encountering. These monitoring devices can also point up important logistics problems such as a breakdown in delivery of printed matter or use of inappropriate broadcast times to meet audience needs. This type of ongoing evaluation is essential in making corrective changes in future cycles, as well as providing program administrators with a clear idea of their overall potential success.

### C. DEVELOPMENTAL INVESTIGATION

The success of the proposed intervention will depend significantly on the project implementors' adequate knowledge and assessment of:

- o The target population's correct health and nutrition knowledge, attitudes, and practices, especially as they relate to the specific health problem.
- o The constraints—whether social, economic, physical, or political—which limit the opportunity for the populations to change their knowledge, attitudes, and practices in response to project intervention.

This approach requires a significant investment in pre-program research. Development communications experts, drawing heavily on a variety of social science survey techniques, and more recently, from social advertising and marketing strategies, have made significant advances in such developmental investigations.

#### 1. Investigation Topics

For a health problem, project designers conduct investigations and surveys that provide both broad and specific information in the following areas. For example:

##### a. Problem Definition

- o What are the measurable effects of the present health conditions on people's lives?
- o What are the perceived effects of the present state of these conditions?
- o What are the principal causes for the problem?
- o What are the major solutions being proposed?
- o Who in the total community is best equipped to solve the problem?
- o What are the major constraints limiting the solution of the problem?
- o Which of the alternative solutions being discussed is most susceptible to educational influence?
- o What has been the history of efforts in this area?

b. Audience Characteristics

- o Who is affected by the present conditions?
- o How can these individuals be grouped into audiences which share significant common characteristics such as language, socioeconomic level, family structure, decision-making patterns, family mobility, etc.
- o What is the expectation of each group in relation to the solution of the chosen health problem?
- o What are the detailed characteristics of each group's present health topic behaviors?
- o What characteristics of the cultural reward system can be associated with the selected behaviors?
- o What examples exist of each audience group's ability to make significant adaptation with simple behaviors?

c. Distribution Channels

o Opinion leadership

Who represents convincing sources of information on the topic for each target audience?

o Mediated Communications

What forms of mediated communication are particularly acceptable to the target audience?

o Institutional Delivery

What institutions would be accepted by the target audiences as viable sources of information on the health topic?

How can these organizations be coordinated most effectively?

d. Outcome Expectations

- o What type and magnitude of change would be considered successful and would be practical, given defined resource levels?
- o How could these changes best be measured?

2. Instruments To Be Used

In order to collect this information, a range of instruments is proposed. Each instrument is tailored to the type of information being sought, and is designed to combine both reliability and efficiency. The first source of information should be existing anthropological and ethnographic studies. A thorough review of existing literature should be undertaken.

**Focused group interviews** bring together selected members of the target population in groups of five to eight. Each group will be led by a trained interviewer who will use a prepared list of probing questions. The principal objective of this activity is to collect broad information on vocabulary, attitudes, and concepts related to the intended health problem.

**Individual interview questions** build upon the information collected during the group sessions. A new set of respondents are selected who have characteristics similar to those of the previous group. The objective of the individual interviews is to probe deeper into individual attitudes of selected individuals.

A **series of home observation visits** are planned to identify the existence of commodities, conditions, or behaviors which might inhibit or reinforce the behaviors being advocated. Trained observers visit some 1,000 homes in conjunction with the individual interviews.

Finally, a **short survey questionnaire** is developed, based upon the results of the previous four activities. These will help quantify critical areas of concern identified in the previous stages.

An effective public education program must include the important step of testing the recommended action or instruction by actually observing the behavior of the audience to determine what occurs as the product is acted upon. This systematic observation procedure results in a behavioral profile. The behavior or "product" testing stage provides the program implementor with the opportunity to test the appropriateness and acceptability of the behaviors before additional and significant investment is made in the media design.

Each instructional package is prepared by establishing discrete and sequenced behavioral objectives for which the implementor anticipates particular actions in that sequence by the target population. It is important to observe behaviors that precede and follow the target behavior, identifying critical reinforcers that surround and support the specific behavior. As the sample group or individuals are observed, intermediate behaviors and unanticipated behaviors can be identified and, as appropriate, included in the instructional package.

#### D. PROGRAM IMPLEMENTATION

Information collected and analyzed during the feasibility study is then transformed into a specific workplan. This plan defines who is to be identified as the target audience, what instructional advice will be advocated, how the audience will be reached, who will be involved in and responsible for specific activities, how the program will be monitored, and how much the enterprise will cost.

It is essential to segment, or divide, the audience into clusters sharing similar characteristics. On an a priority basis, seven variables appear particularly important as segmentation devices in most developing countries. They are: (1) language, (2) socioeconomic level, (3) family structure, (4) decision-making structure, (5) specific health attitudes and behaviors, (6) access to health facilities, and (7) family mobility. Others may be added as more is learned about specific conditions in each country.

