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This paper describes the use of marketing techniques in nutrition planning, focusing on changing the food habits and personal hygiene behavior of rural people in Ecuador. A survey of nearly 2,800 respondents at the end of the two-and-a-half year project determined the changes in behavior, knowledge, and attitudes about health and nutrition following radio and television transmission of short messages on nutrition education. A descriptive analysis of the project setting forth a "reach and frequency" technique appropriate for other countries is presented, as are the processes of planning, executing, and evaluating such a project. A second section of the report describes the objectives of research in the project: (1) refining the design to make sure messages were meaningful and motivating, and (2) interpreting the impact of the campaign on target audiences. Results showed that such a technique can be used to reach rural mothers, farmers, and young people without a large financial investment. The appendices include the survey, questionnaire, plus code sheets and guides.

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MASTE

USING MODERN MARKETING TECHNIQUES

FOR

NUTRITION EDUCATION

ECUADOR

FINAL REPORT

December 31, 1975

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The Ecuadorian National Nutrition Institute (INNE) and later the Nutrition Division, Ministry of Public Health, were our counterpart agencies. Their collaboration made this project possible.

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INTRODUCTION

The pilot project in Ecuador began with a faith in the reach and frequency technique* and its application to social problems such as malnutrition. At the end of nearly two and one-half years of work with the program our faith is strengthened, and we have learned a great deal about how this educational tool can be used in developing countries and about its limitations and strong points.

This report is a discussion of the lessons we have learned about executing the first reach and frequency program and about the quantifiable results of this particular experiment. As important, in our opinion, as the result of this project on the target audience are the improvements that our experience will yield for later applications of the technique in education.

In the appendices to this report we have included the relevant documents of the study. In the text itself we have summarized the findings, presenting what we believe to be the most striking conclusions. In addition, we have presented a frank analysis of the processes of the project, how we started and proceeded through the project, and what we learned about implementing mass media projects.

*Reach and frequency technique is a campaign of short messages, frequently repeated, broadcast over radio and television scheduled throughout the broadcast day, over long periods of time. This is the method most commonly associated with commercial advertising.

In looking back on the Ecuador experience with the initial work in the Philippines and Nicaragua now nearly finished, it is very easy to show how we could have proceeded differently in Ecuador. Much of the narrative of the following report analyzes the process of executing and evaluating the project.

The accomplishments of the project can be summarized as follows:

- This was the first closely studied effort to use modern marketing methods, not associated with a product but with changing food and personal hygiene behavior.
- The project was carried out in Ecuador, using many of the local people to do the technical work, recording, filming, interviewing, etc. We did not import New York talent for much of the work.
- We did not require years before we were broadcasting. Even with unexpected handicaps we were broadcasting within six months after beginning work.
- Our interview schedule, including nearly 2,800 respondents, studied over an 18-month period, is the largest field interviewing program ever undertaken in rural Ecuador, and the largest opinion research project undertaken in the country.
- We have been able to document changes in behavior, knowledge, and attitude as a result of the messages.
- We have demonstrated that a national social service program can get access to the radio airways and can provide professionally produced materials without a large investment in

studios, writers, directors, and all the other costs traditionally associated with radio programs.

- We have demonstrated to the Ecuadorian Government that they can use this technique to reach rural mothers, farmers, young people to educate them without an investment of thousands of dollars for studios, etc.
- We have shown that this model is appropriate for other countries achieving greater impact because of the lessons learned in Ecuador.

We view this report not as a final statement about the reach and frequency technique, but as the first chapter in a series, each describing a new application.

A NOTE ON THE ORGANIZATION OF THIS REPORT

The report is divided into two major sections, each treating two of the purposes of the project. In the first section we have presented a descriptive analysis of the processes of the project, setting forth a working model for the reach and frequency technique in other countries. Additionally, this section describes the extent to which this model was implanted and accepted by the Ecuadorian Government and has become a tool for future programs. Finally, in this section we present some of the lessons learned from this project.

We have learned a great deal from this project, and one of the purposes of this report is to bring together these lessons so that follow-on projects will benefit from our work.

The second section of the report presents the findings of the evaluation interviews. Three chapters are included: A Summary of the Findings, Objectives and Methodology, and Limitations of the Data. This presentation of the data from the interviews is fully illustrative of the quantitative findings of the project.

In the appendices we have included detailed findings of the interviews, plus all materials relating to the research: questionnaires, before and after modification by the Ministry of Health, code sheets and guides, and other materials related to the project. These appendices are a complete record of the project.

