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MASS MEDIA & HEALTH PRACTICES

PROJECT IMPLEMENTATION

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Academy for Educational Development, Inc.

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Document #

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SEMIANNUAL REPORT NO. 1

Project Director

Dr. William A. Smith

October 1, 1978 - March 31, 1979

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M A S S M E D I A A N D H E A L T H P R A C T I C E S

Contract No. AID/DSPE-C-0023

Academy for Educational Development, Inc.

Biannual Report

October 1, 1978 to March 31, 1979

I. Background

On September 30, 1978, the Academy for Educational Development was contracted by the United States Agency for International Development to conduct the implementation aspects of 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 conduct the evaluation aspects of the project. The project is designed to build upon past experience with communication technology and utilize radio and photo-novelas in conjunction with local health delivery services to develop within two cooperating Ministries of Health the capacity to use mass communication as a regular and systematic part of their overall 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

- A. Identification of possible sites for the project.
- B. Exchange of views between contractors and USAID on project objectives and operational goals.
- C. Exploration of present state-of-the-art as regards oral rehydration therapy in developing countries.
- D. Administrative preparation.

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III. Activities Undertaken

Objective 1:

Identification of possible sites for the project

The Mass Media and Health Practices contract does not stipulate who bears principal responsibility for site selection. Contract language simply states, "The contractor, along with AID/Washington and EC shall participate in final country selection...." Because of the need to use official AID channels in contacting local USAID missions, it was determined that AID/Washington would play a central role in the site selection process.

This process as defined by AID included several steps: 1) identifying in Washington a limited number of countries to which an action cable would be sent, 2) using an action cable addressed to USAID mission health offices to provide detailed information on the project, and to request a site visit to the country, 3) conducting a week-long site visit to each country positively responding to the cable, 4) evaluating the results of the site visits upon pre-established criteria, and 5) making the final selection in Washington. Several broad criteria were established by AID in determining what countries should receive an action cable. They included 1) existence of an AID mission, 2) presence of a significant AID health program, and 3) geographical priorities established for the time at which different geographical regions would be contacted. In this regard, it was determined that Latin America would be contacted first, Africa second, and Asia in the event that responses from either Africa or Latin America were negative. The action cable* was drafted by Anthony Meyer, AID Implementation Contract Monitor, on October 1, and sent

*See Appendix A

to eight USAID missions in Latin America. The cable outlined the basic objectives of the Mass Media and Health Practices Project, listed several important intended outputs, identified the two contracting institutions, and specified eight criteria for selection as a project site. The cable requested permission to conduct a site visit and meet with the USAID mission and appropriate Ministry personnel to discuss the project.

The cable was sent to Guyana, Bolivia, Panama, El Salvador, and Honduras with information cables sent to Costa Rica, the Dominican Republic, and Jamaica. A response deadline was set for November 17. By that date no response had been received from Guyana or Honduras. Bolivia and the Dominican Republic responded that the existence of large-scale health projects there made consideration of this project impossible at this time but expressed support for the project concept. El Salvador responded that present levels of American personnel were high and additional personnel were unadvisable. Panama's response was favorable to the concept but they questioned whether diarrhea was a significant health problem in the country. Upon receipt of information that Peru might be interested, Dr. Meyer drafted a letter to the USAID mission in Lima providing similar information and requesting that mission's consideration of the project.

In the absence of any firm positive response to the cable in Latin America by December 15, and in response to several inquiries made by the Africa Bureau, cables similar to those sent to Latin America region were sent to ten African missions including: Kenya, Tanzania, Liberia, Swaziland, Cameroon, Niger, Upper Volta, Lesotho, Senegal, and the Gambia. Cable responses were requested by January 31, 1979.

The results of the site selection process as of March 31 are as follows:

<u>Countries Contacted</u>	<u>Country's Response</u>	<u>Project Response</u>
<u>Action Cable</u>		
Guyana	Not appropriate	Excluded
Bolivia	GOB unable to meet criterion	Excluded
Panama	Favorable to project but prefer other health problem	Excluded because infant diarrhea problem not serious
El Salvador	Mission overloaded	Excluded
Honduras	Favorable response	Visit scheduled for May 14
Ecuador	Favorable response	Visit scheduled for May 21
Peru	No response	Excluded
<u>Information Cable</u>		
Costa Rica	Loan relationship too complex	
Dominican Republic	Presently conducting project with mass media	
Jamaica	Presence of conflicting program	
<u>Action Cable</u>		
Kenya	Mission overloaded	Consideration pending
Tanzania	Favorable response	Visit scheduled for April 9
Liberia	No response	Excluded because overloaded with projects
Swaziland	Unable to provide support	Excluded
Lesotho	Unable to provide support	Excluded

Cameroon	Positive Response	Visit scheduled for April 16
Senegal Niger Upper Volta The Gambia Mali	Because of AID regulations restricting investment of additional monies in Sahelian countries, action on site visits pending internal AID/Washington review	
Rabat	Not at this time	Pending
Amman	Negative Response	Excluded
<u>Possible Sites in Asia</u>		
Philippines Indonesia Nepal Bangladesh	} Not contacted yet	Pending

Objective 2:

Exchange of views between Contractors and AID on project objectives and operational goals

In the absence of any firm site decisions, several meetings were held with Stanford and Academy representatives and AID personnel to discuss the overall project objectives and to begin to establish a working relationship among the three parties. The first meeting, held on October 11 in Washington, was of a general nature. Several points were discussed during the meeting. The contractors were made aware that AID's expectations included four important aspects: 1) dramatic change would be demonstrated by the project, 2) the change would involve the observed behaviors of the target population, 3) mass media would carry the principal burden of this change effort, and 4) creation within the cooperating Ministry of an ongoing capacity to use mass communication was essential.

