

Mass Media & Health Practices



MASS MEDIA is helping mothers in Africa and Latin America prevent and treat infant diarrhea. Health workers and traditional leaders distribute an illustrated instructional flyer; radio teaches mothers how to use the flyer; the flyer reminds mothers how to mix the new medicine when it is needed. The combination of radio, print, and health workers in a single package is an important key to success.

VILLAGE RESEARCH is another key to success. The radio programs, illustrations, slogans, and the health advice itself are carefully tested with rural women. The goal is to create materials which these women can understand and believe in. Their vocabulary, their beliefs, and their practices are reflected in every aspect of the program.

CREATIVITY is also important. A colorful flag and comic books are examples of how simple materials have been used to popularize important new concepts.

Other important health advice on immunization, malaria, tuberculosis and water and sanitation has been added. And yet, the same basic approach is proving successful. Practical advice, carefully tested and widely promoted through a combined package of radio, print, and personal support, can overcome the barriers of distance, isolation, language, and tradition.

MASS MEDIA & HEALTH PRACTICES

Academy for Educational Development
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Institute for Communications Research
Evaluation Contractor

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AFTER TWELVE MONTHS OF BROADCASTING

A STATUS REPORT ON THE PROJECT IN HONDURAS AND THE GAMBIA

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OVERVIEW

Diarrheal dehydration kills seven out of 20 infants in the developing world. Oral rehydration therapy (ORT) could save many of these lives if effective ORT programs were now in place. Yet ORT is not widely used because health care providers and mothers still don't recognize its true potential.

Honduras and The Gambia are now completing a three year experiment to determine how oral rehydration therapy can be most effectively delivered to large numbers of rural and isolated people threatened by diarrheal dehydration. The programs focus on those most at risk, infants under the age of five. Using **mass media**, combined with **health worker** training and simple **print materials**, rural women are being taught what oral rehydration therapy is, how they can use it in the home, and how to monitor their child's progress during the diarrheal episode. Special emphasis is being given to feeding advice in an effort to break the vicious cycle of diarrhea and malnutrition.

Results in Honduras show:

- After one year, 48% of women reported having used Litrosol (the local ORT packet) to treat diarrhea at least once.
- During same period, recognition of Litrosol as a diarrheal remedy went from 0% to 93% of the population.
- Of those reporting to use Litrosol:
 - Over 90% could mix it properly
 - 60% gave the correct recommended daily amount
- Death from any cause involving diarrheal in children under two dropped by 40% within 18 months.

Results in The Gambia show:

- After eight months of the campaign, 66% of mothers knew the correct home mix oral rehydration formula being promoted.
- 47% of mothers reported having used the home formula to treat their child's diarrhea.
- During an intensive four week period in October, 11,000 rural women attended 72 village sugar/salt mixing contests; 6,500 women actually mixed the solution during these contests. Over 150,000 flyers with mixing instructions were distributed to villages throughout the country.

A team of independent evaluators from Stanford University concluded:

The overall picture that emerges of the project in Honduras is one of an intensive, well integrated campaign that is achieving impressive successes in teaching people health information and getting them to change specific behaviors related to infant diarrhea.

The overall portrait of the campaign at the end of the first year in The Gambia is one of an intense level of activity that has become highly salient for rural Gambians. The campaign and the recognition it has received have produced impressively high levels of awareness and behavioral change in the population in a relatively short time.



Two Gambian mothers use the instructional flyer to remind them how much salt, sugar and water to use in mixing the oral rehydration solution.

BACKGROUND

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

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

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

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

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

As activities under the original agreement have begun to end, interest in the approach to health communication has grown. Honduras has expanded its health communication program to include campaigns on malaria, tuberculosis, immunization and family planning. Ecuador, Peru and Swaziland are receiving assistance from the M&HP project personnel to adapt the approach to their own needs for expanded diarrheal disease control. The methodology is proving not only successful but adaptable to a wide variety of conditions and topics.

THE PROBLEM: DIARRHEA KILLS

About 5 million children die each year from diarrhea related causes. As much as 30 percent of all infant death in the world today is due to diarrhea. Diarrhea kills through dehydration and malnutrition. Intense bouts of rapidly dehydrating diarrhea cause a loss of as much as 10 percent of body weight and can kill in a matter of hours, while prolonged bouts of diarrhea interact with general malnutrition to produce wasting and finally death.

There are virtually no effective drugs to combat the bacterial or viral organisms which are responsible for most diarrhea. Effective prevention must interrupt a complex transmission chain involving faeces, hands, water, vector transmission, and food. Each link in the chain represents a need for significant, often unrealistic, changes in environmental conditions and personal habits. Any one change by itself is unlikely to measurably reduce diarrhea morbidity.

There is, however, an effective weapon against diarrheal dehydration. Independent of the causal agent, **oral rehydration therapy** represents a practical means of saving thousands of lives each year. ORT focuses on three aspects of the diarrheal syndrome. First, ORT can replace the water and salts lost by a child in 95 percent of the cases of dehydration caused by acute diarrhea, restoring the child's capacity to absorb liquids and replacing lost body fluid. Secondly, it does this through a low-cost oral method, rather than the costly intravenous route, opening up the possibility for widespread administration by non-professional and even illiterate personnel. Thirdly, ORT promotes a series of related behaviors which, if properly applied, reduce the impact of diarrhea on malnutrition and wasting. The clinical significance of ORT has been demonstrated in numerous studies throughout the world, and it now represents the world health community's primary weapon against diarrheal death.

The key to effective ORT is the correct preparation and administration of an oral glucose-electrolyte solution, often referred to as ORS. ORS in its simplest form is a combination of water, salt and sugar and can be mixed using home ingredients. A slightly more complex formula including sodium, glucose, potassium and bicarbonate is available in a pre-packaged envelope and is designed to be added to a standard volume of locally available water. It is now recommended that countries consider a two tier approach; simple sugar and salt or other liquids in the home during early stages of diarrhea, and complete formula in the home and rural clinics for most moderate and severe dehydration. In all cases ORS should be supplemented with additional feeding and childcare information.

While ORT represents a major improvement over intravenous therapy in the treatment of diarrheal dehydration, it does require certain minimum criteria in order to be effective. The ingredients for ORS must be easily available to isolated populations. If packets are to be used then an effective distribution system must be in place. If a simple sugar and salt mixture is to be advocated then these ingredients must be widely available. In both cases, mothers must be taught how to mix the ingredients in exactly the right proportion to avoid ineffective and even potentially dangerous concentrations of sodium. They must also learn to give the solution correctly, i.e., slowly, over a 24-hour period, and continue to do so even if a child vomits or refuses the liquid.

These requirements, coupled with advice on breast-feeding, feeding during diarrhea, and the advisability of other medications, create a complex set of educational tasks. ORT is now at a stage of development in which attention has turned away from the clinical effectiveness of the electrolyte solution towards the effective development and administration of delivery systems for ORS and the related educational messages on preparation, administration, and childcare.



Poster used in Honduras to remind physicians that breastfeeding is important.



