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Mass Media and Health Practices

Implementation

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SEMI ANNUAL REPORT NO. 3

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MASS MEDIA AND HEALTH PRACTICES PROJECT

Contract No. AID/DSPE-C-0023

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Semiannual Report No. 3

October 1, 1979 - March 31, 1980

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I. BACKGROUND

On September 30, 1978, the Academy for Educational Development was contracted by the United States Agency for International Development to implement a five-year project designed to develop a methodology for the application of mass communication to the prevention and treatment of acute infant diarrhea in rural areas of developing countries. Simultaneously, Stanford University was contracted to evaluate the project. The project is designed to build upon past experience with communication technology and to utilize radio and fotonovelas in conjunction with local health delivery services to enable two cooperating Ministries of Health to use mass communication regularly and systematically in their health education program. This effort is a joint project of the Office of Education and Office of Health within the AID Development Support Bureau.

II. PRINCIPAL OBJECTIVES FOR THIS PERIOD

- Complete final contracting of field personnel for Honduras site.
- Develop budgetary analysis of project expenditures and projected expenditures.
- Conduct pre-service orientation and planning workshop.
- Participate in search for African site.
- Develop specific implementation activities in Honduras.

III. ACTIVITIES UNDERTAKEN

A. Complete Final Contracting of Field Personnel for Honduras

Dr. Reynaldo Pareja and Ms. Elizabeth Booth were presented to the technical and contracts offices of USAID for approval as field director and assistant field director, respectively. After an extended series of negotiations, they were approved for these positions on January 25, 1980. Their initial appointment period began on December 20, 1979, and runs until December 2, 1981.

B. Develop Budgetary Analysis of Project Expenditures and Projected Expenditures

The selection of Honduras as a project site and the subsequent negotiations with the Ministry of Health considerably increased project personnel's understanding of budgetary requirements. These new realities, coupled with an analysis of the additional costs incurred as a result of the extended project start-up period, prompted a detailed review of present and future budgetary considerations. During this process, inflation was discussed as a potentially serious problem when analyzed over the five-year life of the project. The results of this analysis were discussed with the technical monitors of the project on March 24 and a report submitted to them on March 28. (A copy of that report has been included in Appendix A.)

The most immediate concern arising from this review was the need to seek official approval for three originally unanticipated costs related specifically to the Honduras site. These include the following:

	Life of Project Expenses
1. The original field team selected for Honduras were Mr. and Mrs. Ronald Parlato. As a married couple, their benefits and allowances were figured for a one-family unit. By substituting two separate households (Reynaldo Pareja and Elizabeth Booth), additional costs were incurred amounting to:	$ 4,850.00
2. During negotiation with MOH officials in Honduras, it was decided that the implementation contractor would fund three MOH counterparts for the first year of project activity. This was due to the fact that the MOH budgetary cycle for 1980 had passed when negotiations took place and the Ministry was unable to support these individuals until 1981. This cost amounted to an additional:	$30,500.00
3. Once in Honduras it was determined that new local personnel would be needed by the project. Both a chauffeur and an office assistant were necessary for the safety and efficiency of the office and were consistent with both MOH and local USAID practices. This cost amounted to:	$29,524.00
TOTAL	$64,874.00

In discussion with the technical office it was determined that a PIO/T would be drafted, substituting a portion of the fifth-year dissemination phase to defer these additional costs. The larger issues of inflation and unanticipated costs related to project start-up were left pending a more in-depth analysis.

C. Conduct Pre-Service Orientation and Planning Workshop

In order to provide a structured and internally consistent orientation for both implementation and evaluation field personnel, a week-long seminar was conducted in Washington on January 3-4 and 7-11, 1980. This was the first opportunity for the field staffs of both contractors to sit down together, receive an orientation to the various facets of project operation, and begin planning for both implementation and evaluation.

A detailed final report of this experience has been included (See Appendix B), but a few highlights of the experience are recounted here. Participants included eight members of the Academy staff, three members of Stanford's staff, five consultants, and the two DS/ED monitors. The principal objective of the workshop was to expose the three field people to each aspect of the project operation, including behavioral analysis, social marketing, development communication application and evaluation practices, and the principal medical considerations facing the project. In addition, time was spent discussing operational relationships between the two contractors and reviewing a preliminary action plan for the first six to nine months of project activity.

Several important technical issues were raised during these discussions. Some of the most important include:

- The need to collect specific behavioral information on oral therapy at the village level.
- The selection of major preventive behaviors associated with effective diarrheal disease control, which include: continued breastfeeding through 18 months, discarding/heating of weaning foods after 2 hours, seasonal boiling of water to coincide with seasonal peaks of bacterial diarrhea, and repeated handwashing.

- The need to ensure adequate personal communication during oral therapy instruction.
- The complexities and importance of developing effective distribution systems, not only for the instructional messages but for physical elements like oral rehydration packets as well.

These and other issues are discussed in more detail in the Workshop Orientation Final Report. (See Appendix B.)

In addition to discussing a variety of technical issues, the last day of the workshop was spent reviewing a draft work plan developed for the first six to nine months of project activity in Honduras. There were no major changes in this schedule. It was agreed that the first important tasks were liaison with Ministry counterparts, orientation of field staff to Ministry interest and activities in the area of diarrheal control, and selection of the specific areas of project activity. Important additional tasks include establishment of project offices and selection of MOH counterparts. One outcome of the planning sessions conducted during the week following the workshop was a comprehensive list of investigative issues related to project implementation. The list included almost 600 questions divided into eleven subcategories. This list will be used as a guide to make preliminary judgments and set priorities for the first six-month investigation phase.

D. Participation in Search for African Site

In early February a cable was received from the USAID mission in Tanzania indicating that the Government of Tanzania had determined that the MM&HP Project was not consistent with their present efforts in health education. Upon receiving this somewhat surprising response, a renewed search for an African site for the project was initiated. Several of the countries which had been contacted previously were recontacted, and several new potential sites were added to the list. By March 31, 1980, the second round of site-selection activities in Africa had produced the following results:

GAMBIA	Contacted by cable. Favorable response to the request for a site visit.
KENYA	Contacted by cable. Response indicated high interest and would advise in February. When February cable was not forthcoming, a follow-up cable was sent. No reply to follow-up cable as yet.
SUDAN	Contacted by cable. Response indicated that last quarter of 1980 is earliest possible time. Project determined this would be too late. Sudan was excluded.
MALI	Contacted by cable. Response indicated project not appropriate.
MOROCCO	Contacted personally by Dr. Anthony Meyer. Response indicated that project is not feasible within MOH.
NIGER	Contacted by cable. Response somewhat ambiguous. Recontacted and no response as yet.
BOTSWANA	Contacted personally in Washington. Interest indicated and official cable sent to Botswana to request visit. No response from field as yet.

E. Develop Specific Implementation Activities in Honduras

1. The commitment to the Ministry of Health at the time the project agreement was signed was to have field personnel in Honduras by mid-January. AED's field personnel, Reynaldo Pareja and Elizabeth Booth, arrived on January 28.

2. The first series of activities involved meetings with USAID officials and representatives of various departments within the Ministry of Health. The principal contact office in the Ministry is the Health Education Unit, but the Maternal Care Unit, the Infant Care Unit, the Training Division, the Department of Epidemiology, the Environmental Sanitation Division, and the Nursing Division all play important supporting roles. Individual meetings were held with each division to seek their support for the project, to explain basic project goals, and to solicit their participation in the site selection and initial planning stages of project implementation. Because the level of AID investment in the Ministry of Health is increasingly rapidly, this proved an important step. As competing health programs and large-scale international investments begin, it

will be more and more difficult to compete for Ministry attention to the MM&HP Project.

3. One of the first tasks was to identify adequate office space for the project. The director of the Health Education Unit offered to vacate half of his assigned office space and allow the MM&HP personnel to use this space until a larger space was made available by the Ministry's expansion into additional facilities. Furniture was located and moved into the office, and the project began functioning within the first week of the team's arrival.

4. Local hire personnel were also identified. The secretarial position description was expanded to include a single person capable of administrative support for field research and daily office activities as well as bilingual typing and filing. An office messenger was contracted and in-service training begun to prepare him to assist in field monitoring and interview activities. While it was decided that a chauffeur would be needed for safety and increased field efficiency, the actual contracting of a chauffeur was postponed until the project vehicle arrived. The Ministry was extremely helpful in providing a vehicle and driver during the extensive visits made to three regions of the country.

5. During the project director's visit to Honduras (February 11-20), three potential regions for project activity were identified. These include Health Region 1, the Danli Region; Health Region 2, the Comayagua Region; and Health Region 5, the Choluteca Region. A series of four-day visits was organized to each region and a data collection guide was developed to ensure that comparable data was collected in each area.* Priority was given to questions related to:

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* A report on the results of this activity has been prepared and will be attached to this report as soon as it arrives from Honduras (see Appendix C).

- Existence of an adequate health infrastructure.
- Access and coverage of radio facilities.
- Recognition of diarrhea as a problem.
- Receptivity of regional medical authorities to project operations.