Several inherent contradictions discussed at this meeting included the conflicts between 1) the priorities of a research design and those of a development project designed to train local personnel, 2) the needs of a carefully controlled experiment and the requirements of a fully successful development effort, and 3) the requirements of evaluating a medical practice and those of evaluating a communication effort.

The second meeting between contractors and AID representatives was held on December 21. This meeting was in response to a prior meeting which included several medical experts and focused on oral rehydration therapy. The tone of the December 21 meeting again was general, attempting to determine and resolve different perceptions of project goals.

AID expressed concern over the application of HEW guidelines governing the use of human subjects in research and experimental projects. Both contractors agreed to investigate the guidelines and report on how their respective institutions would meet these requirements. The country selection strategy was reviewed and the decision to approach the Africa region was ratified by the group.

A lengthy discussion of project goals was conducted, but no conclusive agreement was reached on several important issues. These issues include:

1. Oral rehydration -

Concern was expressed that oral rehydration therapy had not been successfully tested in a field situation and could not, therefore, be considered a totally reliable practice. The acceptance of the practice by most major international health organizations and the positive clinical evidence of its effectiveness argued in its favor, however. Additional medical information was to be sought before a final decision was made on its role in this project.

2. Research objectives -

Disagreement was expressed as to whether the evaluation effort should focus on mortality rates, on morbidity rates (both seen as measures as the medical effectiveness of the project), or on adoption of the practices being advocated with an accompanying assumption that those practices are beneficial.

A second discussion centered around the difference between measuring the relative importance of different inputs (radio, photo-novel, health worker) and thus determining the optimum mix of those components, and measuring the relative effectiveness of a single proposed mix against control conditions.

In an effort to gain further insight into the evaluation requirements of this project, a visit was made on November 20 to the University of South Florida by representatives of the two contractors to discuss the evaluation process used by the Basic Village Education Project. Although this was an

agriculture-focused project, it had several important parallels with the evaluation aspect of the mass media and health practices project. This day-long meeting was beneficial in setting out important issues to be discussed and decided upon. A description of the points raised at South Florida can be found in Appendix B to this report.

On January 16, Academy representatives met with Dr. Stephen Joseph, Joseph Stockard, Robert Schmeding, and Anthony Meyer. The purpose of the meeting was to brief Dr. Joseph on the project's progress and to discuss the Academy's resolution of the Human Subjects guidelines. During this meeting, Stephen Moseley, Academy Vice President, explained that the Academy had reviewed several systems for complying with the Human Subject's guidelines set up by HEW and had resolved to form an internal panel which would review all pertinent aspects of the projects and meet the criteria established by HEW. Actual formation of the panel would take place immediately upon selection of a site for the project, allowing field criteria to be included in the panel's selection.

On March 20 another meeting was held between representatives of the Academy, Stanford, and AID/Washington. Participants included David Sprague, Don Ferguson, Arthur Kennedy, Clifford Block, Anthony Meyer, Dennis Foote, Barbara Searle, Cheryl Greenwood, Donald Swanson, and William Smith. The principal topic of discussion was the evaluation strategy to be used by Stanford. Consensus was reached on three issues during this meeting:

1. Success of the project will be evaluated by the level of adoption to criterion of the component recommended behaviors.

2. Serious effort will be put into verifying the relation (in particular field settings of the project) between the criterion performances and health status.
3. The strategy for designing the intervention will be to use all available resources to obtain an impact and then to reduce the level of components to obtain information about designing a more cost-effective system.

Elaboration on these points can be found in Appendix D.

Objective 3:

Exploration of present state-of-the-art as regards oral rehydration therapy in developing countries.

As part of the Academy's responsibility to identify two medical experts to serve as permanent medical advisors for the project, a search was conducted using AID, PAHO, and WHO recommendations. Emphasis was placed on medical people who 1) had experience with oral rehydration therapy, 2) had worked extensively in developing countries, and 3) were able to dedicate at least 30 days a year to this effort. This process resulted in a list of approximately 10 individuals in the United States.

Three of these individuals, Dr. Myron Levine, Dr. James Rust, and Dr. George Curlin, were invited to attend a round-table discussion with representatives of both contractors as well as AID personnel in health, population, and education. Important new insights into oral rehydration therapy were gained. A detailed summary of these discussions can be found in Appendix C of this report.

On January 22, Dr. Norbert Hirschhorn was invited to Washington to meet with Anthony Meyer, Dennis Foote, and William Smith. Dr. Hirschhorn had been identified as one of the leading medical researchers in the area of infant diarrhea with particular emphasis on oral rehydration therapy.

Because of his intensive field work in the Philippines with oral rehydration, he was considered an important candidate for one of the two medical advisory positions. Following this meeting it was decided to submit Dr. Hirschhorn's name along with that of Dr. Myron Levine as the Academy's proposed medical advisory board. Official approval of their appointment was received from AID/Washington on March 16.

Additional Activities:

1. Several informal meetings were held between Stanford and Academy personnel to discuss coordination details for the project. It was agreed during these meetings that regular bi-weekly letters would be exchanged to keep each other informed of activities.
2. A presentation of project objectives was made to a meeting of USAID nutrition representatives at Coolfont, West Virginia, on November 14. Informal conversations were held afterward to explain the project in more detail to interested individuals from the Africa region.
3. A letter was received from Ron and Peggy Parlato to the effect that personal considerations had made their availability as Academy field personnel impossible.
4. Interviews were conducted with prospective candidates for field site personnel. Some 15 individuals were contacted and interviewed.
5. Materials were collected, reviewed, and catalogued on several different aspects of the project, including similar communication campaigns, oral rehydration therapy, use of non-verbal graphic materials, and related general health materials.
6. Secretarial support for the project was identified and contracted, and specifications for field equipment were collected and analyzed.