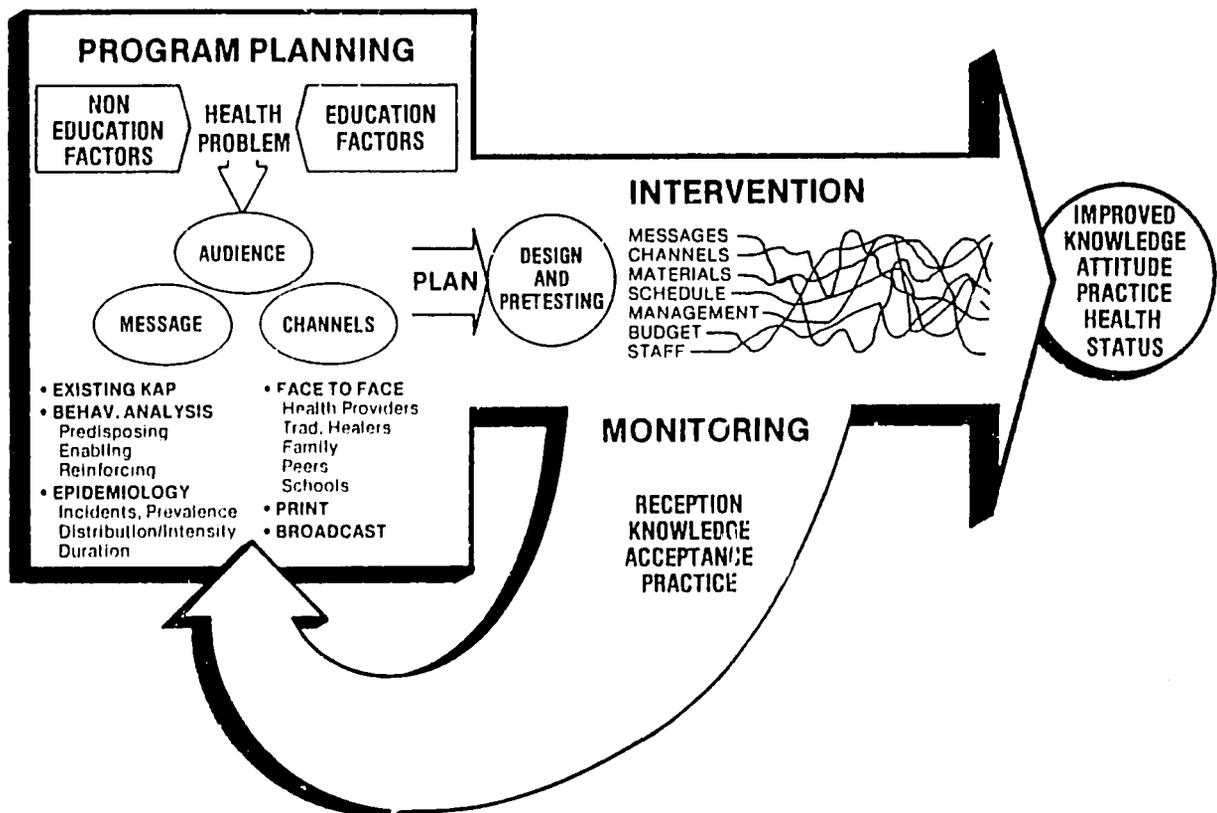
Poster used in The Gambia to remind health workers to recommend breast-feeding.

THE HEALTH COMMUNICATION APPROACH

The particular health communication strategy adopted by the Mass Media and Health Practices project is part of a growing genre of health education activities referred to generally as the public education or the public communication approach. This approach attempts, in a predefined period of time, to change a particular set of behaviors in a large-scale target audience with regard to a specific problem. During the past two decades, dozens of campaigns on topics as varied as forest fires, mental retardation, energy conservation, smoking, alcoholism, littering, seat belts, venereal disease, malaria, breastfeeding, latrine construction, population control, and infant diarrhea have attempted to inform, motivate, and often to change the behavior of a large audience in a short time. Experience has shown that the short-term campaign which relies too heavily on media alone has been little more effective than traditional programs which rely solely on direct patient education through health workers. The MIM&HP program is using many of the lessons learned from short intensive campaigns, but integrating them as part of a long-term and continuous health communication strategy. The goals of long-range planning are to ensure that episodic crisis campaigns are avoided in favor of a long-term, consistent health communication strategy designed to promote key health priorities such as diarrheal disease control, immunization, malaria control, and family planning.

The approach is illustrated in the following diagram which shows the relationship between three key stages in the strategy; preprogram planning and development, the instructional intervention, and an ongoing monitoring and evaluation system with clear results in knowledge, attitudes, and behavior.

PUBLIC COMMUNICATIONS MODEL



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

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

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

Monitoring and evaluation permits the planner to detect problems and make important iterative changes in educational strategy. A monitoring system which permits the regular sampling of select segments of the audience is developed. Planners know: (a) how a microcosm of their intended audience feels about the advice they are receiving; (b) whether they are taking that advice; and (c) what obstacles they are encountering. These monitoring devices can also point out important logistics problems such as a breakdown in delivery of printed matter or use of inappropriate broadcast times to meet audience needs. This type of ongoing evaluation is essential in making corrective changes in future cycles, as well as for providing program administrators with a clear idea of their overall potential success.

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

From a behaviorialist point of view, there are five circumstances which singly or in combination account for absent behavior. First, necessary materials or implements like ORT packets may be unavailable. Second, prerequisite skills, discriminations, or knowledge may be lacking. For example, rural mothers may know that boiling water is good but not understand that it actually kills the parasites they fear. Third, there may be no incentives such as immediate improvement in their child's health to engage in the behavior. Fourth, there may be incentives to engage in compatible but inappropriate behaviors like giving kaolin or purges. And fifth, there may be punishing consequences which discourage the desired pattern. A child may vomit, for example, or his diarrhea may actually appear to increase. An understanding of these factors is absolutely critical in the development of an effective instructional intervention.

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

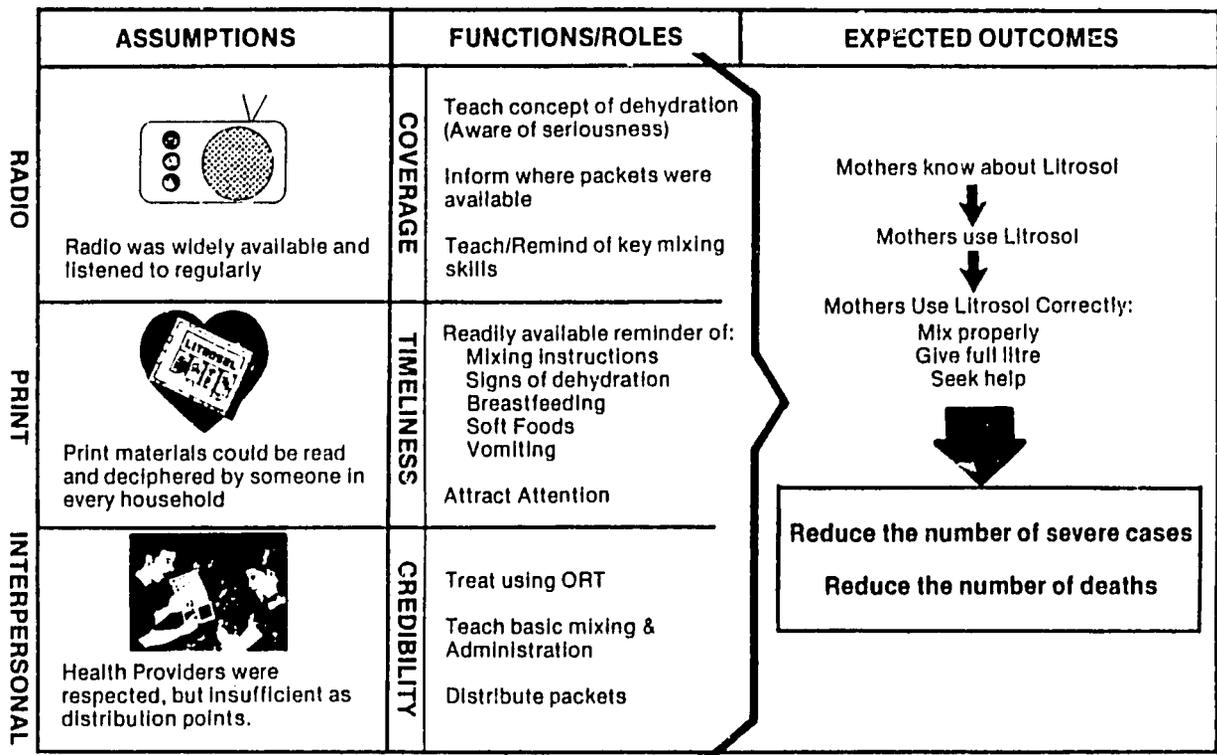
Another important point to emphasize is effective delivery of positive consequences or rewards. Behavior does not change unless rewards are actually applied to the desired behavior pattern or some reasonable approximation. It is not sufficient, for example, for nurses to tell outsiders how important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

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

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

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

Radio is used to provide widespread coverage of key new skills and as a regular reminder of critical mixing, administration and feeding advice. **Print materials** are used to carry more detailed instructions and be available in a timely-way -- when the mother needed to know how to mix ORT, how to give ORT, and how to monitor her child's progress. **Interpersonal channels**, physicians, and health workers provide overall credibility for the new health technology and constitute the primary distribution vehicle for packets in Honduras and mixing advice in The Gambia.