On Friday, March 21, a meeting was held to present the findings of the regional site investigation to representatives of the various MOH departments. The AED/Stanford recommendation was to select the Danli region. While the full reasons for this decision are explained in the aforementioned report (see Appendix C), the principal reasons were the following:

- The Choluteca region is experiencing a malaria epidemic, and the influences of this on the medical community made diarrhea a secondary problem. Consequently, Choluteca was excluded.
- The Comayagua region is characterized by poor roads, poor health infrastructure, and questionable radio reception in several areas of the region.
- The Danli region has adequate health infrastructure, relying heavily on midwives and primary health workers selected by local communities. A diarrheal study had also been completed only last year and is a good basis for early project planning. There are two potential problems with the area which include (a) the heavy influence of the national capital on health care services (it appears that many rural people go directly to Tegucigalpa for care, ignoring local health facilities), and (b) radio reception for about one-third of the area is only realizable if the National Radio Transmitter is used. This may mean that certain instructions will be transmitted nationally while the distribution of packets and other message-related artifacts will be distributed reliably on a regional basis only. These two problems present difficulties for both implementation and evaluation contractors.

The reaction of the MOH representatives at the March 21 meeting was in favor of the Comayagua region. Their arguments were based primarily on health need. As health professionals concerned with improving the overall quality of health services, they understandably prefer to have specialized resources such as those represented by this project allocated in regions of greatest need. They argued that the Danli region receives most attention and that it would be

unfair to set this project there as well. No final decision was made during this meeting, and it was agreed that a meeting would be held on March 28 to make the final determination. AED field personnel met with representatives of the various MOH departments on an individual basis to discuss a variety of facts which argue for the Danli region. These facts did not come out during the March 21 meeting.

6. A study supported by PAHO and conducted by the MOH and medical technicians from the Center for Vaccine Development at the University of Maryland compared the effectiveness of simple salt and sugar solutions with the complete WHO formula. This was the first clinical trial of salt and sugar under controlled, double-blind conditions. While the results of the study are yet to be analyzed and published, early indications suggest that low potassium levels in children (particularly in children who have received purges or who have been vomiting before arrival for treatment) are too low to rely on salt and sugar solutions alone. At the same time, the study appears to show the basic effectiveness of the simple formula in rehydrating children. The field team was responsible for producing a videotape news story on this study and ensuring that it was shown on local television in Honduras. In addition to providing excellent visibility for the oral therapy program of the Ministry, it is one of the first steps at bringing diarrheal control to public attention in Honduras.

7. The MOH has committed itself to producing some one million packets during 1980, using the WHO formula and aluminum packaging. During a recent visit of UNICEF representatives to Honduras, several problems were uncovered with these packets, now being produced in small quantities. The aluminum foil packets are being printed in Miami, and the ingredients mixed and packaged by the Ministry in Honduras. The difficulties uncovered are the following:

- The salts were not being dried sufficiently in some cases, permitting premature caking of the mixture.
- The foil packets being used were so tough that opening the packets was difficult.
- The ink used in printing directly on the aluminum foil packets rubbed off easily.

The MOH has established packet production as a priority for 1980, and for this reason it was impossible to schedule market research time into their production schedule. Therefore, the decisions about packet size, configuration, instructions to be printed, colors, and name of product are not being researched. These decisions are being made on an ad hoc basis using the best advice available. For this reason, AED has suggested that some 20,000 packets be produced this year with no lettering or identifying marks. This will permit some experimentation with product characteristics like packet color, instructions, name, etc.

8. The AED field team has been interviewing potential candidates for the three MOH counterpart positions. No final decision have been made as yet, but it presently appears that excellent candidates will be identified. The most difficult position to fill has been in the area of radio production.

9. Local print materials are being collected. A set of popular fotonovelas has been compiled and is being taken to rural areas to judge their basic acceptance among rural readers. Fotonovelas of different types have been selected, including cartoon heroes, slick photographic love stories, superheroes, comic editions, etc. It is expected that some early reader preferences can be adjudicated in this way.

10. Local sources of information on community behavior are also being identified and analyzed. Ms. Booth recently participated in the annual meeting of Peace Corp nurses. These PVCs work on a regular basis with rural women and have an excellent sense of rural perceptions of health problems. Most importantly,

they have an understanding of how effectively the health infrastructure reaches into the rural community and how it's accepted by rural people. A report is being prepared on the results of these interviews.

Two local anthropologists have been contacted and interviewed for leads toward community health attitudes and practices. Several USAID representatives with extensive experience in community investigation are also being interviewed for leads in these areas and for assistance in identifying appropriate interviewers for use in rural communities.

11. As previously mentioned, a site visit to Honduras was made by the project director (Dr. William A. Smith) from February 10 to 21. A detailed report of the visit is included in Appendix D.

F. Other Technically Related Activities

1. Dr. Smith participated in a conference on Oral Rehydration Therapy (ORT) sponsored by AID and CEFPA. The conference was designed for PVO and resulted in a good deal of interesting interchange among field practitioners of diarrheal disease control programs. A number of the larger, almost ideological, questions related to (a) complete formula vs. salt and sugar, (b) need for face-to-face instruction of mothers, (c) potential dangers, and (d) administration regimes were all addressed. The conference was not designed to resolve these issues, and indeed it did not. A brief review of the principal topics discussed are found in Appendix E.

2. The Health Message Testing Service, operated by HEW, is one of the few examples of an independent, structured, pretesting service for health messages in the United States. The service is coordinated by Porter, Novelli & Associates, Inc., and brings together producers of health spots (both TV and radio) in the United States with a commercial pretesting service, McCollum Speildman, Inc. Dr. Smith interviewed one of the principal directors of the project, Ms. Rachel Greenberg, and is now preparing an article on their operations for project use.

G. Administrative Activities

1. Two field professionals (Reynaldo Pareja and Elizabeth Booth) were contracted and relocated in Honduras. This included a variety of administrative tasks such as shipment of personal effects, determination of local allowances and benefits, customs clearance documentation necessary for free entry into Honduras, etc.

2. A project vehicle was selected, purchased, and shipped. It will arrive in Honduras on March 28.

3. Field trials are being made on a tape recorder/radio combination before final purchases of the equipment is made.

4. Office supplies have been selected, purchased, shipped, and cleared through Honduran customs.

IV. PROJECTED ACTIVITIES FOR APRIL 1, 1980 - SEPTEMBER 30, 1980

A. Prepare an Investigation Plan for the Following Six-Month Period

This plan will detail how information in the following eleven areas will be collected:

Health Attitudes and Behaviors

1. Caretaker profile
2. Opinion leaders
3. General health issues
4. Childcare
5. Feeding practices
6. Diarrhea in the community
7. Oral solution issues

Health Structure

8. Health care system
9. Health worker system

Media Issues

10. Radio
11. Print

It will include the administration of at least one structured questionnaire to a representative sample of families with children below the age of five. This, coupled with the baseline information being collected by the evaluation contractor, will be supplemented by focused group and individual interviews, direct behavioral observation, and ORT solution mixing and administration trials. The specific activities to be included in the plan with their approximate time frame are provided below:

1. Development of Quantitative Instrument (April-May)

   a. Selection of test questions
   b. Pretesting of questions
   c. Final design of questionnaire

2. Development of Investigative Materials (April-June)

   a. Questionnaires
   b. Interview forms
   c. Observation guides/records
   d. Testing materials (games)

3. Training of Investigative Personnel (April-June)

   a. Develop training strategy
   b. Group interviews
   c. Individual interviewers
   d. Task analyst - observers
   e. Questionnaire administrators

4. Collecting of Behavioral Information on Mixing and Administration of ORT (May)

   a. Conduct and videotape trials with 20 mothers
   b. Analyze results

5. Investigation of Media Environment (May)

   a. Monitor existing programming

      - Two national radio stations
      - Five local radio stations
      - One week study of existing programming
      - Comparison of broadcast schedule with actual broadcasts
      - Taping of quality spots; analysis of program content

   b. Compare costs of broadcast and production facilities

c. Study reception in target area

- Develop questions for inclusion in interview form and questionnaire
- Direct observation/verification (adolescents paid to monitor listening habits)
- Play existing spots for small group; gage reaction to existing programming

6. Investigation of Health Systems

a. Task analysis of five health centers - one person assigned to record all activities by five-minute periods
b. Task analysis of five midwives and five guardians - one person assigned to record all activities by 1/2-hour periods
c. Other traditional health care workers will be investigated
d. Analyze health workers
e. Identify health users
f. Analyze health worker impact

7. Investigation of Diarrhea-Related Behaviors (June-July)

a. Focused interview groups (10 communities)
b. Individual interviews (with 20 mothers/other caretakers)
c. Direct observation of five mothers - Task analysis at 15-minute intervals
d. Include questions on questionnaire form
e. Knowledge test using gaming approaches (matching games)
f. Content to be investigated: breastfeeding, weaning practices, caretaker behavior, diarrhea vocabulary, perceive cause of diarrhea, remedies for diarrhea, seriousness of diarrhea, and perceived signs of diarrhea

8. Analysis of Distribution Systems (July)

a. Develop questions for inclusion on interview form
b. Interview anthropologist
c. Direct observation of local distribution points and analysis of how these points operate
d. Study MOH distribution system

B. <u>Prepare a Project Implementation Plan (June)</u>

This plan will translate the early results of the investigation phases into specific decisions on how the intervention will be structured and scheduled. It will detail the instructional objectives, the media strategy, the distribution system, the interpersonal training, and the print development and distribution system.

C. Participate in the Search and Selection of an African Site for Project

AED's project director will participate in site visits to African countries selected as potential sites for the project. The results of these visits will be analyzed with representatives of Stanford and DS/ED and a final decision made on an African site. A project agreement will be negotiated with one African country.

D. Staffing of the African Site

Once an African site has been selected and language and experience requirements for field personnel are defined, field staff identification, selection, and contracting will take place.

E. Completion of Budgetary Analysis

During this period the budgetary analysis process begun in the previous reporting period will be completed. This will be carried out through meetings between AED and DS/ED personnel and will be based upon an updated estimation of inflationary and other unanticipated cost figures.