IV. Projected Activities for Period April 1 - September 31

A. Site Selection

Site visits are scheduled to:

Tanzania from April 5 - April 13

Cameroon from April 14 - April 23

Honduras from May 14 - May 18

Ecuador from May 21 - May 25

Upon completion of these visits, the contractor will participate with AID/Washington and the Evaluation Contractor in determining if one of these countries is suitable as a site for the first year's activities. This determination will be made in part upon an objective analysis of the criteria previously outlined for site selection.

Future activities are dependent upon the results of this process.

It is possible to project three broad possibilities:

1. None of the sites are appropriate.
2. One or all of the sites are appropriate, but initiation of the project is delayed for several months.
3. One or all of the sites are appropriate, and initiation of the project can begin as soon as possible.

A second set of variables which must be taken into account is the pending commitment to consider several countries previously mentioned. This decision rests now with AID and may indeed influence the ultimate outcome of the site selection process. It could require an additional site visit to Africa in June or July.

B. Project Preparation

Assuming the most optimistic result of the site selection process, namely that a country is chosen by the end of May, and start-up time in that country could be as early as June or July, the following activities would take place:

1. Final Recruitment and Contracting of Field Personnel

While the Academy has been actively seeking field candidates, the indefiniteness of project initiation, language requirements, and special technical needs, along with the budgetary implications of early contracting, have argued against contracting field personnel until further information on sites is available. This process will take priority once a field site is chosen.

2. Formalization of the Agreements Between All Parties

Formal agreements will be drawn up between AID and the cooperating government and between the contractor and the cooperating government. These agreements will stipulate: project objectives; contributions and responsibilities of the cooperating government, AID, and the Contractors; terms under which the agreements will be terminated; and allocation of resources.

3. Stateside Workshop

After field personnel have been selected for both Evaluation and Implementation contracts, a joint seven-day workshop will be conducted in Washington for these individuals.

Workshop objectives include:

- a. Understanding of project objectives.
- b. Early coordination of evaluation and implementation field staffs.
- c. Orientation to technical aspects of project including characteristics of infant diarrhea, communications strategies, health worker training designs, and evaluation approaches.

The workshop will bring together AID monitors, contractor personnel, medical advisory experts, and specifically selected consultants in the area of evaluation design, behavioral modification, and social advertising. The principal aim of the workshop will be to start the project in a systematic, coordinated fashion before the pressures of daily routine overshadow the project's fundamental purpose.

This will be a time for frank discussion and interchange between all parties and should result in a tentative plan of action for the upcoming three-month period.

4. Placement of Field Personnel and Administrative Infrastructure

Field personnel will be relocated, office space identified and occupied, and secretarial services contracted. Basic office equipment will be purchased and installed. Specifications for technical equipment will be developed and appropriate equipment ordered.

5. Coordination with Local Counterpart Institution(s)

The actual activities undertaken in this regard will be dependent upon the operating procedures within the cooperating institutions. If possible, a two-to-three day intensive workshop will be designed

for project field personnel and counterpart personnel to discuss basic project objectives and strategies, and to develop an operating style among the parties involved. This meeting will focus on the development of an operational plan for the coming three to six months and will emphasize the collection of information during the developmental investigation phase outlined in the AED proposal.

6. Coordination with USAID Mission Personnel

Meetings will be held between field personnel and local AID mission to determine the nature of future coordination between the two groups. This may vary considerably from one country to another, but should be an explicit task scheduled early in the project's history.

7. Identification and Training of Local Investigative Resources

In order to conduct the developmental investigation outlined in the AED proposal, local investigators will have to be identified. Once identified and contracted, they will be trained in a variety of tasks related to the specific information collection procedures. These procedures will focus on several broad areas, including: the present health structure, the media system, the village, the rural family, the local health culture, the diarrhea behavior context, and the marketing structure for local medicines.

V. Administrative Report

A. Expenditures - September 30, 1978 to March 31, 1979

Salaries and Wages	\$18,306.56
Employee Benefits	3,188.05
Consultant Fees	-0-
Travel and Transportation	505.50
Overseas Allowance	-0-
Other Direct Costs	7,982.61
Equipment	-0-
Indirect Costs @ 22 percent	<u>6,596.18</u>
Total	<u>\$36,578.80</u>

B. Personnel/Level of Effort Summary

Sr. Project Manager (Stephen Moseley)	.20 pm
Project Director (William Smith)	3.00 pm
Project Manager/Editor (Cheryll Greenwood)	.60 pm
Associate Project Director (Don Swanson)	.10 pm
Administrative Staff	<u>6.00 pm</u>
Total	<u>9.90 pm</u>

APPENDIX A

Text of Action Cable Sent to USAID Missions

Text of Action Cable Sent to USAID Missions

Subject: Mass Media and Health Practices - New Project

1. DS/ED in cooperation with DS/HEA is initiating the subject project on the use of Mass Media for Health Education. The project is funded from FY 78 and is scheduled to begin in early FY 79 in one country and in early FY 80 in a second country. DS/ED and DS/HEA would appreciate expressions of interest from missions which would like to be considered as project sites.

2. DS/ED as a result of various contracts over the past several years, has been able to test several methodologies for the use of media to influence health and nutrition practices among rural LDC populations. We now know that media such as radio and graphic materials can under certain conditions influence LDC rural audiences in the improvement of health practices. Yet it is difficult for health and nutrition personnel, even when working with skilled media production professionals, to incorporate the use of media systematically and effectively into their educational efforts. The same questions recur: What overall strategy should be followed in the selection of media and the timing of their use; what procedures should be followed to translate health objectives into specific messages tailored to specific rural audiences; what formative evaluation methods can be practically used during production; and how can the overall educational effort be efficiently managed, monitored, and modified?

3. Furthermore, typical efforts to date have fallen short in achieving large-scale adoption of improved practices, even though they are often

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effective in rapidly changing attitudes and knowledge.