DIFFUSION MODEL

THE CAMPAIGN IN HONDURAS

The field project in Honduras is a three-year portion of the overall project. It is subdivided into two distinct activities: the nine month pre-program research activity and the actual execution, monitoring, and revision of the public communication campaign itself. The project has modest financial resources to develop and produce the radio, graphic, and in-service training materials, and to fund one-half of the radio broadcast costs. The Project is also providing two expatriate technical assistants to the Health Education Unit of the Ministry of Health (MOH) in Honduras, as well as supporting two local specialists assigned full-time to the MM&HP Project.

The Ministry of Health is funding three full-time counterparts, office space and the remaining broadcast costs. The project staff coordinates project activities with several other MOH offices, including the Director General, Maternal Child Care, Training and Human Resource Development, Epidemiology, and Environmental Sanitation. A coordinating committee has been established to review project activities and to ensure that the project is consistent with the overall health priorities of the MOH.

The project operates in Health Region No. 1 of Honduras. This region was selected after careful study and provides a representative population of approximately 400,000 individuals.

The Problem

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

Communication Objectives

The mass media campaign in Honduras has the following main objectives:

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

Audience Definition

The audience in Honduras has been divided into two main groups:

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

Communication Strategies

The project is designed to teach the primary audience:

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

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

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

Message Tone

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

Execution

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

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

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

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

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

EVALUATION LEGEND

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

HONDURAS ACTIVITIES

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

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THE CAMPAIGN IN THE GAMBIA

The field project in The Gambia is a two-year portion of the overall Mass Media and Health Practices Project. The Gambia activity is divided into a six-month pre-program development investigation and the actual execution, monitoring, and revision of the public education program. The project has modest financial resources to develop and produce the radio, graphic, and in-service training materials required. The MM&HP project also provides one expatriate technical assistant to the Health Education Unit of the Medical and Health Department.

The Gambian Ministry of Health (MOH) provides one full-time counterpart and office space, and the national radio system is providing all radio broadcast time. As in Honduras, a coordinating committee has been established by the Ministry to review project activities and to ensure that the project is consistent with the Government's overall health priorities.

The Problem

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

Communication Objectives

The main objectives of the mass media campaign in The Gambia are the following:

- o Substantially reduce the number of deaths among children below the age of five from diarrheal dehydration.
- o Establish one sugar/salt (S/S) rehydration regimen as a standard for village-based prevention of dehydration.
- o Differentiate the village level management of diarrheal disease to meet the seasonal characteristics of the wet and dry season diarrhea/malnutrition complex.
- o Establish a regular faeces clean-up campaign within a significant number of rural family compounds.

Audience Definition

The audience in The Gambia has been divided into three main groups:

- o The primary audience is rural mothers, grandmothers and older female siblings of children under five.
- o The secondary audience includes Rural Health Inspectors, Community Health Nurses, Health Peace Corps Volunteers, Leprosy Inspectors, Maternal Child Health teams, and Primary Health Care Workers.

- o A tertiary audience includes general physicians, dresser/dispensers, local leaders (alkalos), and rural fathers of children under five.

Communication Strategies

The campaign is designed to teach the primary audience:

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

The campaign hopes to teach the secondary audience:

- o To properly mix and administer S/S rehydration solution.
- o To properly manage moderate and severe dehydration in the health centers using ORT packets.

The tertiary audience will be motivated to support and praise mothers who properly use the S/S solution for diarrhea.

Message Tone

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

Execution

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

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

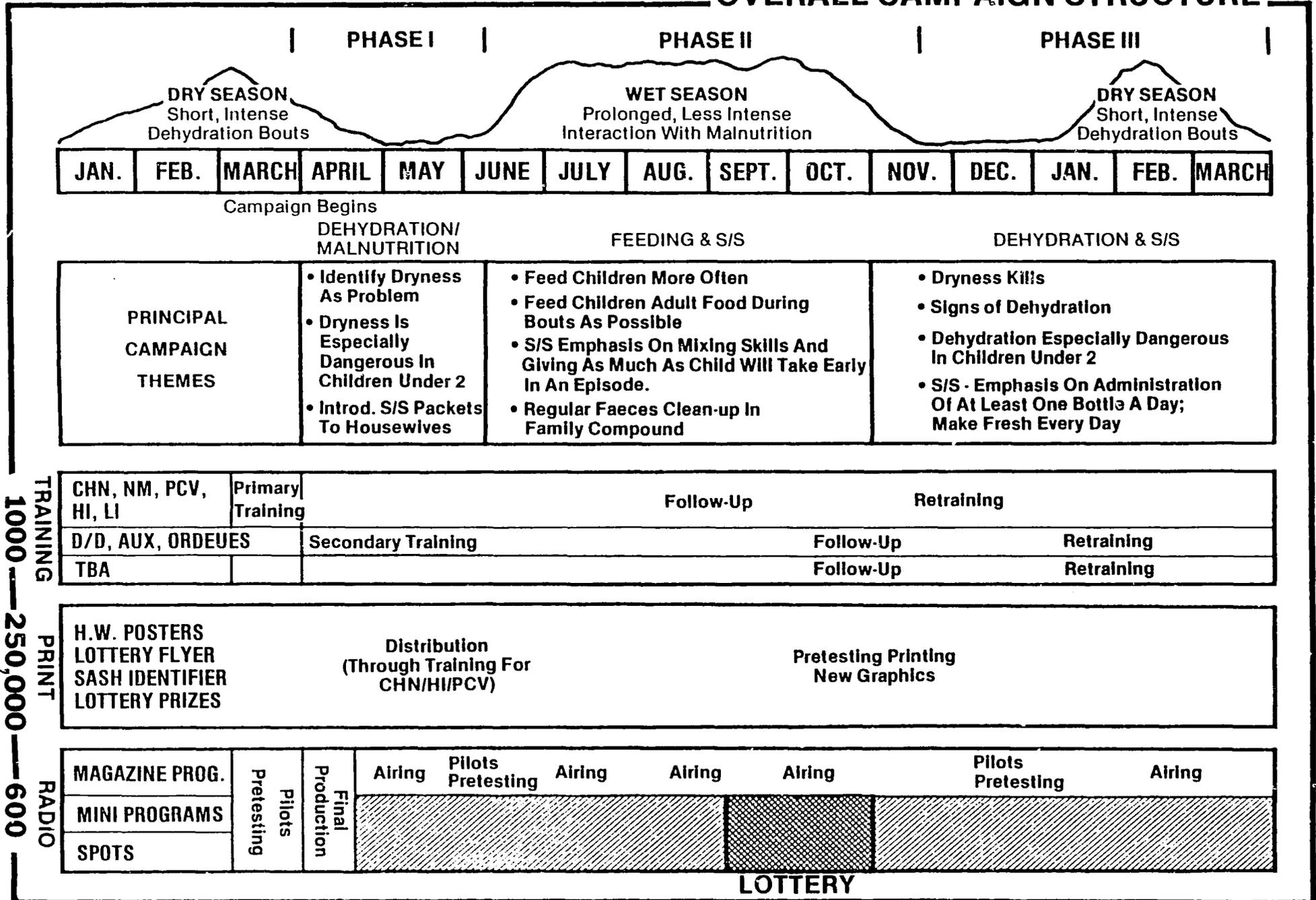
Phase I, which precedes the wet season diarrheal peak (characterized by prolonged, debilitating bouts of diarrhea), emphasized the relationship between diarrhea, dryness and malnutrition, establishing the concept that "dryness," or dehydration, can be prevented through a special diet of S/S solution, breast milk, and adult cereals given to young children during bouts of diarrhea. Phase I included an intensive face-to-face training program for rural health workers (HIs, CHNs, PCVs, LIs, and MCH team members) in the proper management of diarrhea including S/Ss solutions, UNICEF packets and intravenous/intraperitoneal (IV/IP) therapy. These health workers in turn trained TBAs in 1,000 villages in the proper mixing and administration of the S/S solution, leaving a happy baby flag on the hut of the trained TBA as a identifying marker.