V. ADMINISTRATIVE REPORT

Expenditures - to March 31, 1980

Salaries and Wages	$ 89,233.74
Employee Benefits	14,817.44
Consultant Fees	12,990.00
Travel and Transportation	29,699.17
Other Direct Costs	26,415.32
Overseas Allowances	-0-
Equipment	7,365.50
Overhead at 22 percent	38,094.24
Total	$218,615.41

The original budgetary analysis presented to AID is undergoing revision. Because presentation of the first analysis would only be misleading, it has been decided to include the final presentation in the next Semiannual Report.

MASS MEDIA AND HEALTH PRACTICES ORIENTATION WORKSHOP

FINAL REPORT

January 3-4 and 7-11, 1980

I. BACKGROUND

This workshop was designed to provide a basic orientation experience for the three principal (AED and Stanford) field personnel in Honduras. While it was not originally conceived as part of the overall project structure, the increasingly apparent complexity of the MM&HP Project, coupled with the incorporation of a wide range of disparate professional disciplines, made such a workshop important. The following report details the basic objectives, lists the principal participants, outlines the general activities, and details the major concerns addressed during this experience.

II. DURATION - January 3-4 and 7-11, 1980

Locale - Washington offices of the Academy

III. OBJECTIVES

A. To develop a common vocabulary. This will mean that terms such as DVE, Radio Math, Oral Rehydration, Behavioral Modification, Social Marketing, Development Communication, and a host of other concepts, institutions, and fields related to this project will be discussed and at least a common understanding of how they relate to this project will be acquired.

B. To explore individual experiences and prejudices related to the application of communications to development.

C. To define an administrative structure which will promote a positive working relationship between Stanford and Academy staffs.

D. To define the relationship between field and home-office personnel for both Stanford and AED staffs.

E. To determine the most critical issues facing the project for the next six months period and develop approaches for resolving them.

F. To develop a preliminary work plan for the first six months of project activity.

IV. PARTICIPANTS

Academy for Educational Development

Dr. William Smith
Mr. Stephen Moseley
Ms. Cheryll Greenwood
Ms. Jill Merrick
Mr. Ricardo Villeta
Mr. Alexander Greeley
Dr. Reynaldo Pareja
Ms. Elizabeth Booth

Stanford

Dr. Dennis Foote
Dr. Carl Kendall
Dr. Barbara Searle

Consultants

Dr. Paul Touchette
Mr. William Novelli
Dr. Robert Hornik
Dr. Myron Levine
Dr. Robert Black

AID/DS/ED

Dr. Clifford Block
Dr. Anthony Meyer

V. ACTIVITIES

Thursday, January 3

9 a.m. - 12 p.m.	Dr. William Smith	Review principle personnel and institutions involved in project. Discuss roles of field personnel in relation to pre-defined project tasks areas.
1 p.m. - 3 p.m.		Distribute and discuss background readings.

Friday, January 4

9 a.m. - 12 p.m.	Dr. William Smith	Review project objectives and goals.
10 a.m. - 11 p.m.	Dr. Barbara Searle	Discussion of evaluation activities going on at Stanford.
1 p.m. - 4 p.m.	Dr. Anthony Meyer	Discussion of AID's goals and policies related to this project. Review of project history and discussion of the place this project will play in the overall development of mass communication as an effective development tool.

Monday, January 7		
9 a.m. - 12 p.m.	Dr. Myron Levine	Review literature and research related to diarrhea control. Elements such as definition of diarrhea, causes and transmission agents, effective treatment, and preventative features were reviewed in a structured, well organized presentation accompanied by slides.
1 p.m. - 4 p.m.	Dr. Dennis Foote	Presentation of evaluation goals and present planning procedures. Distribution of a draft document which reviews major prevention measures for infant diarrhea.
Tuesday, January 8		
9 a.m. - 12 p.m.	Dr. Robert Black	Review background information on diarrheal control program and introduce discussion of oral rehydration therapy in a village setting. Discussion among consultants of significance of various elements, especially those related to reinforcing consequences of oral rehydration to rural mothers.
1 p.m. - 3 p.m.	Mr. William Novelli	Presentation and discussion of social marketing. Criterion for successful marketing campaign discussed, emphasis placed on need for excellent research and the inclusion of product research. Discussion of the implications of product research for this project.
3 p.m. - 5 p.m.	Dr. Robert Hornik	Presentation and discussion of past applications of mass communication in third world settings. Lessons drawn from this experience. Importance of directed, targeted research discussed. Relationship between evaluation and implement research tasks discussed.
Wednesday, January 9		
9 a.m. - 11 a.m.	Dr. Myron Levine	Focussed discussion on the oral rehydration behavior including delivery systems for instructional information related to its adoption. Sharing of recent experience in Honduras and discussion of the impact of new USAID health program for Honduras.

1 p.m. - 3 p.m.	Dr. William Smith	Presentation of preliminary implementation delivery model for instructional inputs. Discussion of this model with consultants.
3 p.m. - 4 p.m.	Dr. Paul Touchette	Exploration of behavioral variables in the oral rehydration experience in a village setting. What might the behavior look like? What now happens in a village?
Thursday, January 10		
9 a.m. - 12 p.m.	Dr. Dennis Foote Dr. Carl Kendall Dr. William Smith Dr. Reynaldo Pareja Ms. Elizabeth Booth	Use of critical incident excercises to explore hypothetical problems field staff may meet in Honduras. Problems include conflicts over counterparts, disagreements between evaluation and implementation contractors, and problems caused by serious delays in program execution.
12:30 p.m. - 1:30 p.m.		Review draft work plan prepared by AED. Discussion of various research strategies and role of anthropology research in the overall planning. Inclusion of the collection of basic behavioral data on oral rehydration as an early priority for the implementation team.
		Discussion on several different project execution models. Agreement that field realities will be important determinant of final decision.
2 p.m. - 3:30 p.m.	Dr. Clifford Block	Discussion of AID's concerns with fotonovelas' role and with health status measures of project success. Presentation of workshop activities and discussion of distribution problems as an early concern of consultants and staff. Review of AID goals and expectations for this project.

Friday, January 11

9 a.m. - 12 p.m.	Ms. Cheryll Greenwood Mr. Stephen Moseley Mr. Ricardo Villeta Mr. Alex Greeley	Review AED administrative policies. Distribution of forms and explanation of each. Discussion of office administration in Honduras, including accounting procedures, need for filing capacity, vehicle purchase, etc.
1 p.m. - 3 p.m.		Presentation of Academy's past experience with similar project, emphasis placed on the BVE experience and what has been learned from it.

VI. ACCOMPLISHMENTS

A. Project staff, including both Academy and Stanford personnel at both field and central office levels have had an opportunity to meet and work together in an unpressured environment. This has enabled them to focus on critical technical issues without the real-world demands of an operating field office. This experience has provided both staffs a shared, conceptual framework for the project.

B. Important consultants in all major areas of project activity have been introduced to field staffs in a structured and orderly manner. Field staff personnel now have an excellent idea of who these individuals are and what contributions they can be called upon to make.

C. Field staff have acquired extensive new information and insight into the administration and technical responsibilities they will be asked to assume. A small portion of this information is reflected in a series of review questions given to the AED team as one way to measure whether important information was communicated (see attachment).

D. Consultants had the opportunity to review the present state of project planning and discuss the implementation models being proposed.

E. Several specific technical issues were explored. They are as follows:

1. Need for specific behavioral data: Dr. Paul Touchette stressed the importance of collecting precise samples of oral rehydration and other advocated behaviors. These behavioral samples performed in correct ways will then become the basis for the behavioral analysis component. Both videotaping and direct observation were proposed as methodologies for this task. It was included as an early priority for AED activity.

2. Selection of major prevention behaviors: While it was agreed that final selection of prevention behaviors will require field investigation, it was concluded, based upon Stanford's recent review and the advice of two medical consultants that the following four preventative behaviors hold the most promise:

a. Continued breastfeeding through 18 months.

b. Discarding or reheating of weaning foods after 2 hours.

c. Seasonal boiling of water to coincide with seasonal peak of bacterial diarrhea.

d. Repeated handwashing (even with contaminated water).

In addition to the prevention behaviors, two treatment behaviors were agreed upon as early targets of investigation: oral rehydration of children with moderate to severe dehydration, and continued feeding--both breastfeeding and administration of soft foods--during and immediately preceding bouts of diarrhea.

3. Concern over importance of interpersonal factor in oral rehydration instruction: The medical consultants expressed concern that sufficient interpersonal instruction be included to avoid dangerous miseducation which might result from radio carrying too much of the instructional burden. This problem was discussed particularly within the context of teaching oral rehydration mixing and administration behaviors. This view was supported somewhat by Dr. Touchette in his remarks concerning the basically non-verbal nature of the oral rehydration experience and the basically verbal nature of radio. Several alternatives were discussed, including the possible use of transference of stimulus control from health workers to radio.

The discussion of health workers raised another but related issue. While the medical consultants felt comfortable focussing attention on a single health worker within a given community, others, especially Dr. Robert Hornik advised the use of a broader interpersonal network, avoiding the danger of an all-or-none strategy. The relative merits and operational style of village health workers (midwives, and the Honduran Guardianes) were then discussed, and it was agreed that this issue required more understanding of local conditions.

4. Concern over distribution systems for both instructional tools like fotonovelas and behavior-related elements such as oral rehydration packets: General skepticism was expressed that official governmental distribution systems would work. Suggestions were made to explore the commercial and nonformal sectors to find ways to deliver these products in addition to using politically-mandated government channels.