4. This R&D project is directed toward the problems outlined in items 2 and 3 above. Its objective is the development of a more effective set of methods for the use of media in modifying important public health practices. It is to be developed in conjunction with existing LDC public health efforts. Further, it will have the objective of establishing the basis for ongoing, continuing use and evaluation of these techniques, if proved effective, by LDC professionals.

Specific Additional Outputs Include:

a. The in-service training in the application of the methodology of three-to-five MOH personnel working in collaboration with two U.S. experts.

b. A multi-media intervention conducted in coordination with village health workers in one region of the country aimed at the treatment and prevention of acute diarrhea.

c. The ability of the participating MOH to continue to use media effectively in its health education efforts.

5. The project will target health practices related to the treatment and prevention of infant and small child acute diarrhea. Educational objectives will vary somewhat from country to country but in general will include:

a. Recognition of the onset and progress of dehydration.

b. Preparation and administration of proper doses of oral rehydration fluid and foods.

c. Recognition of the progress of the positive impact of treatment.

d. Adoption of basic sanitary practices surrounding infant feeding.

e. Adoption of adequate infant feeding practices.

6. After a nine-month period of message and materials development, an educational intervention aimed primarily at mothers and those in direct care of children will take place over a two-year period in the country selected for FY 80. The educational effort will emphasize the use of radio, graphic materials including photo-novels or comics and posters, and materials aimed at village level health workers. The interventions will be evaluated by detailed baseline and follow-up surveys of the target audience, in-depth interviews with local professionals and data from health posts.

7. Two contracts have been awarded for this project by means of competitive procurement procedures and will be fully funded by DS/ED. The Academy for Educational Development (AED) will provide the personnel and purchase supplies and services related to the conduct of the intervention and in-service training in each country. Making use of experts in health, behavioral science, and communications, the Institute for Communication Research at Stanford University will conduct a formal evaluation of the educational effort in each country, in cooperation with AED and the participating country institutions. DS/ED with assistance from DS/HEA will monitor the activities of these contractors.

8. Countries chosen as sites should meet the following criteria:

- a. Dehydration due to acute diarrhea must be a serious health problem.
- b. The project should complement USAID program plans, and decrease in infant mortality should be a program goal.
- c. The participating government should be interested in the long-term use of mass media for health education and be willing to provide at their expense three to five full-time counterpart project personnel for collaboration and training who would continue in their assignments at the end of the project.

- d. The participating countries must have the major media hardware required by the project (that is, radio stations, widespread access to radio receivers, and printing presses) and media production professionals available for hire.
- e. The participating governments must be willing to contribute (or assure the contribution of) at least 50 percent of required radio time (the absolute number of air hours cannot be stated until the intervention plan is designed according to the media availability and resources of each participating country).
- f. The participating governments must be willing to contribute office space and provide government purchasing rates for project supplies such as paper and required services such as printing.
- g. The participating governments must be willing to publicly endorse in newspapers and on radio the high national priority of the health education objectives undertaken by the project.
- h. The participating countries must be genuinely willing to adhere to the fairly strict requirements on data collection, experimental design, and evaluation which are essential for this sort of R&D program.

A letter of agreement between AID and the participating country will express the commitments involved.

9. DS/ED and DS/HEA are prepared to visit up to three missions interested in the project with AED and Stanford representatives beginning in November. This airgram is being sent to an initial list of countries identified by LA/DR as having interest in the use of media in health or nutrition education. It is hoped that the first site for the project can be selected from among these countries. For travel planning purposes, mission responses will be needed by November 17.

Appendix B

South Florida Meeting Notes

Report on Visit to BVE Evaluation Team
University of South Florida -- November 20, 1978

William Smith, Academy for Educational Development
Dennis Foote, Stanford University
Barbara Searle, Stanford University

On November 20, 1978 we met with Edgar Nesman, Thomas Rich, and Sally Rivers at the University of South Florida. The Florida participants are all members of the team that has been evaluating the Guatemala Basic Village Education project (BVE); we are key personnel working on the implementation and evaluation aspects of the Mass Media and Health (MM&H) project recently funded by DSB. The purpose of the visit was to allow an informal exchange of information and ideas with the hope (and expectation) that we can build on the BVE experience. The wide-ranging discussion, which lasted from 9:00 a.m. to 4:00 p.m., covered many topics; this report presents a synthesis of the issues discussed, rather than a chronological report and includes, where appropriate, some of the implications of the discussion for the MM&H project, even though these were not explicitly discussed during the day. We should say at the outset that the day was enormously productive, that we thoroughly enjoyed it, and that we are sure that continuing input from the BVE evaluation team would serve to inform and strengthen the work of the MM&H project.

Agendas of chief actors

One theme that recurred during the day revolved around how to deal with the differing agendas of key actors and how to cope with change during the life of the project. Some people saw BVE as an experiment to test whether, and how well, three configurations of communications systems could teach farmers about improved agricultural practices. Others

saw the project as an attempt to increase agricultural output, using the three types of campaigns. The questions a project is designed to address crucially shape the evaluation design; the BVE evaluators worked on the assumption that the former question was being investigated. However, later work, particularly the cost-benefit analysis, was concerned with the latter.

Another ambiguity that emerged (over the years) concerned the implicit change model that was being investigated. The evaluators were testing a diffusion model while others turned out to have in mind an individual change model. The evaluators were looking for changes in the target POPULATION, as a group. They made the assumption that radio broadcasts, monitors, and agronomists (as appropriate) served as change agents that facilitated the spread of information throughout the population. They were explicitly not measuring the change that occurred in those farmers who listened to the radio or those who participated in forums. With hindsight, one can suggest that they might have investigated the level of usage in order to estimate the efficacy of the diffusion process, but this surely was not one of the main objectives of the project.