Once the audience has been segmented and critical characteristics have been identified, it is possible to define the specific instructional content of the program. The most important consideration here is that the advocated behavior be actionable—that is,

that it be something the audience can indeed perform. If new resources are needed, if some major change in traditional behavior is proposed, if investment is required, then each of these factors must be dealt with in the program.

From a behavioralist point of view, there are five circumstances which singly or in combination, account for absent behavior. If one takes the example of a large-scale program promoting the use of oral rehydration therapy, the necessary materials or implements, such as ORT packets, may be unavailable. Second, prerequisite skills, discriminations, or knowledge may be lacking. For example, rural mothers may know that boiling water is good but 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, to engage them in the behavior. Fourth, there may be incentives to engage in incompatible behavior, such as giving kaolin or purges. And fifth, there may be punishing consequences which discourage the desired pattern. A child may vomit, for example, or his diarrhea may actually appear to increase. An understanding of these factors 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 to approximations of the desired behavior. Use of approximations require that we identify a relevant existing behavior to reinforce and may mean including a few behaviors in the instructional program which we know rural mothers are now performing correctly. Rather than telling mothers to stop bottle-feeding, for example, we may want to reward mothers when they do breastfeed.

These concepts are critical to selecting messages which are salient, appropriate, and actionable. Once the content has been selected, general messages are transformed into specific materials, radio and TV scripts, draft print materials, etc. This is essentially a creative function, but not an isolated creative function. The artist must assimilate the insight gained in the previous stages into simple messages which communicate powerfully.

Most experts continue to believe that some form materials pretesting is useful, particularly when a totally new approach is being tried. This belief is supported by experience in many development settings. The recently created Health Message Testing Service (HMTS), sponsored by the U.S. Department of Health Education and Welfare, is an example of how systematic pretesting is becoming a regular part of public education programs in the United States. The key to pretesting seems to be (1) get it done quickly so that the producers have time to make needed changes, (2) do it well so that the results are helpful, and (3) test draft rather than final materials that costs can be kept reasonably low.

Once pilot materials have been tested and changes made, production facilities, either commercial or government-operated, are contracted to produce the large number of needed materials.

The ultimate success of the program depends on the complementarity of the three major program elements: broadcast media, print materials, and community outreach. The total information program should be greater than the sum of its parts. Each component should energize every other.

## 1. Community Outreach

Broadcast media and print materials will ensure that a large percentage of the target population will be exposed to some aspect of the program's information. But important groups of individuals may be excluded from effective contact with the project if only these two systems are used. The community outreach aspect of the program is designed to reach those individuals otherwise excluded, and to create community support groups which contribute additional energy to the total program. Community outreach includes the following activities:

### a. Health Extension Workers: Special Considerations

The programming of effective interpersonal contact under any circumstances is difficult in the rural areas of the Third World. The lack of a physical infrastructure from which to operate, often impossible terrain and inaccessible villages, difficult climate and resultant deterioration of physical communications infrastructure, lack of adequate funds, small professional pool from which to select personnel, lack of appropriate supervision, class, caste, and racial differences between agent and client...all of these factors and more impede the functioning of an effective rural extension system. When such a system is asked to function within yet another framework--that of a highly-organized, complex communications scheme--the need for practical planning is even more important.

As much as extension workers in theory are the key elements in the behavioral change process, in practice they seldom are. As much as in theory they provide the interpersonal, credible link between external information sources and community receivers, they frequently cannot. And as much as many communication programs have been criticized for not using rural extension workers, an equal number have failed by expecting too much from those workers they have used.

There is no easy solution or recommendation for the effective programming of health extension workers in a multi-intervention communications program. Amounts of budgeted money vary, as does political commitment to health, existence of severe and resistant disease, external, international pressures--all from country to country and region to region. Yet, there seem to be certain actions the communications planner can take to insure at least a modicum of effective health worker participation and impact:

- o Establish a clear line of administrative authority for project-related activities within the Health Ministry.
- o Involve Ministry personnel at all levels of extension-worker participation in the program.
- o Do not become financially committed to the payment of extension personnel for services rendered during the program.
- o Do not attempt to change existing health extension patterns.
- o Allow inter-Ministerial extension worker contact to develop gradually, and at the pace of the various Ministries involved.
- o Focus on training as the key element in the use of health extension workers in the program.

b. The Public Schools : A Powerful Vehicle

The public schools offer one of the few widespread organized and structured environments through which a large percentage of the total urban population can be reached. Students attending schools represent all economic levels and cultural backgrounds. They are not only potential targets of a public education program, but they are also a logical and powerful distribution vehicle for project information. Materials distributed in school can be shared with their families and friends, multiplying the impact of investment in school-based programs.