5. Concern over the enormity of research tasks: As discussion continued the number of empirical questions that needed to be answered grew. It became clear that one of the first tasks was the development of a comprehensive list of these questions and then establishment of a system for prioritizing them. It was agreed that sufficient resources were not available to conduct extensive survey research on more than a few of these issues, and that mini-research projects would have to be sponsored to determine face validity of important hypotheses and then monitor these factors as carefully as possible.

6. Concern over a packet-only strategy of oral rehydration: While past discussion had been leading towards a packet-only strategy, particularly in Honduras where the government has made a commitment to WHO-formula packets, Dr. Levine made a case for the inclusion of a home-mix component to reach most of the early cases of diarrhea as a fall-back alternative in the event that packet distribution was delayed. This new position comes out of Dr. Levine's recent experiences in Honduras where field trials of home mix proved to be within acceptable ranges.

The components of this particular strategy include:

1 level teaspoon of home salt (a 5 mm teaspoon)

4 heaping teaspoons of home sugar

1 litre of household water

Both teaspoon and litre sizes must be established by a trained person (local midwife) and explicitly shown to a caretaker.

The new view does not represent a diminution of commitment to packets, but rather as an exploration of a potential backup system. It should be clear that while the recent Levine experience demonstrated safe solution mixing, it did not establish solution efficacy.

7. Increased optimism concerning health status indicators: Both Drs. Black and Kendall made hypothetical cases that mortality indicators may be easier to find than originally thought. While no firm decision on this issue was reached, it was agreed to reopen discussion of mortality as a possible indicator of change in health status.

MASS MEDIA AND HEALTH PRACTICES WORKSHOP REVIEW QUESTIONS

1. **What are the two principle goals of the MM&HP Project?**

   Effective methodology
   Institutionalization

2. **What key words or factors would you list as being particularly important in this project?**

   Radio, fotonovelas, health workers, opinion leaders, systematic approach, rural, diarrheal prevention, and diarrheal treatment.

3. **What are the key institutions involved in the MM&HP Project? Be as specific as possible.**

4. **What offices in the funding agency are responsible for monitoring MM&HP Project activities?**

   Office of Education and Office of Health (DS/ED - DS/H in DSB)

5. **What is the basic evaluation goal of the MM&HP Projec**

   Evaluate the effectiveness of the metho[illegible]ogy and to differentiate between vario[illegible] communication components of the project and roles they play best in such a campa[illegible]

6. **Identify each of the following individuals by their organizational affiliation and relationship to the project.**

Dr. Mayer	**Dr. Corrales**
Dr. Block	**Dr. Estrada**
Dr. Ferguson	**Dr. Velasquez**
Dr. Guzman	**Dr. Isaza**
Dr. Malaya	**Dr. Hysop**
Dr. Searle	**Dr. Sprague**
Dr. Rubi	

7. **How would you define the relationship between Academy and Stanford field personnel?**

Cooperative with overlapping goals, but different focus.

8. **In the absence of clinical information, what is the best source for a definition of infant diarrhea?**

The mother

9. **What is the standard medical definition of diarrhea?**

Three loose stools in 24 hours.

10. **Who are considered infants for the purposes of this project?**

Six months to two-three years.

11. **Name two reasons why diarrhea is particularly dangerous in infants?**

Increases body water, inability to verbalize need, immobility of infant, and homostatic mechanism less efficient.

12. **What is the relationship between diarrhea and malnutrition?**

Diarrhea predisposes toward malnutrition.

13. **What is the single greatest cause of infants leaving their growth curve?**

Infection

14. **Give three reasons why severe diarrhea reduces the nutritional status of a child?**

Fever, lower appetite, food withheld, increased loss of calories, and mal-absorbtion.

15. **What are the two principle causes of diarrhea? Which of these two is of most importance to this project?**

Bacteria and virus

16. **How many bouts of diarrhea can we expect to see in the average child in Honduras per year?**

Four to six

26

17. **According to Dr. Levine, we can assume that bacterial diarrhea will increase during what part of the year?** Hot and Wet

18. What is the best treatment for diarrhea given rural field conditions?

No treatment for diarrhea.
Oral rehydration for dehydration.

19. List by increasing severity the external indicators of dehydration?

5 percent dry mouth/tongue, number of stools, skin turgor; 7-8 percent sunken eyes, frontenal; and 10 percent shock-death.

20. Diarrhea is a consequence of dehydration. T or F

F

21. What are the most common transmission agents for the bacterial causes of diarrhea?

Weaning foods, water, and hands.

22. What are the two key factors governing the degree of weaning food contamination, given initial bacterial levels which are equal?

Temperature and duration.

23. Under certain circumstances, purges can be beneficial in cases of severe diarrhea? T or F

F

24. What are the four behaviors which Dr. Levine advocated as having the most likelihood of positively affecting the morbidity of infant diarrhea in a village setting?

Continued breastfeeding, hand-washing repeated, boiling water seasonally, and discarding/reheating weaning foods after two hours.

25. List one or two specific contributions which you feel the following individuals might make to the MM&HP Project. Examples: design survey questions, develop training system for health workers, etc.

Dr. Robert Hornik:

Dr. Paul Touchette:

Mr. Bill Novelli:

Dr. Mike Levine:

26. **What two factors seem to be highly correlated with the number of infants who actually die from diarrheal dehydration?**

Malnutrition and other infections.

27. **Do viral or bacterial agents tend to cause more severe diarrhea?**

Viral

28. **Worms are one of many causes for diarrhea? T or F**

F

29. **Give three examples of variables that could be used to segment the broad MM&HP Project audience.**

Age, childcare involvement, and radio ownership.

30. **What factors are involved in social marketing that are not generally considered by social advertisers?**

Product research

31. **What are some of the variables which can be changed to make our oral rehydration "product" better....different?**

Packaging

32. **List three of the non-instructional roles that radio can play in a developing country?**

Institutional catalyst, organizer, maintainer, and equalizer.

33. **List three of the factors which predispose toward success in a mass media program?**

Shared project goals in government, complement mass media with other channels, need to change environment, and research is needed.

34. **The duration of a typical bout of acute infant diarrhea is _____.**

Three to four days.

35. **How many bouts of infant diarrhea would we expect to see in a given child annually?**

Five to six

36. What percent of total indidences or bouts of diarrhea can we expect to show some sign of dehydration?

Ten percent

37. What percent of total incidences can we expect to lead to severe dehydration and possibly death?

One percent

38. How can a rural mother differentiate between acute diarrhea and dysentary?

Blood and mucus in stool.

39. How many infants per thousand die annually in Honduras?

117

40. What percent of those deaths are attributable to infant diarrhea?

30 percent

41. How many episodes of diarrhea per year can we expect to happen in Honduras?

1.8 million

42. What is the basic unit of data required by a behavioral analysist?

A clear picture of the behavior performed well.

43. What three basic factors does a behavioralist look at to design an effective behavioral modification program?

Antecedents, behavior, and consequences

44. Give an example of how "transfer of stimulus control" might be used by the MM&HP Project?

In training of health workers, transfer them from interpersonal training to radio training.

45. Give an example of how "reinforcing approximations" might be used in the MM&HP Project.

Get health workers to positively reinforce mothers for those things they do properly, even if several segments of the behavior are performed badly.

INFORME REUNION DEL COMITE DE COORDINACION DE PROCONSI (COCOP)

El 27 de marzo de reunió el Comité de Coordinación de PROCONSI para deliberar sobre el Informe de Selección de Región que se le había pasado a cada miembro el 25 de marzo.

1. En dicha reunión se discutieron los siguientes puntos:

   a. Argumentos técnicos para la elección de la Región
   b. La política del Ministerio a seguir respecto del uso de los sobrecitos de rehidratación oral.
   c. Las actividades que debería asumir la Comisión de Coordinación del Proyecto.
   d. La institucionalización del Centro de Rehidratación oral en el Hospital Escuela.

2. Las conclusiones a las que se llegaron sobre estos puntos fueron las siguientes:

   a. El Comité aceptó y ratificó las conclusiones a las que llegó el Informe de Elección de la Región. Es decir, encuentra que las razones expuestas para elegir la Región 1 están de acuerdo a las necesidades explícitas y a los criterios técnicos que el Proyecto tiene que tener en cuenta en virtud de sus objetivos. Se anotó sin embargo, que tan pronto el Proyecto haya encontrado un modelo operativo de Comunicación Radial, que dicho modelo se haga extensivo en cobertura a nivel nacional para apoyar la

distribución y demanda de los sobrecitos cuando estos se encuentren listos.

b. Quedó claro que entre el suero casero frente al suero preparado con los sobrecitos, el de los sobres sería el tratamiento que el Ministerio asume como el más indicado, respetando, claro está, el tratamiento específico y adicional para aquellos casos complicados (shigueiosis, salmonella, virales, etc.).

c. El punto de participación de la Comisión quedó consignado en varias actividades:

- Programar la forma, método y canales de difusión del método de rehidratación oral a la comunidad médica que no se encuentre al tanto de los beneficios del tratamiento.

- Elaborar una serie de normas pediátricas para el uso, preparación, administración y seguimiento del tratamiento con el suero oral de sobrecitos.

- Ofrecer la asistencia necesaria a fin de que PROCOMSI pueda hacer el análisis e interpretación de los datos obtenidos en la Fase de Investigación.