The message for us in this discussion is two-fold. First, it is tremendously important to be as explicit as possible about purposes, questions under investigation, models of change, and so on, and to have prior agreement about these among all the (known) chief actors--AID, AED, Stanford (ICR), and the Ministry of Health. The second message is that even if we do this, it is likely that during the course of a long project agendas will change.

The MM&H project already exhibits some of the same ambiguity about goals. On the one hand, the project is billed as an investigation of

the METHODOLOGY of producing an effective media campaign using infant diarrhea as a test case and the implication that media, in this case, should bear the principal change burden. On the other hand, we are being asked to produce a DRAMATIC effect on either the incidence or cure of infant diarrhea, using some combination of media. Are we testing the effectiveness of radio or of oral rehydration? It seems to us that the optimum implementation design adopted for one of these goals would be ill suited to achieving the other; to try to do both at once will probably decrease the probability of doing either as well as we know how. However, as we discussed with the BVE team, many political constraints exist that must be coped with and even if we can come to agreement with AID we must also deal with in-country agendas.

Relationship between the evaluators and the implementors

At its best, the relationship between the evaluators and implementers IN COUNTRY is unequal. The implementors have a constituency in the country--those who have an interest in what they are producing, for whatever reason--and their activities have face validity. The activities of the evaluator are usually poorly understood and if viewed at all are seen as an obstacle to attaining project goals. Thus, the two functions have different levels of prestige and support. If the two activities are carried out by different people, there is an automatic inequality between them. The BVE evaluators felt that this inequality was exacerbated because they had no full time representative in Guatemala. They were glad to hear we would have a resident staff but cautioned first, that the credentials of the evaluator be as strong as those of the implementor and second, that some mechanisms be devised in advance for handling the inevitable conflicts that would arise. The

evaluator has the major stake in maintaining the design or in changing it according to agreed upon guidelines. Often the implementor is under pressure, which may come from his staff or from outside, to change. The evaluator needs to have equal power and status in the confrontation and may be able to help the implementor resist outside pressures.

In the BVE one of the major confrontations between evaluator and implementor occurred over the selection of experimental and control areas. The evaluators needed to match areas along many dimensions; the implementors needed to respond to programming and political constraints. The FSU people felt that the satisfactory resolution of the conflicts was substantially helped by Howard Ray's understanding of and appreciation for evaluation. Such mutual respect (the evaluators should also respect the constraints under which the implementors act) can help substantially to resolve conflicts.

The BVE team made several suggestions for easing the way of the evaluator in country. They feel the evaluator needs to spend much more time cultivating the good will of the people he's working with and he needs direct access to them, and should not rely on the implementor to interpret his activities. None of the evaluation activities should appear "useless." For example, when pretesting instruments, arrangements should be made for the results to be used in some way that is evident to Ministry people. If possible, the evaluator should have a counterpart. Not to do so makes the evaluation parasitical, a "colonizing" type of activity.

A critical related issue is who speaks for the project. In the BVE project, conflicts between implementors and evaluators were settled internally and did not become part of the Ministry or Guatemalan

agendas. In the MM&H project no such clarity will exist. For local counterparts to use differences between the contractors as a weapon or to be victimized by its inherently divisive character will seriously affect the project. While it is reasonable that the evaluator and the implementor should have different counterparts, it is important that they see themselves as part of a single effort. It seems clear that unless some policy decision is made at the outset regarding who speaks for the project and unless this policy is supported through careful coordination between the field teams and the home offices, conflict between the two teams holds potential for creating serious difficulties.

Issues regarding site selection

Several different issues fall under this rubric. With regard to country selection:

We discussed the alternative of choosing a country that presently has a program related to infant diarrhea and one that does not. The FSU team strongly suggested that we choose a country that does NOT have a program for a couple of reasons: (1) it is difficult to disentangle the effects of competing programs; (2) one has little flexibility in designing a program if it has to mesh with one already underway; and (3) people with the appropriate expertise will already be committed elsewhere.

We talked about the tradeoff between Ministry and AID Mission support. The FSU team felt that Mission support could open doors and build Ministry support and, in a choice situation, is preferred. They reminded us, however, that chances are that most in-country people who are around at the beginning of the project will not be there at the end, although our projects are shorter and hence less likely to suffer from this instability of people. (It is, after all, individual people

and not institutions that provide needed support, a point that advocates of systems analysis tend to underplay.)

A less global issue was also raised: as discussed below, the project will need to make use of local data and access should be assured as a precondition.

We were asked what the reasons are for working in two countries. In BVE, part of the overall objective was to evaluate the effects of the treatment (which remained relatively constant) on two different cultural groups in the same country. The assumption was made that although the cultures were somewhat different, their problems were similar and could be attacked with the same technique. Thus, the explicit cross-cultural question was how the implementation of the treatment needed to be modified to adapt to cultural differences. If the MM&H project is to address the same type of question by using two countries, then we must find two locations that have essentially the same problems and are willing to adopt essentially the same solution. On the other hand, if the second country is to be used to test the methodology, it must be recognized at the outset that both the problem chosen (within the broad issue of infant diarrhea) and the mediated solution adopted may be very different in the second country. This is an issue that should be explicitly discussed and settled before even the first country is selected, since if the first option is adopted we need to find--at the outset--two countries suitable for the appropriate type of comparison.

With regard to selecting sites within a country:

The evaluation design for BVE required matching areas in nearby areas that could be given different levels of treatment (including only

pretesting and posttesting, a non-media treatment that had SIGNIFICANT design implications, but more of that below). Among the dimensions that were matched were land quality, exposure to radio (so that media literacy could be assumed), literacy, and farm size. As it turned out, even with extensive groundwork, the areas were not matched in ways that turned out to be crucial. The FSU team suggests that, given the quality of data in most developing countries and the fact that the importance of some variables only emerges as a result of the experiment, such non-matches are almost inevitable. Another strategy, randomly selecting villages, was not available to BVE because all experimental areas had to be within and control areas outside of the radio reception area.