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

Phase III, which immediately precedes and coincides with the dry season diarrheal peak (characterized by short, intensive and rapidly dehydrating bouts of diarrhea), reinforced the S/S mixing behavior stated in Phase II and emphasized the rapid, systematic administration of the S/S solution from the on-set of the diarrheal episode in children under five.

THE GAMBIA

OVERALL CAMPAIGN STRUCTURE



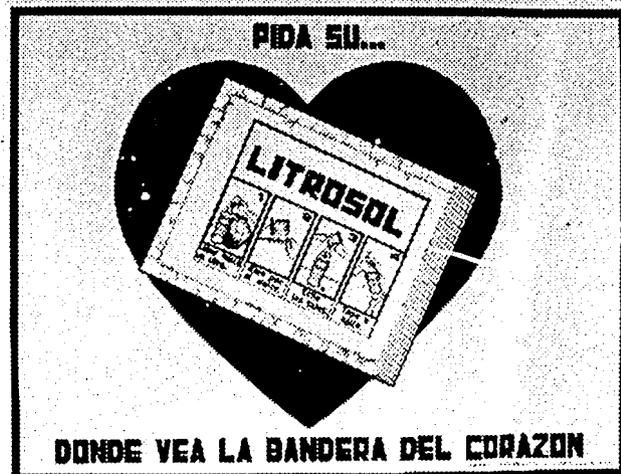
Images from the Field

IN HONDURAS:



A complete formula oral rehydration packet is produced locally by the national pharmaceutical company.

Called Litrosol, this brand name is widely publicized through posters, pamphlets, radio programs and an instructional label which reminds mothers of how much water to use in mixing the prepackaged salts.



Most packets are distributed with a simple flyer, folded to appear like an envelope. The flyer carries important instructions on how to mix the packet with water, how much to give and what feeding practices to use.

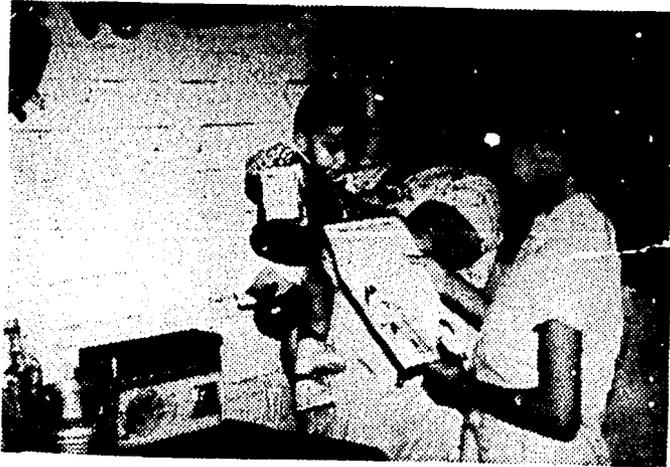
These materials are developed after months of intensive investigation in rural areas to determine how mothers now treat diarrhea and what they expect from a diarrheal remedy. Simple photographs are used as discussions starters to help mothers talk about treatment, and their experiences with diarrhea.



One of the toughest jobs is analyzing the results of these investigations. Hours are spent reviewing questionnaires, discussing their importance, and using principles of behavioral psychology to prioritize problems and select promising educational solutions.

One solution discovered was to develop a loving image for the campaign. A red heart is chosen as a central visual symbol, signifying the love that mothers have for their children. It is repeated often on print materials.





Radio programs, thousands of spot broadcasts, and dozens of weekly programs are broadcast on carefully selected local stations. These programs build upon the loving theme selected for the graphics, and talk directly to mothers, grandmothers, and older siblings in vocabulary they can understand and appreciate. Radio is both the first contact with Litrosol and a regular reminder of key mixing and administration instructions.

Local health workers and health professionals are trained to use and promote Litrosol. Practice sessions, using a simple doll, replicate each step in the rehydration process. The fun of using a doll heightens the workers' interest and enthusiasm.



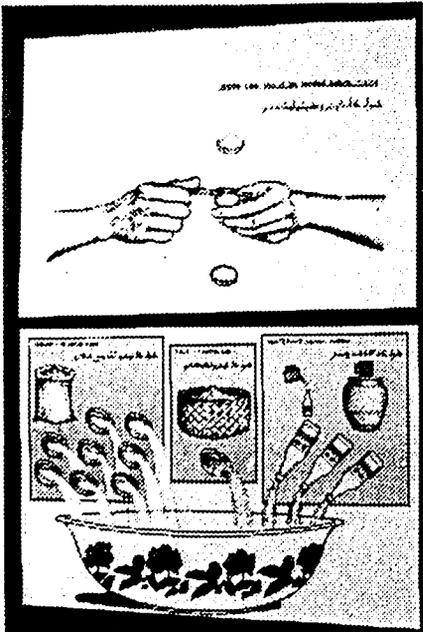
A simple flag with the red heart symbol is given to each trained health worker. Radio programs then announce that Litrosol is available at houses with the red flag. This integration of radio, graphics and health workers proves to be a powerful combination.

IN THE GAMBIA:

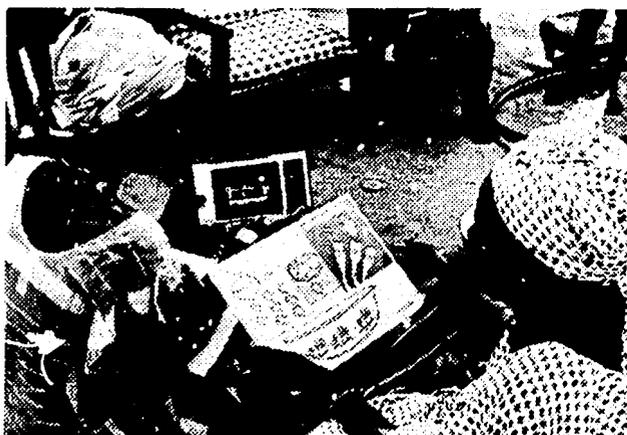


Village health workers learn to mix the correct sugar, salt, and water solution using the same materials and containers found in rural homes.

A village health worker proudly displays a happy baby flag, symbol to the community that he is a source of information on the water, sugar, salt diarrhea medicine.

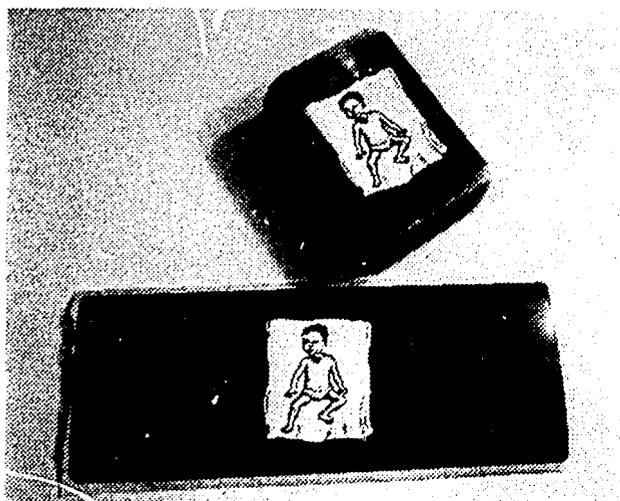


A one page flyer shows how to use a bottle cap and a local soft drink bottle to measure the correct proportion of sugar, salt, and water.