- Participar en la definición de los contenidos técnicos que formarán parte de los contenidos de la campaña de comunicación.

d. Respecto la institucionalización del Centro de Rehidratación

oral, se decidió formar un Comité de Acción coordinado por la División Infantil. Dicho Comité hará los contactos y sondeos necesarios para determinar la posibilidad, los costos de instalación, la financiación de funcionamiento y la elaboración de un potencial programa de adiestramiento. Este último punto ofrece perspectivas interesantes en la medida en que dicho Centro se convierta a la vez en el lugar de adiestramiento del personal de Salud que va a promover en las Regiones el tratamiento con los sobrecitos.

3. Solicitud.

De acuerdo al tenor de la reunión, se solicita al Dr. Guzmán una carta que comunique a la Regional que PROCOSI se implementará en la Región 1.

4. Asistentes: estuvieron presentes en dicha reunión las siguientes personas:

Dr. Rubí	Dr. S. Romero
Lic. María Teresa de Cerolla	
Dr. D. Velásquez	Dr. A. Zelaya
Dr. B. Rivera	Dr. R. Pareja
Dr. V. Ramos	Lic. Gertalina de Ramos

METHODOLOGY OF THE SELECTION OF THE HEALTH REGION FOR THE MASS MEDIA AND HEALTH PRACTICES PROJECT (PROCOMSI)

Honduras is divided into eight health regions, the Metropolitana and seven rural regions. The first phase of the Project was to select, with the assistance of the Ministry of Health personnel, the region most acceptable to the Project implementation. The criteria for selection included:

1. Population between 350.000 and 450.000 people.
2. Rural population.
3. Reasonable access to the health facilities and aldeas.
4. Good attitude toward and acceptance of the Project by regional health personnel.
5. No other major health problem or epidemic which would detract from the stress on infant diarrhea.
6. Minimum amount of foreign radio interference.
7. Regional radio stations capable of mounting a campaign.
8. High statistical incidence of infant diarrhea.
9. Identification of the problem of infant diarrhea by the campesino as well as health professionals.
10. Presence of a relatively effective community health system.
11. No other major health project in the area which would detract health personnel from the infant diarrhea problem.
12. Relatively dense population (especially for evaluation purposes).

I. PRE-ELIMINATION.

The first stage of site selection entailed interviews and discussions with the heads of the Ministry of Public Health Divisions and other Ministry personnel. These interviews gave the Project personnel the opportunity to make the initial contact with the various Division heads, formally

present the project, learn about the Divisions, especially their relation to the regional health structure, and solicit opinions about the strengths and weaknesses of each region. In particular we discussed:

The health system in general

Health personnel

Health facilities

Transportation and communications services

Foreign radio interference

Presence of local and national radio stations

Use of oral rehydration therapy

Environment health status

Health statistics: population, population density, cases of diarrhea, numbers of Ministry installed wells and latrines, numbers of health personnel and facilities

Projects planned in the regions

Previous health studies and reports which could be helpful to the Project

Candidates for the three Project counterpart positions.

From these discussions, we eliminated five of the eight regions:

Metropolitan: Immediately eliminated due to the criteria of PRCCOMSI as a rural project.

Region 3: Population of 999,514 too high for the project criteria.

Region 5: High incidence of radio interference from El Salvador and Guatemala. US$10 million AID environmental sanitation project planned for 1980.

Region 6: No access to the region during the rainy season, the time the project will probably need to mount the campaign and remain

in constant contact with regional health personnel.

Region 7: Population of only 203,818, too low for the project criteria. Seven million dollar European Commonwealth environmental sanitation project planned for 1980.

The remaining three regions were then scheduled for site visits to acquaint the project personnel with the realities of the regional health systems.

II. SITE VISITS.

Presentation of Project to the Regional Director and Personnel.

Regional Hospitals. The project and project personnel were first formally presented to the Regional Director who had been previously contacted by Dr. Zelaya, the head of the División de Educación. We explained the concepts of the project, the purpose of our visit and then discussed the region with the various personnel the Regional Director indicated. The object of this visit was to assess the interest in and support for the project at the regional level and to obtain a general panorama of the region, i.e.

Number and location of health facilities.
Number and location of Ministry personnel.
Road conditions and transportation to the CESARES.
Number, location and utilization of the community health workers.
Methodology of Ministry supervision of the areas.
Locations where oral rehydration is presently being used.
Projects (both health and other) in the region.
Planned training courses of health personnel.
Our field site visit route was then planned with the help of the Regional Director and other regional personnel to obtain the best sample contact with the areas as possible.

Field Site Visits - CESAMOS AND CESARES.

During our visits to the CESAMOS (Centros de Salud with Doctors) and

CESARES (Centros de Salud without doctors, only auxiliares de Enfermería) in the regions we tried to obtain direct contact and experience with the reality of community health problems and treatment as seen by the local Ministry personnel, community health workers and users of the health facilities. One team member assessed the formal and community health system through personal interviews, the second looked at the anthropological aspects and the third studies the communication system within the region. In particular we looked at the following points:

Formal Health System.

1. Opinions of the major socio-economic problems in the area.
2. Opinions of the major infant health problems.
3. Treatment of diarrhea at the health facility. If suero casero was used, what was the recipe, how and by whom was it prepared and administered.
4. Seasonality of diarrhea.
5. Traditional beliefs about the causes and treatments of diarrhea.
6. Health statistics system.
7. Facilities - including clinic space, cleanliness, available medicines and health forms.
8. Other institutions and programs present in the area.
9. Numbers, location, training and activity of community health workers.
10. Attitudes of the formal health workers towards the community health workers.
11. Interest in and acceptance of the project.

Community Health System.

1. Status within the community.
2. Training.
3. Opinions of major health problems in the area.

4. Treatment of diarrhea. If suero casero was used, what was the recipe, how and by whom was it administered.
5. Frequency of patients (and or projects).
6. Attitudes of the community health workers towards the formal health system.

Local Anthropological Conditions.

1. Size and patterns of the communities.
2. Level of environmental health.
3. Major ferias and saints days.
4. Water sources.
5. Migration in the area.
6. Ethnographic material such as sources of income, agricultural patterns, etc.
7. Attitudes and patterns of use of the formal health system and community health workers.
8. Existence of and interest in the problem of infant diarrhea.
9. Other health facilities and traditional health workers in the community.
10. Political stability of the area.
11. Sources of interviewers for the initial investigation and final evaluation.
12. Facilities for training courses.
13. Control group for the final evaluation.

Communications.

Methods of accessing communication within the regions included:

1. Inventory of radio stations received by the project AM/FM portable radio.

2. Visits to local radio stations. The visits included:

   - Discussions with the owner or manager of the station filling out previously designed questionnaire.

   - Tours of the station facilities.

3. Audience Listening Habits Survey: A short verbal questionnaire was given to the patients waiting in each of the health facilities and, when time permitted, other people in the village. The sex and approximate age was noted and each interviewee was asked:

   - Do you have a radio in your house?

   - What stations do you listen to? When?

   - What are your favorite programs?

   - Where are you from?

   During the second week of field visits two other questions were added:

   - How many bands does your radio have.

   - If you don't have a radio in your house, do you listen to radio somewhere else? Where, when and how freqmently?

4. Radio Audience Inventory - an inventory of stations actually being listened to was also made.
   The name of the station, who was listening and what they were doing were noted.

5. Inventory of Bus Service from the Sites.

6. Visit to the telegraph and telephone service (When possible a call was placed to Tegucigalpa).

7. Visit to the Post Office - when possible a letter was sent to Tegucigalpa.

8. Availability of batteries for local radios - visits to stores.

9. Use of photonovelas - An informal discussion was held with groups

of women (in some cases groups of parteras) in various sites when time and opportunity allowed. The women were first explained about out visit, then asked if they ever read or looked at fotonovelas. We then showed the women eight fotonovelas ranging from Walt Disney comics to a romance novel, and asked them if they had seen any of them before. If so, which ones had they seen, who read them, how often, etc. We then asked the women to pick up and look at any of the fotonovelas they liked and noted which ones they preferred.

10. Inventory of paved roads.

11. Accessment of Ministry Two-way Radio System in the Region.

12. Assessment of dirt roads.

III. SELECTION.

The information from the field visits was first compiled and discussed with members of the Division of Education. A presentation was then made to the Project Coordinating Committee recommending that Region I be named the area for PROCOMSI implementation. (The Project Coordinating Committee is made up of the Director General of the Ministry of Health and personnel from the various health divisions; i.e. Nursing, Environmental Sanitation, Pediatrics, Maternal, Education and Epidemiology). The committee members felt that in spite of the fact that Region I corresponded best to the Project's criteria, Region II should be selected for the implementation. Group discussion revealed that the committee members felt that Region II was the "forgotten part" of the country. Region II is known to be one of the least developed areas in the country, not just in health, but in other sectors as well. International projects have been implemented in almost every other part of the country except Region II and the Mosquitia. Several participants in the meeting were newcomers who didn't understand the Project's size or goals. They thought that one of the objectives of the project was to give financial support to and improve the formal and community health systems in the region. Several

members needed more information before they could endorse our recommendations.

A fifteen page report was then written describing the project, it's goals and methodology, the criteria for selection of the region, and the field site visits. A week after reading the report and discussing it with the Project personnel and members of the Division of Education, the Committee endorsed Region I as the area of implementation. They also set up a committee to help implement a permanent "Sala de Rehidratación" at Materno Infantil.

CRITICAL BALANCE OF REGIONS I, II and IV

When the results of the field trips were first compared, it was obvious that Region IV didn't correspond to the Project's site selection criteria:

1. What is favorable in Region IV?
   Region IV has a well organized and active community health system. It has an adequate road network and accessibility to the majority of the CESARES and aldeas.
   Local and Tegucigalpa radio stations are popular.