The team had some suggestions for us. Among the characteristics of an area that should be investigated are: water supply, food supply, health practices, migration patterns, birth rates, infant mortality rates, incidence of infant diarrhea, accessibility, availability of radio, literacy. They suggested that we look for places that are ready to modernize. Because we do not have the resources for extensive surveys, preliminary selection of areas must depend on local data sources. The (lack of) reliability of such data must be considered.

Controls

We discussed many facets of the issue of using control groups.

Because BVE was designed to investigate the transfer of information, it was essential to insure (as much as possible) that no relevant information was transmitted to farmers in the control area during the pretreatment interviews. Therefore, the interview schedules specifically stayed away from leading questions, the interviewers were instructed NOT to probe and only spontaneous expressions of information

were recorded. And, of course, instructions for interviewing farmers in the experimental and control groups had to be the same. Furthermore, the evaluators were wary of influencing radio listening and participation in monitor meetings and therefore never asked direct questions about radio listening, meetings, etc. With these limitations it was not possible to track the flow of information, to discover HOW people had learned what they said they had learned. Thus, the decision to compare experimental and control groups hindered the collection of information which the evaluators knew would be interesting but was also seen as contaminating the comparison.

Another issue regarding control groups: In order to increase the credibility of interview information, the interviewers made special attempts to be both credible and supportive of the farmers they talked to. Sometimes they were put in the awkward position of being asked for information that they had been warned not to give. This was not a serious problem when dealing with long-term agricultural information but could be a very serious ethical problem when dealing with the life and death issue of infant diarrhea. Thus, while maintaining "control" status was merely unpleasant for BVE interviewers, it may not be possible for MM&H interviewers.

Another problem: Whatever intervention we devise is likely to change reporting of the incidence of infant diarrhea and probably the frequency of diagnosis as well. Thus, one chief outcome measure we have available to us will not be usable in an ordinary control-experimental comparison.

Another problem, at least in some settings: Since we will not have our own radio stations, we may not be able to control transmission

in such a way as to insure that appropriate populations do not receive the messages. (In Latin America there are lots of small stations. In Africa, this is rarely the case. As a consequence, it may be possible to limit reception to a small area in Latin America, but not in Africa. On the other hand, if messages are given to radio stations to broadcast, it would be easier to supervise that activity in Africa than in Latin America.)

Tom Rich suggested a way out of the control-group dilemma that we think has great potential and should be seriously considered. He suggested that we use as a "control" a group that was given the best "treatment" we could devise within reasonable financial constraints and that we assess the other treatments by how much less effective they are. There are some obvious advantages to this strategy. In addition to meeting the list of objections just given, it would give us a measure (as the experimental plots did in BVE) of what is possible, and should give us at least one group that shows "dramatic" effects. (If not, then we have really learned something useful, if discouraging.)

If we collect the appropriate data, a "maximum" control might be much more useful as a comparison group for analyzing the strengths and weaknesses of the experimental program than a "minimum" control. We can also see potential liabilities in the approach. Any differential levels of treatment may create the impression that some areas are being denied services for the sake of research. Thus, one does not escape this difficulty by eliminating a no-treatment group. Furthermore, it assumes that the "maximum" effort is something we can specify explicitly and which we can realistically expect will produce "maximum" results.

Both the no-treatment comparison group and what we have termed

the "maximum"-treatment comparison group are endpoints on a spectrum of varying treatment levels. We may find, as we analyze both the setting in which we are working and the specific intervention chosen, that the most fruitful design will be one using several treatment levels. Needless to say, these issues will bear much more examination and discussion before they are resolved.

Technical and fieldwork issues

We discussed the advantages of panel vs repetitive random sampling. The BVE time samples were chosen randomly and there were no overlapping questions. That made it essentially impossible to follow change over time. They recommended panels whenever possible, but had they had a fixed subset of questions they could have coped statistically with the random sample.

They had suggestions about increasing the validity of field data: (1) When looking for a particular person to interview (as they did with pre and post interviews) use a cover sheet with the identifying information and have the interviewer check in detail that he has the correct person. Without this they occasionally interviewed sons or fathers with the same name as the person designated in the sample. They encouraged the interviewers to make interpretive comments in the margins; these frequently helped correct coding errors. The interviewers drew a map of each farm on the interview sheet and checked it with the farmer to avoid ambiguities. A supervisor checked each form the evening of the interview. They used convergence questions to check for internal consistency. They used some really innovative methods for training those who were to interview Quiche speaking farmers. And so on. It will be extremely useful to talk to them again when we are closer to designing instruments.

The BVE team (both implementors and evaluators) worked very hard to build into the radio messages behavioral objectives that could later be used. They found it VERY difficult to get radio people to make specific recommendations about changes in behavior. The agronomists tend to take what Ed characterized as the encyclopedia approach. "Corn is a member of the XXXX family, it grows in YYY climates.....etc."

Other notable comments made during the meeting:

The team felt it is crucial that everyone working on the project have field experience.

They found that farmers did not understand sampling procedures (and felt insulted if they were not interviewed) but an explanation within their experience--the analogy to soil sampling--was understood.

They felt that the attempt to collect information that was needed to make programming decisions in the same questionnaire used for pre and post measures was a mistake, that the attempt to do both things at once made the interviews so long. Also, it was impossible to ask all the right questions the first time around. The design should have been more flexible about the introduction of new questions.

With regard to the issue of modernity (and the finding that there was no relationship between individual farmer characteristics and adoption of new practices) the team feels that the "modernity" variables should be applied to groups (families or villages), not individuals. They have the data to repeat the analysis using villages; the results might be really interesting.

Their view of the information diffusion process is that in the early stages of information dispersal, radio would be cited as a major source of new information but that later, even though the information

originally came from the radio, people would identify friends and neighbors as the source. In any treatment that includes monitors, diffusion is a two-step process in which the monitor serves as an intermediary between radio and people by provoking discussion of the messages carried by the radio.