Women get their flyer from local leaders and health centers, and then listen to special radio programs which teach them what the flyer means. Color coding of the flyer allows the radio announcer to be clear and specific about each of the pictures on the flyer.

Thousands of women crowd around a health worker at the nation's first Happy Baby Lottery. Women who can properly mix the diarrhea medicine win a simple prize. The Lottery provides not only motivation to get a flyer, but practice in mixing the solution in supervised settings.



One of the prizes is a bar of local soap wrapped in a gummed label with the Happy Baby symbol printed on it.



Mothers keep the flyer and use it to remind them of how much sugar, salt and water to mix.

Follow-up radio programs use the testimonials of Happy Baby winners, to continually reinforce the value and importance of the sugar, salt and water solution. These programs are an ideal opportunity to repeat the mixing instructions which have been captured in a song using popular rhymes and rhythms.



COMPARING HONDURAS AND THE GAMBIA

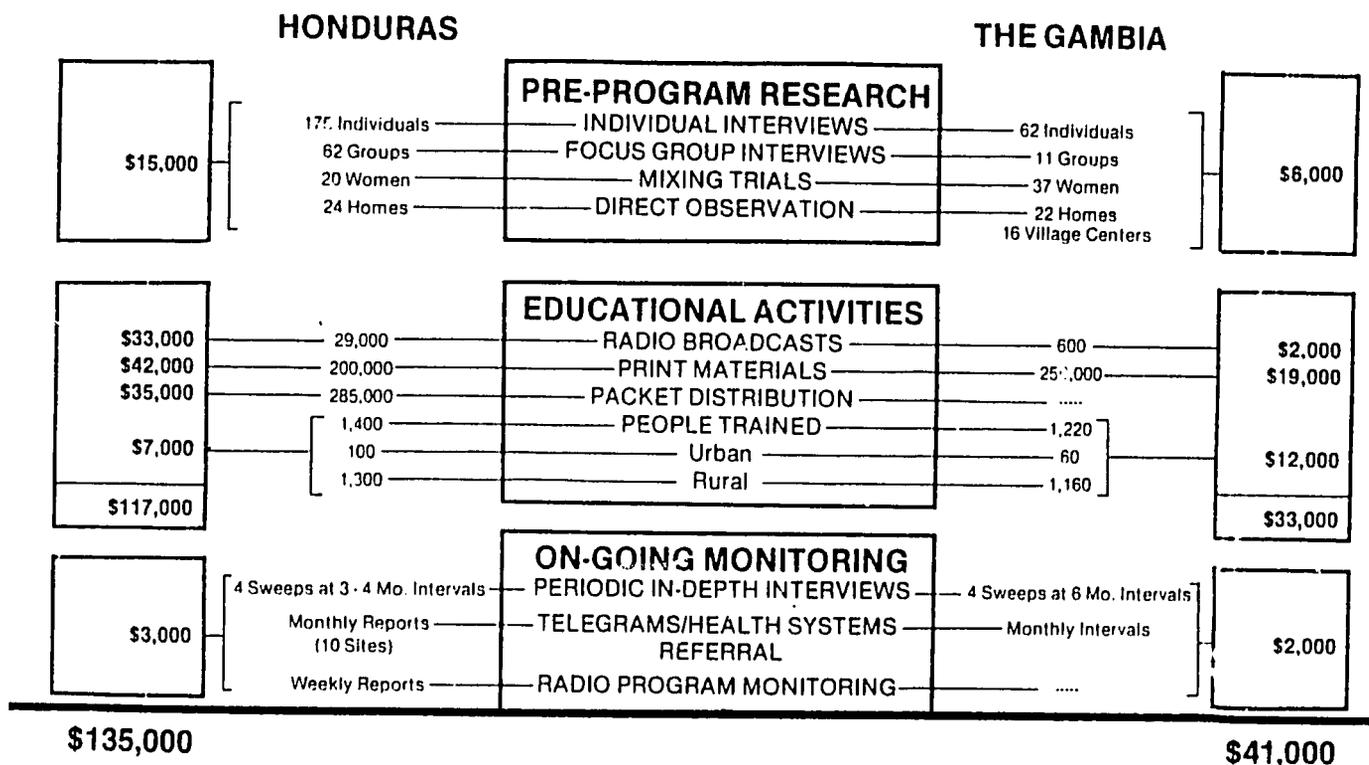
The project compared the usefulness of a single methodology applied to two different environmental and cultural settings. The Gambia and Honduras were chosen largely because of their differences from each other. In essence, the question is: does a systematic, mediated campaign work effectively in both an African and a Latin American setting?

The chart below illustrates the most relevant differences between the two sites.

SOME DIFFERENCES BETWEEN THE TWO SITES

		The Gambia	Honduras
EXISTING ENVIRONMENT	The Health Problem	Striking seasonal variation between short dry season of watery diarrhea, and longer wet season of prolonged diarrhea interacting with malnutrition.	Seasonally prominent watery diarrhea.
	Target Audience	Striking linguistic and cultural differences between major sub-groups.	Homogeneous cultural groups
	Health System	Limited central resources, with significant potential for rural coverage	Significant central resources with relatively limited rural outreach.
	Radio	Single, centralized government broadcast channel. Limited potential coverage.	Multi-channel commercial broadcast system. Excellent potential for coverage.
	Print Media	Practically unknown at village level	Limited availability, but some exposure.
PROPOSED INTERVENTION	Rehydration Regimen	S/S in the home-Packet and IV in the health center.	Packet in the home. Packet and IV in the health center.
	Treatment Strategy	Reinforce significance of dryness. S/S means to prevent dryness. Teach signs of mild dehydration as point to seek help.	Teach significance of dehydration. Teach signs of mild dehydration as point to seek help.
	Principle Treatment Objective	Standardize and popularize proper mixing and use of S/S solution in the home.	Popularize appropriate application of the packet in the home.
PROPOSED INTERVENTION	Principle Prevention Objective	Regular feces campaign within compound.	Cluster of prevention behaviors.
	Campaign Structure	High impact radio lottery targeted at rural women with print and health worker support.	Multiple, intensively repeated short radio messages, broad print material and health worker focus.
	Time	24 months total/12 month broadcast cycle.	36 months total/24 month broadcast cycle.

The following chart illustrates the different out-puts and their relative costs for each country. Costs exclude foreign technical assistance but include local salaries, benefits, travel, transportation, research, printing, production, and broadcast. The significant differences in total cost between the two countries reflect first, significant savings because air-time was provided free in The Gambia and commercial printing costs were much lower. Secondly, the prior experience with the research process in Honduras permitted significant savings in protocol development and a smaller sample size resulting in a lower total preprogram research cost in The Gambia.



1st YEAR ACTIVITIES

IMPORTANT COMMONALITIES OF APPROACH

To understand the MM&HP program it is also important to note the commonalities, not of setting, but of approach, which characterize the project in both countries. In both countries:

- o A significant pre-planning investigation of the medical problem, the social context, and the instructional tools was conducted.
- o Focused instructional goals were established around a narrow health objective.
- o The ultimate criteria against which specific messages were selected were the feasibility, practicality, and reliability of audience adoption.
- o Behavioral design principles were used to select target behaviors, develop the training design, and orient the campaign structure.
- o Radio, print, and face-to-face support were designed as integrated, mutually supportive, and interactive components.
- o Significant use was made of radio for direct instruction as well as information dissemination and popular mobilization.
- o Systematic materials testing and on-going project monitoring were included as fundamental elements.

EVALUATION FINDINGS

The MM&HP project is being formally evaluated by Stanford University's Institute for Communication Research. The evaluation includes resident experts in both Honduras and The Gambia. The research design relies on a variety of studies including a panel study of some 800 families, and health worker, nutrition, and mortality studies. In Honduras a special behavioral study is also underway to determine how women actually use the program's advice in their homes. The following text is abstracted from Stanford's formal evaluation report.