SECTION ONEI. PURPOSES OF THE PROJECT

Our proposal and the contract with AID stated that the purposes of the project were the following:

A. EDUCATION

"Educate specific segments of the Ecuadorian population as to the viable solutions to specific priority nutrition problems."

Although we knew that this was to be an experiment and that much of what was to be learned as a result would be about processes of carrying on a project, we also wanted to serve the nutrition objectives of the Ecuadorian Government.

Furthermore, we demonstrated in this objective an important principle of marketing: segmentation of the audience. This is an important step in designing the message and an important technique to pass on to our Ecuadorian counterparts for use in future mass media programs or for nutrition education projects of any type.

B. MOTIVATION

"Motivate these segments to take steps to improve their nutritional habits by the educational technique and back-up programs."

Our messages identified specific actions that mothers could take to improve the nutritional status of their children, such as continuing breast-feeding, giving iodized salt, and boiling drinking water.

Good idea

The specificity of the messages was in itself a lesson for nutrition educators.

In these purposes we have carefully distinguished between educating, *i.e.*, increasing knowledge and changing attitudes, and motivating to action. Our goals go beyond mere increases in knowledge and awareness, to include changes in behavior.

When we began this project, we did not know, nor did anyone else, how much time and how many exposures to a message would be necessary to move an undereducated mother along a continuum of problem awareness, solutions awareness, solution trial, satisfaction, and changed behavior. The more than 2,800 household interviews that we conducted throughout the 15-month broadcast period attempted to measure this process. The data that we present in Section Two of this report are suggestive of the requirements of this process, but they do not give a definitive answer. Only after many trials, under a variety of circumstances, will there be enough data to describe the schedule of change.

Finally, we should note that this purpose assumed that there would be "back-up programs" to support and complement the radio messages. We did not believe nor do we now believe that with only radio messages permanent behavior change can occur. The radio is not a replacement for face-to-face contact, or for education through other media, but it is a partner. In one of the test areas of Ecuador, Manabi Province, there was when the project began a heavy government investment in health care facilities and personnel. In Imbabura Province, in the highlands, however,

there was little health and nutrition activity. Other than one poster for each message which received rather wide distribution, we were unable to identify any sustained "back up" activity that related to the messages.

Our impact study did not find any difference in the changes of the populations between Manabi Province where there was more health activity and in the Sierra where there was much less. In many instances, however, Coastal people started out from a higher level of knowledge and awareness than their compatriots in the highlands, especially the indigenous folk.

C. LOCAL EXPERTISE

"Establish the methodology and necessary local expertise to allow for the continuation of this and other nation building programs, without necessarily involving continuing support from USAID."

Selection of Ecuador as the site for the project offered that country a unique opportunity to build an institution that would continue the work in mass media, not just in nutrition and health, but also in agriculture education, family planning, worker education, literacy, etc. In spite of our efforts, including the month-long training of two Ministry of Health officials in New York, there is little evidence that the experience has had the desired effect on the Ministry of Health.

The causes of this apparent failure are complex and can be explained in part by the peculiar political atmosphere that existed and still does in Ecuador during the time of the project's implementation. Another contributor to the problems that we encountered was our failure

to gain access from the very first to government officials with sufficient authority and vision to grant this project the attention that it merited. The individuals whom we worked with are still in the Ministry of Health, but they are dispersed among several entities, none with enough power to initiate on their own a mass media project.

It is evident that a more sustained level of technical assistance is necessary if the belief and understanding of the technique are to be transferred. Our purposes in Ecuador were more to demonstrate the efficacy of a technique than to transfer our approach to the Ecuadorian Government.

Our experience tells us that it will take more than observation while we do the project and a month-long training exercise before local health educators and others will understand and appreciate the technique.

As we point out in the section below on "Lessons," we learned that in order to institutionalize this technique, we must carefully train and support several individuals over long periods of time. It is not that the Ecuadorians we worked with are not completely capable of undertaking a project of this type after training, but we also must remember that they will be continuing to fight against the traditionalists in health and nutrition education who are reluctant to give the radio credit as the most effective tool for reaching into the rural areas.

D. A WORKING MODEL FOR OTHER COUNTRIES

"Provide a working model of the Mass Media Reach and Frequency education technique for other countries to emulate."

We have been most successful in this regard. We believe that one of the most important outcomes of the experiment was the process that we learned. When we began we knew that we had to make adaptations from commercial campaigns in the United States to a social marketing scheme in Ecuador. The working model is an expression of these adaptations.