They view the BVE use of radio as "personalized" radio--because it is local and uses peoples names--and they do not think that the BVE findings will necessarily generalize to "impersonal" radio.

They suggested that we include a tracer in the radio programs to help determine whether people are listening. A good example is the name "Dr. Hakim" used in Tunisia, although one that became less of a household word might be a more specific indicator.

The BVE team evaluation team felt that the goal of achieving dramatic behavior change using radio alone is illusory.

BVE was challenged about working with the Indian culture by people who felt that interventions "spoiled" the native culture and thereby hurt the people. Their response was that "no change in a community is not an alternative." That is, the culture WILL change, outside influences WILL reach the people. It is the responsibility of those with the power to do so to see that change is in the best interests of the people.

The use of sampling techniques and interviewing of individuals in a consensus culture must be examined. Those excluded for "random sampling" reasons may feel excluded for power reasons. The BVE team found it expedient to interview certain people who were not in their sample (and not use the results).

Questionnaires should be kept as narrow as possible. The temptation to collect too much information should be resisted.

Formative evaluation should be task specific and done as much as possible in an experimental setting and not in the broad community. The results of the formative evaluations should be used to identify indicators that are appropriate for the summative evaluation.

And finally, they suggested that we not use university students as interviewers in rural communities. as they are too different from the interviewees.

Appendix C

Medical Advisors' Meeting Notes

(The content of these notes is presently under review by the full medical advisory team of AED. They do not constitute the official AED position on the questions posed within but rather document one stage in the program's development.)

25

SUMMARY OF DISCUSSION OF ORAL REHYDRATION WITH MEDICAL ADVISORS

Date: December 19, 1978

Participants: Dr. George Curlin, National Institute of Allergy and Infectious Disease, NIH

Dr. Myron Levine, Center for Vaccine Development, University of Maryland

Dr. James Rust, Pan American Health Organization

Dr. Joseph Stockard
Dr. Donald Ferguson
Mr. Robert Schmeding
Dr. Clifford Block
Dr. Anthony Meyer
Mr. Leonard Cohen
Mr. Jack Thomas

} USAID

Dr. Dennis Foote, Stanford University, Evaluation Contractor

Dr. William Smith, Academy for Educational Development, Implementation Contractor

Dr. Donald Swanson, Academy for Educational Development, Implementation Contractor

Mr. Stephen Moseley, Academy for Educational Development

1. How extensive is the experience with oral rehydration in developing countries?

Answer: The Third World has heavy bacterial infections on top of the persistent viral infections. There exist no prophylactics or any single medication for diarrhea. A few kinds of diarrhea can be treated with antibiotics, but these are very few and require laboratory identification of the pathogen.

Significant clinical evidence exists to support the belief that oral rehydration is effective in preventing death from dehydration, but no field studies have been conducted which satisfactorily indicate that oral rehydration is effective when used by non-clinical personnel. What is known includes:

In patients where 10% dehydration has occurred, 95% of patients can be rehydrated with an oral solution in a clinical situation.

This response to treatment is irrespective of the cause of the dehydration.

There is an increased loss of glucose with oral rehydration, but rehydration occurs nonetheless.

Sucrose is almost as good as glucose in the rehydration formula.

2. Do questions exist about its medical appropriateness?

Answer: Yes, three schools exist: some who claim it is totally ineffective; some who claim it is effective under clinical conditions and believe it is ineffective under field conditions; and some who claim it is effective in almost all cases and are actively proselytizing its use.

Is it appropriate for all cases of infant diarrhea?

Answer: In general, yes. It is not a cure for diarrhea but rather a treatment for the most dangerous result of severe diarrhea, namely dehydration. It can be used with a wide variety of diarrhea-induced dehydration.

How does rehydration affect the problem at various stages of dehydration?

Is earlier rehydration effective in preventing a more acute stage?

Answer: Conclusive evidence on this point is presently lacking, but indications are positive in this regard.

3. Are there basic constraints to its use, or supporting conditions which need to exist to make oral rehydration effective?

Answer: When vomiting is present, a situation which occurs commonly in some types of diarrhea for a period of 6-12 hours, oral rehydration is not effective. • The sodium level of the rehydration fluid is critical, and overdosage of sodium can lead to very severe consequences such as convulsions, aspiration, finburns, and rupture of the brain cells. • To make oral rehydration work, a regimen has to be established taking approximate weight determined by age of individual and percent of

dehydration as measured by approximate severity of the illness (patient responsiveness, number of stools, skin turgor) and prescribe a dosage of the solution. Dr. Levine said that conceptual work on this formula had yet to be done, but he felt with others that enough is now known to make some relatively accurate judgments. Mention was made of a rural curandero in Latin America who had developed such a regimen after seven days' training as a midwife. Emphasis was placed on the importance of the vessel in which the solution is mixed, over the instrument (spoon, etc.) which is used to administer the fluid.

• The traditional view of medicine that the more you take the better it is, is contradicted in the administration of rehydration fluids. If mothers were to give children heavier concentration of the mix because they felt the child was sicker and needed more, this would cause serious problems. • The fluid does not stop diarrhea. In fact, it may increase the incidence of diarrhea after the first administration. Mothers seeing this may want to stop its use. Careful explanation of the role the fluid is playing is important. It should not be seen as a medicine to cure diarrhea but rather as a substance which helps the child fight the diarrhea. • The solution should be kept in a covered container and not stored for long periods once it is made. It does lend itself to contamination.

4. What are the alternatives to oral rehydration?

Answer: This question was not discussed directly, but it can be inferred that the following alternatives exist:

Intravenous rehydration: requires trained personnel and specialized facility.

Emphasis on prevention: There was skepticism among the group as to the specific effectiveness of prevention education.

Advocating use of liquids--any liquids: This was not discussed.