2. What is unfavorable?

   Region IV has an epidemic health problem: malaria. This year, even more than previous years, the number of malaria cases is expected to reach a very serious level. The regional health system will, therefore, be polarized to fighting the epidemic impact. This will certainly distract, if not actually curtail, the health personnel's attention the Project's goals to diarrhea prevention and treatment. Regional health statistics show that although the number of diarrhea cases is as high as other regions, malaria cases are even more frequent. Thus the activities of the health personnel would certainly be distracted if not completely refocussed on the region's number one health problem, the control of malaria.

   Secondly, AM Salvadorean radio stations have a large and frequent audience along the southwest portion of the region. Nicaraguan

radio, which seems to be less popular, also enters the south-eastern part of the region, although only at night. This foreign radio interference would make it difficult to implement or evaluate the radio component of the project.

Finally, the field visit indicated that there is a good deal of migration between El Salvador, Honduras and Nicaragua due to the Panamerican Highway which cuts through the region. During the Nicaraguan revolution, over 60,000 refugees entered the region. The same migration could enter from El Salvador within the next year. Considering the political instability of these neighboring countries there is a serious possibility that massive migration would hamper the implementation and evaluation of the project.

These factors excluded Region IV as a candidate for the project and left the decision between Regions I and II. In order to decide, the data from both regions was compared. The basic points which were analyzed were:

A) THE HEALTH SYSTEM.

The Ministry of Health (MOH) has divided the country into eight sanitary regions. The regional supervisors include a Regional Director (a doctor), a Regional Nurse, a Regional Coordinator of Promotores de Salud and the Regional Hospital staff. Each region is subsequently divided in several areas. Each area has an Area Nurse and Promotor de Salud, who supervise the staff at the CESAMOS (Health Centers with doctors) and CESARES (Health Centers with "Auxiliares" or Nurses aides).

The staff at the CESAMO and CESAR level in turn supervise and train the community health workers, Parteras, Guardianes and Representantes.

Ideally, patients are referred from the CESAR to the CESAMO and if necessary to the Regional Hospital. The ideal region is one which shows a sufficient number of CESARES to attend the local population

in the aldeas, enough CESAMOS to properly attend the referred cases and sufficient hospital facilities for major surgery and treatment of the most serious cases.

Both Regions I and II show a significant presence of CESARES, CESAMOS and hospital facilities. In general, however, the facilities in Region I are cleaner and better organized and attended than Region II. Furthermore, the community health workers are more numerous, better organized and more active in Region I than in Region II. The sites visited showed the following statistics:

	Region I	Region II
Parteras	244	206
Guardianes	257	112
Representantes	234	18
Promotores	16	2

Region I also has a more comprehensive annual work plan for 1980, especially continuing education courses for the community health workers. Out of seven sites visited in Region I, four planned "readistramiento" courses in 1980, while only two out of eight sites in Region II expected to hold such courses. Planned selection and training programs for new community health personnel were surprisingly low in both regions. However, Region I had at least one more selection and training course for community health workers than Region II. Region I has also programmed educational talks at the CESAR level while Region II has not. This indicates that the community health volunteer program has been implemented somewhat in Region I, while it is just beginning in Region 2.

A vaccination campaign was also scheduled in Region I, while none was mentioned in Region II.

SUMMARY:

Region I has a more active and responsive formal and community health

system, an essential criteria for site selection.

B) SUPERVISION OF HEALTH PERSONNEL WITHIN THE REGIONS.

Supervision of health personnel within the Regions is performed through personal visits, meetings and monthly reports. In Region I, the area personnel meet monthly, while in Region II the personnel meet once every three months. The developed road and transportation systems within Region I encourage more frequent visits to the CESARES by the Area Health Supervisores. (See E)

Ministry of Health supervision and contact is more frequent in Region I. However, the Region frequently has shortages of gas (as do all of the regions) which will limit the number of personal visits to the CESARES, unless the supervisors utilize the project vehicle or the project is able to purchase gasoline for Ministry of Health vehicles.

C) FOREIGN RADIO INTERFERENCE.

The major anticipated communications problem was that of radio interference from outside of Honduras. One of the main goals of the field visits was to study the range and audience of foreign radio stations.

The questionnaires, inventory of stations actually being listened to and conversations in the region lead us to believe that Radio Sandino is the AM Nicaraguan radio station which presently reaches Region I. This station is on the same frequency as Radio America, a strong Tegucigalpa radio station which broadcasts only during the day. Radio Sandino can only be heard at night from approximately 6:00 p.m. to 5:00 a.m. Reports indicate that a samll audience listens to Radio Sandino at night and early in the morning (4:00 a.m.) However, almost 100% of the people. when asked "What stations did you listen to yesterday?", reported they had listened to Honduran radio stations. Several who said that they sometimes listened to Nicaraguan radio said they listened more frequently before the coup when Somozan radio broadcast only rancheros and short newscasts.

Reports from the questionnaires, inventory of stations being listened

to and conversations in Region II, however, show that there are several commercial AM and short-wave Salvadorean stations which enter into the region as far as the major population centers of Marcala and La Esperanza. The audience reported listening both day and night. One entire corner of the region on the border of El Salvador (Departamento de Intibucá), a population of approximately 41,500 receives no Honduran radio stations at all due to the high mountain.

REGIONAL RADIO STATIONS.

Region I supports five local radio stations while Region II supports eight. Facilities range from one small control room with a turntable and cassette tape recorder to a full size,professionally equipped control room with separate recording and mixing studio. One or two of the stations in each region are affiliated with one of the national networks Audio Video or Emisoras Unidas. The complete description of the facilities, programming and tariffs of each station has been filed for further Project use.

There is a substantial audience, in both regions, of the local radio stations. In Region I, however, the local stations are located only in the southern part of the Region. In the northern part of the region, most of the audience listens to Tegucigalpa radio stations. The Project will, therefore, have to utilize national radio as well as regional radio stations to reach all of the target audience.

Numbers of radios in both regions appears about equal. The field questionnaires indicate that approximately 80% of the families have radios in their homes. Approximately 20% own a second small transistor which the male members of the family will carry with them to work.

Listening patterns in both regions are similar. The audience is largest in the early mornings, lunch time and evenings. The programs with the largest audience are newscasts. Almost every person in both regions indicated that their family listened to the news, frequently two or

three times a day. Programs featuring rancheros were the second most frequently mentioned. Women indicated that radio novelas including three political satires, were their favorite programs. One Tegucigalpa station, in particular, programs radio novelas almost the entire day.

Radio stations in both regions are capable of mounting and maintaining a health campaign. Most local radio stations have an interesting and thriving two-way rapport with their communities. All stations program "Social Service Announcements", usually during their ranchero programs, which include lost and found, deaths, vaccination schedules, and other public service announcements. Several stations act as mail distributors. Letters are sent to residents in the area in care of the radio station. Many stations offer a personal message service. Listeners will send letters or personally dictate their announcements to station personnel with greetings and messages for their friends and families. Three stations allow the campesino to deliver his or her message personally. There is frequently a steady stream of visitors to the station leaving and dictating their messages. Another public service program is the "marathon" wherein the stations raise money for a "good cause", frequently to pay the hospital expenses of a poor family. The announcers explain the problem and ask people to pass by and leave money at the station. During International Year of the Child, one radio station had children come to the station to talk and signing on the air. Winners of games were awarded prizes donated by local businesses.

Exactly how the project can utilize and expand on this two-way rapport will be developed during the initial media investigation.

AVAILABILITY OF BATTERIES.

Since a good part of both regions is yet without electricity, most campesino radios are battery-powered. It appears that there is less problem with seasonal shortages of batteries in Region I than Region II due to the more extensive and better maintained road network. (See E).

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One woman in Region II reported that her family never listened to the radio while it was raining because they believed that lightening would strike them through the radio. This opens up a new area of inquiry. Are there reasons, other than lack of batteries, which would cause caretakers to stop listening to the radio during certain times of the year, especially during the rainy season?

SUMMARY.

Region I is the stronger candidate in the area of radio due to the smaller amount of radio interference from outside of Honduras. The large Salvadorean radio audience within Ragion II would completely eliminate at least the southern part of the region.

However, two major problems must be kept in mind as the project is mounted in Region I. First of all there is the possibility that Radio Sandino will amplify their signal and programming to encourage a larger Honduran audience. Secondly, and most importantly, the need to use Tegucigalpa radio stations, which reach most of the rest of the country as well as the target audience in Region I, will complicate identifying an evaluation control group which is completely free of Project radio message contamination. On the other hand, however, the use of national stations make the radio spots and mini-programs more cost effective as we will actually be reaching a much larger audience than the target audience within the region.

D) PHOTONOVELAS.

The presence and audience of photonovelas in both regions was much smaller than had been anticipated during the January project seminar in Washington, D. C. Three groups of women in each region were shown and discussed samples of photonovelas. Most of the women reported that they hadn't even seen the photonovelas before. Those that had seen them said that only their children looked at the comic books. The only women who reported they had read photonovelas were three of

the nurses who all preferred the romance photonovelas.

Sales of photonovelas was uncommon in the large towns of the region and non-existant in the smaller ones. Consumption of photonovelas seems to be by a small urbanized and educated audience. Further studies in the region will reveal what role photonovelas can have within the campaign.

E) ACCESSIBILITY AND TRANSPORTATION.

The roads and transportation system are more developed in Region I than those in Region II. Region I has approximately 285 kilometers of paved roads while Region I has only 110 kilometers. Due to the geography of the region, the secondary unpaved roads in Region I are in relatively good condition but deteriorate with distance from the primary paved roads. In Region II, however, due to the mountainous terrain, the secondary roads are in very poor condition and deteriorate even further during the rainy season. Many of the CESARES are completely inaccessible during the rains.