Schools represent a challenge for the public educator. Usually their curriculum requirements are rigid and their teachers resistant to the introduction of new ideas. Each teacher is already overburdened with tasks and often resents being asked to carry an even greater instructional load. It must also be recognized that many students perceive what they learn in schools as irrelevant to real life. It is important to convince them that schools can teach them immediately practical and useful things.

Three principles, age-specific content, colorful materials which students can use and take home, and simple, flexible teachers' guides can be adapted to many settings. The precise adaptation should be a topic for the feasibility study, but it appears clear that schools, and perhaps other institutions, can be asked to make an important contribution to the public education approach.

c. Other Community Activities

- o Opinion leaders, including health workers, are identified in selected villages. These individuals are given specially prepared materials which will help them to inform other community members.
- o Promotional activities are selected, based upon their local feasibility. Examples include a traveling health fair with puppet shows, music acts, printed materials to be distributed, and involvement of local celebrities. These fairs travel from village to village, making presentations and stimulating interest in the programs. In urban settings, a telephone hotline might be established to provide specialized information and answer specific questions. Random telephone calling might be used to reinforce some behaviors so that every week a certain percentage of a given area would receive phone calls, reminding them of some selected behavior. In villages without telephone service, this information might be handled by wall posters or handbills, printed frequently on inexpensive paper and distributed regularly through some local commercial channels. Resource centers could be set up temporarily in stores and become distribution points for information and advice, as well as places where people could go to get questions answered.
- o Buttons, bumper stickers, and even cash awards can be distributed to early adopters. These would function as motivation for more reluctant members of the community. Each research will help determine which of these and other ideas are most appropriate in a given setting.

While all of these "gimmicks" can add color and impact to a program, it must be remembered that they are no substitute for sound selection of practical behaviors and a clear understanding of what constraints are faced by people being asked to adopt new health behaviors. The best promotional ideas will not compensate for unrealistic advice or poorly constructed messages.

## 2. Broadcast Media: Radio and Television

Broadcast media can be conceived as a central element in the public education approach. Because of its reach and acceptability, it is the point from which less-universal and less-familiar communications interventions begin. It is the matrix of the program, for its messages will continue throughout, received regularly in every village while contact with schools and community facilities will be less frequent and less intense. It is the unifying element in the program which will relate community, school, and print material to the information it broadcasts. There are a number of possible media formats which can be used to reach various audiences and to strengthen the understanding and acceptance of new information.

Radio is generally preferred to television in most developing countries simply because radio reaches a much larger percent of the total population, particularly when the specific target population is primarily the nation's neediest and poorest segments. Television, however, should not be overlooked. In many countries, particularly in the Middle East for example, television coverage is extensive. Even in countries where the vast majority of people do not have access to television, TV programming can be an important element to ensure urban decision-makers understand and support a large-scale national program. Given these exceptions, however, radio remains the primary vehicle to reliably reach large numbers of isolated people with regular audio messages.

Radio programming varies greatly from one country to another. Latin America and many parts of Asia have broadcast systems dominated by multiple commercial channels. Most African broadcasting, however, is controlled by government operated stations on which programming is considered primarily a instrument of national development and education. In Latin America and Asia, radio remains largely an entertainment media, heavily influencing popular opinions through news and commercial broadcasting. However, radio is used—whether short spots, news formats, interviews, radio novels or didactic "talks," its effectiveness depends upon basic credibility and acceptability to a given audience. Public education is not dependent on a single broadcast format, indeed it is best when a variety of formats are tailored to local needs.

Irrespective of format, radio can play several unique roles in any program of public education.

Open broadcast radio can:

- o Reach everyone who has a receiver. Radio does not discriminate by race, ethnicity or sex. Radio receivers are widely available in even the poorest regions of the world, and while individual radio ownership may vary significantly from one area to another, the cumulative impact of radio on the traditional rural information system is extraordinary high.
- o Teach specific cognitive skills such as basic numeracy, as demonstrated in programs like Nicaragua's Radio Math Project, postulating radio's potential to teach other cognitive skills such as improved farm management and new health behaviors.

- o Reinforce and remind people of key information which they learned from extension agents and thus provide relatively low-cost follow-up.
- o Inform large numbers of people of seasonal and even daily variations in critical aspects of project success, such as prices, materials availability, and weather conditions.
- o Stimulate popular support by creating an environment of enthusiasm and excitement, allowing people to feel part of large and important new programs.
- o Link rural people from distant areas and permit direct exchange of experience building upon their basic trust of others like themselves.
- o Transmit people's concerns directly and persuasively to decision-makers increasing the relevance of national and regional policy making.
- o Increase the acceptance of extension workers within rural communities by serving as a message center and voice of encouragement and praise.
- o Motivate, and provide on-going support to isolated extension workers.