5. Are there conflicting opinions about what the oral rehydration fluid should consist of, or its dosage? What is the medical effect of variation of optimal dosage?

Answer: (See question 3) These advisors agreed that a lower sodium level would make a safer solution while maintaining effectiveness.

6. Are there any regional differences or any special concern we ought to take into account when identifying a site for this project?

Answer: There are regional differences in diarrhea-producing agents, but these do not seem to affect the treatment for dehydration, namely rehydration. A site should be selected where the incidence of diarrhea is severe enough to permit measurement. Some statistics here may be helpful. In a Third World population of 1000 it can be expected that 200 infants will die in the first year, and 60 of those from diarrhea-related causes. It is typical that a given child will have approximately 12 incidents of diarrhea a year.

7. Given the nature of oral rehydration fluids, is there anything in their composition which would make advocacy of them by mass media dangerous?

Answer: If the mixture is made in the home, the sodium level is critical. The size of the container in which the solution is mixed is also important. The media would have to distinguish three factors: severity of diarrhea, age of child, and appropriate mix for various combinations.

8. What are the medical concerns about parent-administered regimens? Should we be advocating a home or pre-packaged preparation?

Answer: The group's consensus seems to fall upon the pre-packaged formula, although there was optimism that family-made formulas were a viable alternative.

9. If you had limited resources, what would you advocate for this problem?

Answer: A pre-packaged oral rehydration mix seemed to be the consensus.

10. Would local medical practitioners be opposed to such a media campaign?

Answer: There is some evidence that the answer would be yes. It was suggested that involving too many medical personnel might create difficulties but that some doctors will have to be involved. It was also mentioned that many Latin American doctors have been trained at a facility where oral rehydration was opposed and that many Latin American doctors feel the sodium levels of present formula to be too high.

11. Should we advocate a practice which might tend to keep mothers away from medical facilities?

Answer: The answer here was indirect. The message should include an admonition to mothers to use clinics when the case of diarrhea is severe.

OTHER ISSUES DISCUSSED

- a. There was a consensus that the birth-to-fifteen-month age group was the most critical population for this project, but several people advocated including children up to 5 years old because it would make the benefits of the project much more cost effective and extensive.
- b. There are presently pre-packaged solutions or plans to produce pre-packaged solutions in several Latin American countries. Guatemala and Costa Rica were mentioned. Cost in Guatemala is about 5¢ a liter.
- c. Relationship between nutritional status and oral dehydration is not clear. This is an important topic for further research.
- d. Glucose, once considered to be more important than sucrose in rehydration therapy, has been reassessed, and evidence exists that sucrose is almost as good as glucose and an acceptable alternative.
- e. There is no cutoff point where administration of oral rehydration fluid must end. The tendency in some field cases has been that as the child

begins to look better and feel better, administration of the fluid is stopped.

- f. Prevention should center on personal hygiene and environmental sanitation. Hand washing before meals, feeding the child first, continued breastfeeding and supplemental feeding would be important points to make during the prevention campaign.

Appendix D

Details of Evaluation Strategy Consensus

Mass Media and Health Practices

Summary of decisions reached: March 20, 1979 Meeting, Washington

Consensus was reached on three issues regarding the Mass Media and Health Practices project. The three decisions are first listed, then discussed more fully.

1. Success of the project will be evaluated by the level of adoption to criterion of the component recommended behaviors.

2. Serious effort will be put into verifying the relation (in the particular field setting of the project) between the criterion performances and health status.

3. The strategy for designing the intervention will be to use all available resources to obtain an impact and then to reduce the level of components to obtain information about designing a more cost-effective system.

Statement 1:

The formulation of statement 1 grew out of a discussion of problem of mismatch between the ideal performance of a recommended behavior and the performance levels likely to occur in the field. The discussion took place about oral rehydration in the home (and we will use that example here) but is applicable to any other behavior the project decides to recommend through its health campaign.

In this case the "components" of the behavior are such things as (1) the concentration of key ingredients of the prepared mixture, (2) the frequency of administering the fluid (during a single episode), (3) the duration of

administration (during a single episode), (4) the time of onset of rehydration, (5) the percentage of episodes for which treatment is used, and (6) the persistence of use (continuation past the trial stage). For each of these components, the campaign will recommend an appropriate behavior to families, based on advice from medical consultants.

We can be quite sure that many families will not carry out all the behaviors as recommended. On the basis of a literature survey and advice from medical consultants, we will identify one or more profiles of minimal levels of adoption of component behaviors that could be expected to have a medically significant effect. It is against this standard that we will evaluate the effectiveness of the campaign. It is also against this standard that components or the campaign itself will be designed.

Statement 2:

Ideally, the project would like to demonstrate unequivocally that the campaign mounted results in changes in health status of babies. Because of the substantial difficulties in carrying out that type of research, we have adopted the strategy outlined in Statement 1. Nevertheless, the interest in health status remains. Thus, we have agreed that the evaluators will be aware of the importance of health status as a dependent variable and will attempt to collect information that will shed light on the relationship between the campaign and health.

Statement 3:

We discussed three alternative strategies for configuring the relation between campaign components and outcomes. One, which we adopted, is to

mount what might be called a maximum campaign (within the resource capability of the project) and pull back once we have demonstrated the campaign's effectiveness. A second strategy is to begin with a minimal campaign and add components and resources until an acceptable level of effect is achieved. The third strategy is to systematically investigate the relation between components and effect using an experimental design. The minimal strategy was rejected for two reasons: because too many iterations are likely to be required and because it is important to maintain credibility by demonstrating effectiveness early on. The experimental strategy was also rejected for several reasons. First, AID is not centrally interested in the question of relative effectiveness of components. Second, it is important to retain flexibility and not be locked into an experimental design. Finally, development of an effective system should take priority over research about components because in AID's view the project is basically a development project.