Bus service along the paved roads is frequent in both regions. Congruently, however, since Region I has more paved roads, it also has a more numerous and frequent bus service. Public transportation to the aldeas along the unpaved roads is also more developed in Region I than in Region II. Most CESARES in Region I have bus service, while many in Region II do not. Public transportation vehicles in Region I are usually middle and small size buses, while in Region II vehicles are usually pickups and trucks.

The developed public transportation system in Region I has increased the numbers of people going directly to the capital for medical service without being referred from the regional medical services. For example, in Dr. Michael Levine's recent Oral Rehydration Study at Materno Infantil (the national hospital), 26% of the patients studied came from Region I. This is understandable when there is direct bus service from a town in

the region to Tegucigalpa, but none to Danlí, the Regional Hospital. There is no direct bus service from Yuscarán or Talanga (CESAMCS) to Danlí, site of the Regional Hospital, but there are several direct buses a day to Tegucigalpa. This problem diminishes somewhat in the southern part of the region where all bus service to the capital must pass through Danlí first.

The most important transportation question during the field visits, besides accessibility of the CESARES, was the amount of migration between Honduras and the countries bordering on the regions. (In Region I, Nicaragua and in Region II, El Salvador). Presently there appears to be little migration from Honduras to Nicaragua and vice-versa in Region I. The population which most identifies with Nicaragua is reported to be a small one (approximately 10,000 people) along the border, especially in the "Zona Reclamada". In Region II, however, the migration between Honduras and El Salvador is active in spite of regulations to the contrary. Harvesting coffee provides the major source of income in the southern part of Region II, and Hondurans are reported to harvest on both sides of the border. Many people in the region have family in El Salvador and visits are frequent. The Director of Region II reported "Many people in the area lose the concept of nationality".

This identification and migration between Honduras and El Salvador would become even more serious if there were a revolution in El Salvador. Many people in the area felt that, in spite of regulations, there would be a massive migration from El Salvador into the area. Recent reports indicate that, in fact, three hundred families have recently crossed from El Salvador into Honduras.

SUMMARY.

Due to better roads, more developed public transportation system and less migration from neighboring countries, Region I is the best candidate for the project in terms of accessibility and transportation.

However two major transportation problems will need to be considered in Region I. Some of the CESARES don't have bus service, although al-

most all can be reached by private car. Secondly, there will be periods during the rainy season (reportedly only two or three days) at a time when the aldeas and CESARES are inaccessible due to high rivers.

F) TELEGRAPH, TELEPHONE AND MAIL SYSTEMS.

The telephone system is more developed in Region I. The major towns in the region have public telephones which, for the most part, are reliable. The telephone system in Region II only functions well along the paved roads. For example the telephones in Marcala, a major population center in the southern part of Region II, were reported not to function for several days at a time, and three attempts to call Tegucigalpa during our visit failed.

The telegraph system appears to be widely spread throughout both regions. The Ministry of Health uses the telegraph to send their weekly epidemiological reports to the regional offices.

The mail system appears to function more frequently in Region II. Five out of five letters sent from Region II arrived in Tegucigalpa, even though two of the letters took more than a week. Only one out of five letters arrived from Region I.

The Ministry of Health maintains two-way radio contacts with the Regional Hospital and one CESAMO in each region. (El Paraíso in Region I and La Esperanza in Region II).

G) THE DIARRHEA FACTOR.

1) Presence.

Reliable health statistics are difficult to obtain in all of the regions due to the methodology of collecting and recording the data. Individual case histories are only recorded at the hospital level. The CESAMOS and CESARES collect the data on "family health cards" (Carpeta Familiar). The card lists the name of the family, and only occasionally the name of individual in the family. This complicates isolating the disease that motivated an individual to come to the CESAR or CESAMO. Health personnel at the CESARES and CESAMOS do record numbers of cases

which come to the facilities and are responsable for submitting a weekly epidemiological report to the regional office. These reports are usually submitted by telegram and errors are frequent.

However, both the epidemiological statistics and verbal reports by health personnel in the regions indicate that diarrhea is the foremost disease affecting children under 4 years old. The health personnel in both regions reported that half of the patients brought to the CESARES were children under four years old and of those children more than half came to be treated for diarrhea.

The statistics obtained from the Regional Hospital in Region II demonstrate this as well:

MONTH	YEAR	CHILDREN 4 Yr.under	WITH DIARRHEA PROBLEMS	%
January	1978	117	85	73%
	1979	187	121	65%
	1980	246	132	54%

It's noteworthy that these statitstics were collected in January, the lowest point in the seasonality of diarrhea. The health personnel in all of the regions reported that the peak incidence of diarrhea was during the rainy season, May throught August. During the cooler months of November through January there is an increase in broncopulmonary diseases.

2) Treatment.

Health personnel in both regions prescribe the same treatment for infant diarrhea, caolin with pectina or neomiciacine and anti-spasmodics. The medicines are produced by the Patronato Nacional de la Infancia (PANI) for the Ministry of Health. However, the Ministry of Health and PANI have recently decided to produce oral rehydration solution packets instead of caolin. Some health personnel also recommend the use of commercial oral rehydration solution such as Oralyte,

Electrolyte and Suero Glucosado for light dehydration cases. Extremely dehydrated cases should be referred to the CESAMO or Regional Hospital. Oral rehydration treatment is seldom, if ever, used as a substitute for IV's at these facilities.

Frequently health personnel recommend that mothers use homemade "suero casero", made of sugar, water, salt and bicarbonate. The formula recommended by the Ministry is outlined in the Auxiliares Manual:

Boiled water 1 liter + salt 1/2 teaspoon + sugar 3 tablespoons + a few drops of lemon or orange juice.

Yet health personnel in both regions were unable to respond with the correct formula. Out of 22 formulas reported in the two regions, only two of them were the same. The only measure that was correctly remembered by all of the auxiliares was the one liter boiled water. The amount of salt recommended varied from one pinch to two teaspoons and that of sugar from two teaspoons to three tablespoons. The health personnel in both regions are also confused about administration of food to children with diarrhea. The health personnel recommended withholding food and liquid (including breastmilk) from six hours to twenty-four hours.

3) Use of Oral Rehydration Packets.

Region I is the only site actually using WHO Oralyte packages for oral rehydration therapy. A loosely controlled experiment is presently being implemented in a CESAR in Oropolí. The Oralyte packages are distributed by the Guardianes who are charge of instructing the mothers in the preparation and administration of the solution. The Guardianes are to maintain a record of the number of patients treated and the reaction to the therapy. Our recount of the number of patients treated with the Oralyte seemed high, 80 children during the months of December 1979 and January 1980. The final results are still pending.

4) Studies.

Region I was also the site of the best, if not only, methodological study

of diarrhea, "Algunos Factores Socicepidemiológicos y de Atención Médica en Relación con las Diarreas en Niños Menores de 5 años en el Area de Danlí (Honduras)".

This study is a valuable reference document which is not available in other regions.

5) Traditional Beliefs and Treatments.

The reports from both regions indicate several common explanations for the causes of infant diarrhea. Basically they are: worms, certain kinds of foods (cow and powdered milk were frequently mentioned) infant teething, "empacho" (a complicated explanation of constipation) the "mal de ojo" (a strong psychic look which makes a child ill), and the "caída de mollera" (sunken fontanels).

These beliefs seem to be widely spread throughout all three of the regions visited which indicates that similar strategies can be utilized by the MOH when the campaign is amplified on the national level.

H) INSTITUTIONAL PRESENCE.

Both regions show a liberal presence of development institutions, governmental and private, which could provide support to the project. Both regions have the Instituto Nacional Agrario (INA), Instituto de Formación Profesional (INFOP), HONDUTEL (Telecommunications), Junta Nacional de Bienestar Social (JNBS- implements feeding programs for malnourished children) Recursos Naturales, and educational facilities (generally a small school at the village level and several secondary schools in each region).

There are also several non-governmental institutions such as cooperatives, unions, church related organizations, and housewife clubs which also may prove to be institutional linkages for the project.

Although the presence is high in both regions, the institutions are far more active and their community impact more evident in Region I.

CONCLUSIONS

Comparing the selection criteria with the data obtained from the field trips, the following conclusions were drawn:

Both regions correspond to the Selection Criteria of:

- Population between 350,000 and 450,000 people.
- Rural Population.
- No other major health project in the region which would detract the health personnel from PROCOMSI.
- No major health problem or epidemic more evident than the problem of infant diarrhea.
- Regional radio stations capable of mounting a health campaign.
- High incidence of infant diarrhea.
- Identification of the problem of infant diarrhea by the campesino as well as health professionals.
- Good attitude towards and acceptance of the Project by Regional health personnel.

However, Region I is a far stronger candidate in the areas of:

- Radio Interference: Region I (at this time) has less foreign radio interference than Region II.
- Community Health System: Region I has a more numerous and more active community health system than Region II.
- Accessibility: Region I has more paved roads, a larger secondary unpaved road network and a more developed public transportation system than Region II.
- Population Density: Region I has a relatively more dense population than Region II.

Given the fundamental criteria of a minimum of foreign radio interference, a relatively developed and active community health organization and access

to most of the aldeas in the region, the field trip data shows Region I to be the best candidate for PROCOMSI implementation.