RESULTS IN HONDURAS

Results of the first year evaluation in Honduras are very encouraging. The population has good access to the main channels of communication used by MM&HP. Roughly 80 percent of families own radios, of which about 90 percent are functioning at any given time. Some listen to the radio throughout the day, but most of the audience tunes in between six and seven in the morning and at noon, with virtually no one listening in the evening. On any given day, roughly two-thirds of the mothers will listen to the radio. People have frequent contact with members of the health care community, either through community based workers (21.3 percent of families in the last six months) or staff of fixed health care facilities (32.6 percent of families in the last six months). There is a strong preference for care from modern medicine sources over folk medicine sources (82.5 percent of contacts over the last six months were with representatives of the Ministry of Health system rather than healers, spiritualists, etc.). More than half the mothers can read and, if they can't, usually there is someone else in the family who can. The household literacy rate is 86.8 percent. Therefore it is clear that the MM&HP messages can be received by the target audience through all three channels.

Exposure to MM&HP materials through these channels is also very high. Mothers who listened to the radio on the preceding day remembered having heard a MM&HP radio spot about 70 percent of the time. An average of more than three spots was remembered by mothers who listened to the radio on the previous day. Mothers also have the potential to learn through instruction that takes place during contacts with health care workers. Instruction took place in an average of 42.4 percent of contacts with staff of fixed health care facilities and in an average of 37.9 percent of contacts with community level health care workers. Exposure to the print materials was also very high. Roughly half the sample reported having seen a health poster, usually at a health center. About 80 percent of these recalling seeing a poster could describe it well enough that it could be identified as a particular MM&HP poster. There is no doubt that the campaign messages are actually reaching and being remembered by the target audience.

Learning of the content of the messages is quite successful. After five months of broadcasting mothers successfully supplied 28.9 percent of all possible answers to the questions, most of which were unaided recall items with multiple responses, a particularly demanding test of knowledge. By the thirteenth month of broadcasting, this rate had risen to 33.8 percent, a statistically significant increase. This result is particularly impressive because it includes mothers who never listened to the radio or who reported never having heard one of the spots. If one looks at the learning scores for particular items, the percentages are even higher. For example, nearly two-thirds of all mothers could complete the campaign jingles when prompted with the opening lines. An average of roughly half the mothers named at least one correct answer in each learning category. An average of almost 90 percent of the sample who heard Dr. Salustiano spots could identify Litrosol as the medicine he was recommending. There is thus a pattern of

initial fast learning to a very respectable level when the campaign begins, followed by slower gains in learning as time goes by.

Diarrhea prevalence is high. Estimates at different points vary: the maximum point prevalence observed was 14.6 percent of children less than 60 months of age sick with diarrhea on the day of the interview. A minimum of almost half the children experience an episode of diarrhea during a six month period. Use of Litrosol in cases occurring within two weeks prior to the interview rises from 9 percent of cases after four months of the campaign to 26.1 percent after 12 months. Higher percentages of cases (up to 45.3 percent) are reported to have been treated with Litrosol over periods of six months prior to the interview, but it seems likely that mothers are forgetting more of the less severe cases. Half of the entire sample says they have tried Litrosol after thirteen months of the campaign. About two-thirds of the women get their Litrosol from people in their own community; the rest tend to get it from clinics or the hospital. Learning of the method for preparing Litrosol is primarily from the packet (58 percent at the end of the first year), secondarily from interpersonal sources (43.4 percent) and relatively little from the radio (14.0%). Knowledge levels about mixing of the Litrosol packets were good for the most important aspects--using a liter of water and putting in all the packet both received about 95 percent correct responses. Evidence indicates that more severe cases of diarrhea are more likely to receive treatment with Litrosol. Breastfeeding levels are high (over 90 percent of children are breastfed at some time) but bottlefeeding is often carried out in combination with breastfeeding. At the end of a year 87.5 percent of mothers knew to continue breastfeeding during diarrhea bouts, and 58.7 percent knew to keep feeding the same or increased amounts to children during diarrhea episodes. Mortality monitoring in children less than two years old shows a 40% drop in percentage of deaths involving diarrhea, but not in overall mortality. Honduran children show intermediate levels of malnutrition, wasting, and stunting. Data for assessing change in nutritional status during the intervention are not yet completed.

The overall picture that emerges of the impact of the MM&HP project in Honduras is one of an intensive, well integrated campaign that is achieving impressive successes in teaching people health information and getting them to change specific behaviors related to response to infant diarrhea. Subsequent analyses on the health effects over time will reveal the impact that the behavioral changes have on health status.

RESULTS IN THE GAMBIA

Data collection in The Gambia is conducted within a panel of 800 mothers in twenty communities. The communities are sampled purposively, the compounds are sampled randomly within community and mothers are sampled randomly within compounds. The panel is to be followed for a period slightly longer than two years, with a battery of questionnaires administered roughly once each month. The main batteries of questionnaires are Communication, Childcare and Feeding Practices, Morbidity, and Anthropometric Measurement. In addition to the survey data, a series of smaller separate studies are being run, including interviews with health care workers, community mortality, mixing accuracy, observational studies, and process evaluation.

Access and Exposure

In assessing the impact of the campaign, we first ascertained the degree of access mothers had to the channels (print, radio, and interpersonal communication) and then measured the amount and type of exposure mothers received to campaign information through those channels.

Print

The literacy levels of the mothers in the sample were measured using a simple system that required them to read a complex phrase in any of several languages in Roman or Arabic characters. Only 2.9% of the mothers could read the phrase. When a mother could not pass, she was asked to name another resident of the compound who could read. The test was administered to any claimed reader who was present at the time of the interview, and 31.5% of the compounds had someone present who could read. Even though roughly a third of compounds had readers, almost no printed material was available -- only 3.9% of compounds had any kind of newspaper or magazine available. On the one hand, these low literacy rates meant that campaign materials had to be designed to be independent of printed instructions; on the other hand, the low availability of any printed matter meant that printed campaign materials would have a high salience in the rural areas.

The two major print efforts in the campaign were the use of printed flyers as entry tickets in the Happy Baby Lottery and the distribution of red flags printed with the "Happy Baby" logo to community members trained to train others in mixing water-sugar-salt solution. After the lottery had taken place, 72% of all mothers could show us their copy of the flyer, and more than half of them (38.3% of all mothers) could explain the meaning of all the component illustrations on the flyer. Approximately two-thirds of mothers could explain the significance of the red flags.

These results indicate that the usefulness of the print channel was limited by the literacy levels of Gambians, but that carefully designed materials in appropriate roles could achieve a significant level of exposure and impact.

Radio

The penetration of radio receivers is relatively high in The Gambia. There was a working radio in 59.3% of all compounds, and batteries to operate them can be purchased locally in 90% of the cases. Men own most of the radios (78%) and tend to control the choice of what station is listened to (only 25% of women report that they choose the station). Nonetheless, Radio Gambia is overwhelmingly the most frequently chosen station, with 68% giving it as their first choice. Radio listening is often a group activity in the evenings. Eight in the evening is the most desired listening time for 70% of the women.

Women also listen at eight a.m. and one p.m. but more than two-thirds say their listening is in the evening. Over 60% of the women report listening to Jaata Kendaya, a regularly scheduled health program. An average of 50% of mothers report having heard radio spots about diarrheal disease, and within a few months after the campaign began, 47.9% of mothers reported that they had learned something from the radio about care of children with diarrhea.

Because the radio is often playing during socializing in the evening with people from other compounds, actual coverage by the radio is even higher than the ownership figures would indicate. Thus the heavy reliance of the campaign on radio-transmitted information is an effective strategy for reaching the rural population.