Public education goes beyond simple mass media programs by integrating these roles with print and face-to-face channels. Public education relies on media to reach out and remind, but these are insufficient in themselves to promote significant and stable changes over time. There are at least two ways in which existing village and group structures can be added to open broadcast radio programming and compound the effectiveness of both.

- o **In-school programming.** If it is found that health is discussed in a particular primary or secondary school curriculum, and that teachers are familiar with the use of radio in a classroom situation; specially designed programs for students and teachers can be included at low costs.
- o **Ad hoc listening groups using cassettes.** Selected extension workers can be provided with inexpensive tape recorders and a series of taped radio programs to help motivate village learning groups.

### 3. Graphic/Print Media

Classically, graphic/print media are supportive communications tools, adding depth, range, and texture to an idea, informative message, or concept. They allow the viewer/reader to assimilate slowly, to reflect, to consider the information at greater length, to place that information more clearly within his/her own personal psycho-social environment, and act as a reminder of detail instructions.

Particularly interesting materials include posters, handbills, flyers, instructional labels, and displays at local pharmacies and rural stores. Different kinds of print material, if well designed, can perform different roles.

Health worker study guides can:

- o Repeat the message of the program in prose form.
- o Provide a short body of written material (400-500 words a unit) to be read aloud, normally by the leader.
- o Provide a copy of the discussion questions for each member.
- o Provide something for each member to take away and read (or have read to them) between meetings and after the program--a reference book and symbol of membership of a massive study programme.

Village flipcharts or simple flyers and handbills can:

- o Reinforce aspects of the message contained in the radio program and study guide unit.
- o Serve as regular reminder of specific detailed information.
- o Illustrate the theme of the program through three or four large photos, maps, or drawings for each unit.
- o Help provide a focus for discussion.
- o Show aspects of the program subject that people may have heard about but have never actually seen.

#### 4. Integration of Radio, Graphic/Print Media, and Extension Agents

In practice, graphic/print material should supplement radio, providing well-timed range, depth, and texture to audio messages. Extension agents should take the sum of those two external interventions and personalize them, make them locally relevant; add a credible cast to otherwise disinterestedly produced information. The most essential element in the success of a public education program is the coherent promotion of a limited set of clean, relevant, and actionable message through all reasonable channels, in such a way that one channel supports and supplements another.

#### E. EVALUATION

The evaluation component of the public education program is designed to fulfill two basic functions. First, it should monitor project success at each of the stages described above, and provide project planners with ongoing information needed to make corrections in program effectiveness. This function is called monitoring. Second, the evaluation should assume that the program's central task is behavior modification and should focus on behavior change in the target audience as the ultimate measure of project success. This is suggested for two basic reasons. First, collecting reliable health-status information is very expensive and intrusive on the population being tested. Second, the measurable health benefits from the intervention may be long-term and highly influenced by other environmental and social conditions. A negative health status result might suggest to planners that the public education program failed, when, in fact, people did learn new behaviors, and applied these behaviors properly, but few measurable immediate benefits resulted.

It is proposed that program evaluation use two basic approaches. First, a broad survey of attitude and knowledge related to advocated behaviors with the target population should be prepared and applied at yearly intervals during the life of the project. Second, it is proposed that a panel design be developed for frequent sampling of selected behaviors over time during the life of the project. The panel provides detailed information from a limited but representative sample of the target audience. Combined, the broad survey and panel designs will provide a mix of detail and breadth sufficient to demonstrate impact and identify critical deficiencies. These two evaluation approaches will be reinforced by regular interviews and materials-testing procedures.

#### F. MULTIPLE THEMES AND CONTINUITY

Public education has traditionally been operated as a program - a single intensive effort, focused on a critical problem and limited in time. This is less a fundamental characteristic than a coincidence of historical precedent. Indeed the cyclical nature of many public education themes - the seasonal nature of disease, agricultural topics, and nutritional cycles, argues for comprehensive annual programming of multiple themes; carefully integrating, and varying the intensity of different messages. Secondly, the fact that public education addresses different audience segments permit multiple programs to be managed simultaneously. Finally, the changing characteristics of audiences over time, the increasing sophistication and constantly changing constraints argue for a consistent programming strategy like public education which incorporate regular audience reviews and feedback as part of the fundamental instructional structure. In these ways, public education can rise above the tradition of national mobilization programs of the 60's and 70's and become a regular operational tool which maximizes the use of mass media by systematically focusing on selected themes integrated with equally powerful print and face-to-face delivery systems. Public education represents an important new tool in a growing array of effective education alternatives.