TRIP REPORT

PROJECT SUPPORT VISIT

MASS MEDIA AND HEALTH PRACTICES PROJECT

February 10-20, 1980

Objectives:

1. To initiate establishment of the MM&HP project office in Honduras.

2. To begin planning of first three month activities.

Participants:

AED

Dr. Reynaldo Pareja
Ms. Elizabeth Booth
Dr. William A. Smith

MOH

Subsecretary of Health
Director General of Health
Directors of the Office of Maternal Care, Pediatrics, Epidemiology, Human Resource Development, Nursing, Environmental Sanitation, Health Education, plus the regional directors of all health regions in the country.

Stanford

Dr. Dennis Foote
Dr. Karl Kendall

USAID/Honduras

Dr. James Stone, Head of Human Resources Division
Dr. Tom Hyslop, Head of Health Office
Mr. Joseph Leo, Contracts Officer

Activities:

A. Administrative

1. Discussed local AID regulations and the relationship between Washington contractors and AID/Honduras with Jim Leo. Received information on local allowances, on mission assistance with importation of goods, and on vehicle acquisition.
2. Coordination meeting with James Stone and Tom Hyslop at which MM&HP Project was discussed as it relates to other AID efforts in MOH.
3. Protocol meeting with subsecretary of Health at which the subsecretary demonstrated full support for the project. Immediately following the meeting, he began the process to pursue legal status of project for the purpose of goods importation.
4. Established a petty cash fund for local expenses.
5. Hired a research administrator who will also function as project secretary. This woman has extensive experience with international projects, is bilingual, has administered local fund accounts, and is well-versed in Honduran labor law.
6. Office space and furniture are being acquired. While the Ministry is presently in a very tight position, the director of the Health Education office gave up his own space, moved into a much smaller area, and was active in getting office furniture for the project.

B. Technical

1. After several meetings with different members of the MOH hierarchy, a decision was made that the following three regions be considered as possible sites for the project: Danli, Comayagua, and Choluteca. The remaining four regions were excluded due to travel time from Tegucigalpa, low population size or excessively high population size. Reynaldo, Bette, and Karl developed a 12-day site visit

schedule including lists of people to be visited and information to be collected. The results of this process will be presented as a formal recommendation to the Ministry for their final determination of project sites.

2. Two formal presentations were made to Ministry groups during the visit. The first was a meeting of all health department heads and regional medical officers. This proved to be an excellent opportunity to make a structured explanation of project goals. Reception was generally very favorable. There were questions about the following:

   a. the need to include environmental sanitation in the project;

   b. the role of investigation and implementation (concern was expressed that the project be more than another foreign sponsored study of local conditions). The implementation aspects of the project were reiterated; and

   c. the funding source and the contribution the MOH was being asked to make. (There was concern that the Ministry was being asked to contribute to a project which many members of the group had not heard of before.)

   The second meeting was with the department heads in Tegucigalpa, and was based upon a graphic presentation of how radio, print materials, and health worker contact would function as a unified whole in the project. This presentation seemed well received and the MOH representatives expressed appreciation in being involved in the early stages of project development.

3. A one-day visit was made to the Danli region where the regional hospital, a small health center (CESAMO) and a health post (CESAR) were visited. Anectodal information was collected on midwife activities, much of which raised interesting questions. Two

cases of midwife desertion from the program seemed motivated by a) the midwives need to charge higher prices after being trained and the people unwillingness to pay more, and b) by the midwives own increased realization that difficult births should be referred to health centers but meeting with family resistance to this suggestion. One midwife was threatened with a machete when she told a husband his wife should go to the health center rather than having the baby at home.

A local doctor who has been prescribing the simple sugar and salt solutions claimed to have had success with it. The health post visited administers kaolin* compounds and does advise home-mix oral rehydration solution.

4. Visited with PAHO consultants presently conducting a study of the comparative effectives of home-mix and WHO formula rehydration solution in the maternal-child health hospital in Tegucigalpa. Even though the study was just beginning, one interesting problem has been noted. It appears that dehydrated children who have received purges before arriving at clinics are often very deficient in potassium. It is doubtful that home-mix is capable of restoring potassium levels and if potassium continues to deplete, the child may suffer death. It is yet unknown how many dehydrated children might be potassium deficit but it adds importance to the investigation of purging behaviors before a home-mix program is supported.

5. A number of local fotonovelas were purchased and plans include taking these on site visits to begin audience acceptance tests.

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* Progress is being made within the Ministry to stop distribution of these compounds to health facilities. This is based on the relatively little evidence of positive effects of these substances and significant evidence of their potential harm.

6. Job descriptions were designed for each of the three Ministry counterparts to be hired by the Academy during the first year. Several candidates have been interviewed, but no decisions have yet been made.
7. The draft work plan developed in Washington was reviewed and no major changes were made. It continues to be the principal guide for the next three months activity.
8. A treatment was developed for the production of an instructional videotape demonstrating how oral rehydration works. This was discussed with Ministry officials who were interested but suggested that some later date might be more appropriate. This videotape would be used to a) develop the behavioral model of exemplary oral rehydration behavior, b) to promote oral rehydration among both private and government physicians, and c) publicize the Ministry's efforts to develop effective oral rehydration therapy.

CEFPA WORKSHOP ON INTEGRATION OF ORAL REHYDRATION INTO COMMUNITY ACTION PROGRAMS

CONFERENCE HIGHLIGHTS

A conference report will be produced and distributed to participants. In the interim, I thought that a review of the conference highlights might be useful to you. What follows is a listing of interesting ideas which came up during the conference experience.

I. The conference was designed largely for representatives of PVO's. There was good attendence and considerable interest in using oral rehydration therapy (ORT) within the group. A wide range of experience was present, from groups who had little more than heard about ORT to groups which had been using it in one form or another for quite some time. David Morley was there and brought his considerable experience with community-based health systems to bear on the conference agenda.

II. The presenters at the conference included representatives of major funding agencies like AID (Clifford Peas); WHO (Mike Merson); UNICEP; and CDC. A group of medical consultants, Robert Black and Norbert Hirschhorn, along with representatives of the Cholera Lab, the Philippines ORT programs, and the Egyptian ORT program, were also there.

III. A display of ORT packaging systems presented some 25 different forms of packaging. Many were produced locally and included the following varieties: a standard litre packet from several countries; a Japanese-produced plastic bag which, when filled with water formed a 1/2 litre container; a 10 litre packet being used to rehydrate calves; a litre packet which divided the glucose and salts into two separate pouches by means of a seam; and 200 ml tablets being experimented within Mexico.

IV. Discussion centered around choices between simple salt and sugar solutions, and the complete WHO formula. No resolution was forthcoming; there seemed to be a consensus among the participants (a consensus not challenged by the medical experts) that there is a place for both and the decision must be based upon "local conditions." There was very little discussion of the life-threatening aspects of poorly mixed solutions, either potassium deficiencies, or salt overdosing.

V. There was concern about the educational aspects of ORT programs. Delivery systems, not only for packets (which in this case the PVO's would handle directly) but for the educational messages were discussed. The experience of the three national programs (Bangladesh, Egypt, and the Philippines) were useful, but in each case quite special. The Bangladesh case was in an area heavily influenced by the Cholera Lab; the Egyptian case was really limited to clinic distribution, as was the Philippine case. Mothers bringing their children to the clinic were taught how to mix and administer the packaged solution.

VI. Another hot topic was how many people needed to be treated, or at what stage in the episode of diarrhea is ORT necessary/advisable? Interestingly there was almost an ideological split on the issue between those who felt salt and sugar solutions were better because earlier treatment was necessary and only practical if salt and sugar were used. There were the defenders of packets who said ORT is really only needed by a small percentage of total episodes and the challenge is teaching mothers when that stage has been reached. Again no resounding resolution.

VII. A few interesting innovations were mentioned. One program had adopted a locally available syringe as a convenient and accurate way of mixing the ORT formula in local clinics. A program in Mexico has developed a wordless illustrated booklet for use by health workers in teaching mothers how to use ORT. These booklets are then left with the mothers as reminders of the process.

VIII. The UNICEP representative, who seemed quite knowledgeable about cost and shelf-life of the WHO formula, said categorically that the hydrolysis of glucose, which turns it slightly brown, does not affect the chemical effectiveness of the formula. The cost breakdown he gave for the packet was as follows:

<u>One litre packet</u>

Ingredients	2.5¢	He estimated that a 1/2 packet would cost 4.5¢ rather than 3 1/4¢ because of labor and foil costs.
Foil	2 ¢	
Labor Packaging & Profit	2 ¢	
	6.5¢	

UNICEP provides packets to local governments at 6.5¢ and sells them to other donor agencies with an additional 3¢ added to each packet.

A list of materials collected at the conference follows:

- Las Sales Rehidratantes
- Tratamiento y prevención de la deshidratación en las enfermedades diarreicas
- Guide To Sanitation In Natural Disasters
- The Management Of Nutritional Emergencies In Large Populations
- Diarrheal Diseases Control Programme - Development Of A National Oral Rehydration Programme, EGYPT
- MATLAB Oral Therapy Field Trial Training Manual For Treatment And Prevention Of Diarrhoea
- Control Of Diarrhoeal Diseases: WHO's Programme Takes Shape
- The Control Of Acute Diarrhoeal Diseases: WHO and UNICEF Collaborate In Country Programmes
- Child-to-Child Programme - Sugar, Salt And Water For Diarrhoea
- Integrating Oral Rehydration Into Community Action Programs: What Role For Private And Voluntary Organizations?
- Las Condiciones De Salud En Las Américas
- Oral Rehydration In The Philippines - Experiences On Training And In The Implementation
- The WHO Diarrhoeal Diseases Control Programme