Interpersonal Communication

Use of interpersonal interaction for training and reinforcement of campaign information was the third leg of the Mass Media and Health Practices strategy. Interaction with clinic-based health care workers seems easily possible; two-thirds of the mothers in our sample can reach a health care center within 90 minutes, mostly by walking, and prior to the campaign, 85% of mothers said they had gone to the clinic for the child's last case of diarrhea. In addition to fixed health care facilities, community volunteers were trained and designated as "Red Flag" women, to whom one could turn for advice. Roughly 80% of the mothers in the sample lived in villages with Red Flag volunteers, and over 80% of the women in those villages knew what the flag signified.

Women reported discussing the radio messages among themselves in about a third of the cases. This type of interpersonal communication can provide an opportunity for secondary transmission of information and for generating community consensus on the meaning of the messages.

Potential access to interpersonal communication channels, in both formal and informal settings, is good, and exposure to campaign messages is correspondingly high.

Learning and Behavioral Changes

Basic information about a range of topics, including causes and signs of diarrhea and dehydration, breastfeeding and other feeding practices, personal hygiene, and environmental sanitation are taught in addition to the mixing and administration of home-made water-sugar-salt solutions for oral rehydration.

In diarrhea and dehydration beliefs, the gains are large at the beginning of the campaign and either slow down or in some cases even reverse slightly. Mothers recognize some signs of dehydration after nearly a year of campaign, but by no means all. Sunken eyes and sudden weight loss are recognized by 81% and 71%, respectively. However, sunken fontanel and loss of skin elasticity are only recognized by 36% and 44%, respectively. Mothers' beliefs about the impact of water-sugar-salt (WSS) treatment are improved over time -- between the ninth and thirteenth month of the campaign, the incorrect belief that WSS stops diarrhea is cut from 82% to 44%, while the correct belief that it prevents dryness rises from 4% to 26% of mothers. The concept of dehydration seems particularly difficult. Six months into the campaign 52% of mothers did not agree that "dryness," the campaign synonym for dehydration, could result from diarrhea.

For feeding practices, mothers' beliefs are generally good to begin with and continue to improve during the campaign. A stable average of 87% of mothers report that they breastfed during diarrheal bouts. The percentage of mothers who continue other foods starts at 60% at the beginning of the campaign, then jumps up and stays at a level between 80 and 90%. A year into the campaign, 89% of mothers agree to the statements that babies need extra food during diarrhea and that babies need solid foods to regain their strength.

On the less encouraging side, while some concepts of environmental sanitation are well accepted, after ten months of campaign, 77% of mothers still thought it was okay to throw feces over the compound wall to get rid of them, 55% thought flies didn't transmit disease, and only 36% agreed that feces in the compound can cause diarrhea.

Teaching about the mixing and administration of WSS was the primary educational objective of the campaign, and in this area the most dramatic impacts of the campaign

are seen. The percentage of mothers who have heard of the water-sugar-water treatment that you mix at home rises from 52% in the early months of the campaign to 84% within a year. A measure of correct mixing knowledge requiring the mother to be correct on all aspects of mixing rises from zero in the first month to 67% within nine months. The sharpest rise in this knowledge level measure appears to be the result of the lottery effort that stressed the mixing procedure very heavily in all channels. Many of the finer points of administration are getting across well. For example, knowledge about the correct amount to give children of different ages climbs steadily for all age groups, and averages 62% of mothers knowing the correct amount after a year of broadcasting. Mothers also improve on questions such as when to start administration and what to do when the child vomits. There are examples of items which do not improve or which worsen, but the general picture is one in which the campaign is effectively transmitting a great deal of information to the mothers.

Behavioral changes follow a similar pattern to the knowledge changes. Within nine months of starting the campaign, 47% of mothers had treated at least one case of diarrhea among their children with WSS. The behavioral changes take place at two levels. One is the decision by the mother about whether to seek help from the formal health care staffer when a child has diarrhea. At the start of the campaign, 85% of mothers claimed that they took their child to the health center for the most recent case of diarrhea. A year later that figure had dropped to 50%. Other data show that this indicates that mothers willingly treat at home if they feel they have an effective response available to them. The other level of behavioral change is what treatment the mother chooses if she treats the case herself. Of those cases that were treated at home, the percent receiving WSS skyrocketed from 20% to 89% of home treatment cases, or from 4% of all mothers to 47%, within nine months of the start of the campaign.

Changes in other behaviors are less marked but are generally consistent with the promotion by the campaign. For example, the reported rate of breastfeeding during the first few months of life rises from 82% to 98% in a year, and the reported rate of giving colostrum to newborns rises from 51% to 66% in the same period. Feeding practices seem more variable, but may be reflecting changes in food availability over the course of the year.

The evidence on knowledge and behavioral change during the first year of the project is strong and positive, particularly in the knowledge and behaviors related to the primary objective of the campaign, the adoption of WSS.

Health Status

Diarrheal morbidity has been tracked over the course of the first year and has exhibited the expected strong seasonal pattern. The dry season has lower rates in general, with a two-week prevalence rate ranging between 10 and 18% of children under five years. The wet season has distinct elevation, with two-week prevalence rates ranging from 26% to 34% of children under five. The point prevalence for the wet and dry seasons ranges from a high of 9% to a low of 1% of children under five sick on the day of the interview. Indicators of severity of the case behave in ways directly or inversely related to seasonal changes, but consistently with the general hypothesis of the Medical Research Council that rainy season diarrhea in The Gambia is bacterial and does not produce much acute dehydration, and dry season diarrhea is largely caused by rotavirus and does lead to acute dehydration.

Anthropometric measures of health status were taken in the fourth and eighth months of the first year. They reflect a pattern of moderate stunting and some degree

of wasting. Gambian children are on the average about one standard deviation shorter and lighter than the NCHS standards. The two measurement cycles taken during the first year bracket the rainy season and there is a consistent tendency for weight, weight for height, arm circumference, and triceps skinfold to show a drop from the first to the second measures. The consistency of the pattern lends support to the interpretation that the effect detected is related to the increased levels of illness during the rainy season and the fact that food supplies are much scarcer during the "hungry season" that coincides with the rains. Analysis of the relationship between treatment with WSS and anthropometric measures is planned when data on longer time periods is available.

Mortality data is being collected at the community level and will also be analyzed when a longer time series has been collected.

The data for The Gambia reveals that the target population has good access to the three channels of communication -- print, radio, and interpersonal -- used by the campaign. In addition, the actual exposure to campaign messages through these channels was high.

Learning of campaign content related to the primary objective of the campaign, mixing and administering water-sugar-salt solutions to children with diarrhea, was very high. Learning of other campaign content was somewhat lower and more variable, but still high on an absolute scale.

Behavioral changes were consistent with learning. That is, adoption and accuracy of performance of the prime target behavior was very high. Other target behaviors also showed sizable positive changes.

Health status measures reveal a picture of a high and very seasonal level of diarrheal morbidity. Gambian children are shown to be short, underweight, and low in muscle area and fat area when compared with NCHS standards. Mortality data is being collected but a longer time series must be collected before meaningful analysis can be undertaken.

The overall portrait of the campaign at the end of the first year is one of an intense level of activity that has become highly salient for rural Gambians. The campaign and the recognition it has received have produced impressively high levels of awareness and behavioral change in the population in a relatively short time. Further data collection during the second year of the campaign will investigate the performance of these changes and any possible impact of the changes on the health status of Gambian children.

OBSTACLES TO EFFECTIVE ORT PROGRAM IMPLEMENTATION

The first year experiences with MMHP in Honduras and The Gambia demonstrated clearly that five obstacles to an effective ORT program are particularly important. This section attempts to list those obstacles in brief outline form as a possible guide to future program planners.

1. Inadequate Training/Orientation of Health Care Personnel

- in how to use ORT themselves
- in how to teach mothers to use ORT in the home
- in what childcare advice to give--feeding, signs of dehydration
- in what vocabulary to use with mothers.

Physicians often comment:

- ORT doesn't really work with moderately or severely dehydrated children
- ORT is too labor intensive - my nurses don't have time to rehydrate orally
- Children should not be fed while in rehydration treatment
- Antibiotics are an essential part of all effective diarrheal treatment
- Mothers clutter up my rehydration ward - I don't want lay people administering medical care
- ORT doesn't seem as professional, as serious a treatment, as IV

2. Inadequate Supply/Distribution Systems for Packets and other supplies

3. Inadequate Education of Users

- told too little - no explanation of dehydration or exact mixing
- given wrong advice - told to stop breast-feeding, stop feeding during bouts, give antibiotics, use purges
- user constraints are often ignored - boiling water, how to measure a liter - how to read instructions, time needed to administer ORS properly
- existing beliefs are ignored - purging, fasting, desire to stop diarrhea rather dehydration
- reaches too few people directly - too great a dependence on health workers alone
- messages are often contradictory - several different S/S formulas promoted at the same time
- messages are often unclear to user - wrong vocabulary is used

Mothers often ask:

Can I give my local remedies along with ORS?

Can I use ORS for adults as well?

Do I really have to give a whole litre?

Can I add other ingredients to the ORS?

What do I do if my baby vomits?

Is ORS good for all kinds of diarrhea?

Does ORS cure my baby's diarrhea?

4. **Inadequate Information on Program Performance**, particularly on the:

distribution system

health care providers attitudes and practices, and

user-attitudes toward ORT

- difficulties in applying ORT
- confusions or mistakes in applying ORT

5. **Inadequate Planning**

user education/promotion begins before supplies and training are completed

training is done before supplies are ready

supplies run out after first four months--resupply delayed

program proceeds without full cooperation of medical community

program proceeds without overall policy

program responsibility is shifted from one office to another

resources for monitoring (travel and per diem costs) are unavailable

LESSONS LEARNED

Lesson #1: Coverage, Timeliness, and Credibility - You Need All Three.

If the goal is to produce widespread use of ORT in unsupervised settings, then three factors are critical: coverage, timeliness, and credibility.

Coverage is the ability to reach many people quickly, and it is best achieved through the media. In most countries, this means radio.

Timeliness, or the availability of specific mixing and administration reminders at the moment they are needed is best accomplished by print and graphic material--specifically a packet label and a one-page graphic flyer.

Credibility, or the acceptance of ORT by patients, is best achieved through the full support and use of ORT by recognized health professionals in the country--physicians, nurses, and health workers.

Lesson #2: Have a Plan Which Includes Everything. You Can't Have a Piecemeal Program.

To bring these three elements together, a comprehensive plan is needed. It must include:

- o An adequate supply and distribution system of OR salts.
- o An explicit linkage between what health providers, radio, and print media tell the public--a single set of simple, noncontradictory messages on:
 - How to mix ORS.
 - How to give ORS.
 - How to know when ORS is not working.
- o A training program for health providers which emphasizes how to teach ORT to mothers, as well as how to use ORT in the clinic.
- o A radio broadcast schedule timed to reach specific audiences.
- o A series of simple print reminders of key skills that accompany each packet.

Lesson #3: Base the Plan on Field Research.

An effective plan must be based on field research of existing audience practices and beliefs. A few key questions that need to be answered in this research are:

- o How will mothers mix the solution? What containers are available?
- o Where can mothers obtain packets if they can't get to a health center?
- o Whose advice do mothers take about diarrhea?

- o What do mothers want a remedy for--the loose stool, appetite loss, weakness; what do they most worry about when a child has diarrhea?
- o What are mothers doing now--purging, giving teas, withholding food, etc.--and why do they feel these are appropriate methods?
- o What type of print material would be most valued and used--pictures, words?
- o Why do mothers listen to radio; who do they trust as radio announcers?

There are many other questions which also need answers, but these key areas will trigger responses critical to developing a sound plan.

Lesson #4: Correct the Plan as Required—Keep it Flexible.

Monitoring the campaign is essential. Regular visits to villages, watching how ORT is being used or misused, systematic interviews with health workers and mothers will expose weaknesses impossible to predict otherwise. Once discovered, correct these mistakes, do not try to argue them away. Mistakes are normal, almost inevitable, and they can be corrected if they are admitted.

Lesson #5 Emphasize Simplicity.

Avoid the temptation to complicate matters. Make the advice to mothers simple--use only a few print materials, do not ask health workers to do much more than they are already doing, and repeat a few good radio programs over and over rather than making dozens of new ones.

ORT: SEVEN KEYS TO EFFECTIVE PLANNING

I. USER PROFILE: WHO SHOULD BENEFIT?

Who is most in need?

Where are the greatest targets of opportunity - who could be reached easiest?

What are the greatest existing constraints and opportunities to using ORT (beliefs, practices, resources)?

Who most influences the health beliefs and practices of the user?

II. TREATMENT APPROACH: WHAT ORT REGIMEN WILL BE PROMOTED?

What combination of home-based solutions and prepackaged ORS is optimal in the home and at each level of the health care system?

What ingredients exist in the home? Can packets be effectively delivered? Are packets affordable at every level? What are existing attitudes of health providers?

III. PROGRAM MANAGEMENT: HOW WILL THE ORT SYSTEM BE ADMINISTERED?

Who is responsible for the various administrative tasks necessary to implement an effective program?

Define Program Objectives/Message Strategy

Packet Production/Distribution

Training: Physicians, Nurses, VHWs

Educational/Promotional Materials: Design/Production

Research and Program Monitoring

Institutional Liaison/Promotion

How will ORS be packaged? How much will be required? If purchased outside the country, what time frame is required? Where will packets be made available locally? How will packets and other supplies be delivered on a regular basis to these distribution points?

How should seasonal variations in diarrheal morbidity influence annual program planning?

IV. USER EDUCATION: HOW WILL USER BE MADE AWARE OF ORT?

How can educational materials and messages maximize existing user beliefs and practices? How can these beliefs be identified and fed into programming decisions?

What is the most effective combination of channels (interpersonal, print, broadcast, traditional) to reach the primary user?

V. **TRAINING: WHAT TRAINING IS REQUIRED TO ENSURE EFFECTIVE IMPLEMENTATION?**

Who will be trained, by whom, for how long, where and in what skills?

VI. **COST PLANNING: HOW WILL THE PROGRAM BE FINANCED TO ENSURE LONG-TERM CONTINUITY?**

What are current expenditures for diarrheal disease control, and what savings can be expected from structural changes in the approach to diarrheal control?

What sources of funding now exist (government, international donor, private) and what is the projected duration of this funding support?

What innovative ways can be identified to promote cost effectiveness and self-sufficiency?

VII. **MONITORING AND EVALUATION: HOW WILL MID-COURSE CORRECTIONS BE INCORPORATED?**

What programmatic aspects need to be monitored (distribution system, health care provider performance, user acceptance and adoption, health status changes)?

How can adequate information be collected and analyzed at the lowest possible cost?

ORAL REHYDRATION PROGRAM PLAN SHOULD INCLUDE:

1. **PROGRAM OBJECTIVES:** What is to be accomplished
2. **TARGET AUDIENCE:** Primary Users and Secondary Influencers
3. **TREATMENT STRATEGY:** Home, Clinic, Hospital
4. **PACKET PRODUCTION AND DISTRIBUTION SYSTEM**
5. **TRAINING PLAN**
6. **HEALTH COMMUNICATION STRATEGY:** Message and Channel Strategies
7. **RESEARCH AND EVALUATION STRATEGY**
8. **DETAILED TIME-LINE:** Showing how training, distribution, education and monitoring inter-relate
9. **FINANCIAL PLAN:** Budget with long-range financing program
10. **PERSONNEL /MANAGEMENT PLAN:** Who is responsible for each aspect

KEY PERSONNEL

The following individuals have contributed directly to the success of the Mass Media and Health Practices Project.

AGENCY FOR INTERNATIONAL DEVELOPMENT BUREAU OF SCIENCE AND TECHNOLOGY

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