This report is the first chapter in a series of refinements that we intend to make on the "how to" of mass media education and behavior change projects. Our work in Nicaragua and the Philippines has already provided us with a wealth of new information and experiences in applying this technique under different circumstances.

II. SETTING OF THE PROJECT

A. ECUADOR IN GENERAL

The country straddles the equator, but has a wide variety of climates determined by altitude: tropical rain forest and savannah on the Pacific Coast and the Eastern side of the Andes; desert on the Pacific Coast; temperate, fertile inter-mountain valleys, and high altitude plains in the Highland. Most of the total population (about 8 million) is located either in the Highland valleys or on the Pacific Coast, and there mostly located in the cities. Normally, approximately one-half of the population lives in cities or small towns.

Ecuador is an agricultural country, with nearly all of the rural population working on miniscule parcels of land, while most of the land is owned by a few families. About 9% of the farms account for about 75% of the arable land.

Small farmers are more common in the Highlands than on the Coast where there is a plantation economy. The cultures of the two areas are very different as well, even between the Mestizos of the two areas. In the Sierra, the people are more rural, less involved in a cash economy, less affluent, less educated, and more tied to the land.

Incomes are low in Ecuador, particularly in the rural areas. With the recent boom from oil revenues, inflation has had an even more severe effect on those who have not benefited by the new moneys.

Low income is an important constraint to adequate nutrition. One analysis suggested that fully 50% of the families in Ecuador did

not have incomes high enough to purchase nutritionally adequate foods at current prices.* This information led us to propose solutions to problems that would entail little, if any, new expenditures by these families. However, we could only guess about the income, size, and age of the households.**

B. NUTRITION PROBLEMS

According to the only national nutrition survey, rural areas in the Sierra have adequate calorie intake, but considerably less animal protein than recommended by the Ecuadorian National Institution for Nutrition (INNE). Both urban and rural areas suffer riboflavin deficiencies. In the coastal rural areas, however, calorie deficiencies are most striking while animal protein is not in as great a shortage as in the Sierra. In rural coastal areas, calcium, riboflavin, and niacin deficiencies are serious. In Guayaquil, the largest city in the country, conditions are better than in other areas of the country.

These are aggregated data for all ages in a particular region. In each area, vulnerable groups such as infants and pregnant and lactating women are at even greater risk.

*Thomas M. Cooke and James Pines, "Planning National Nutrition Programs: A Suggested Approach," Volume II, "Case Study"; Agency for International Development, Washington, D. C., 1973.

**As a result of the intervention of the Minister of Health, we were prohibited from gathering demographic information from our respondents during the evaluation interviews. His reasoning was that a national census was being conducted later and he did not want the respondents to refuse the census taker on the mistaken belief that they had already responded. This lack of demographic data constrains us from making generalizations about conclusions. More about the limitations of the research will be presented later.

C. DESCRIPTIONS OF THE TARGET AREAS

1. Sierra

Imbabura Province is in the Sierra, with its capital city about two hours by paved road north of Quito. The terrain, population, and nutrition problems are typical of the Sierra. There are about 350,000 inhabitants, of which 56% live in rural areas.

It is an agricultural region known for its production of corn, bean, potatoes, oats, quinoa, and vegetables. Farms are small, most at the subsistence level. The average income is about \$50 per capita.

The health and nutrition services are minimal in this region, with the regional health office having little outreach into the smaller towns and cities. There are health posts in some of the smaller towns, but most services are concentrated in the province capital.

Quechua-speaking Indians are the dominant ethnic group in the rural areas, though in the cities Mestizos are most common. In order to reach the rural folk, we broadcast messages in both Spanish and Quechua.

Goiter or *bocio* (*coto*) is endemic among the Sierra population, and its irradiation is one of the priorities of the government. Iodization of salt is how goiter has been eliminated in most countries, and such a program is underway in Ecuador. Nevertheless, noniodized salt, usually from mines in the mountains, is sold to the Indians who believe that this rock salt, often colored with iron or sulphur deposits, is better for them. Of course, it is cheaper than the processed iodized salt.

Confronting these prejudices about salt and the difficulties of marketing processed salt to the Indians was one of the major challenges of the project. However, it became one of our most interesting successes.

Because incomes are low in the Sierra, most families rarely have meat and their diets are a monotonous repetition of corn, potatoes, beans, some animal fats, sugar, coffee, and oats or other grains. Among the Mestizo in the Sierra, the diet is a little more varied with fruit and some green vegetables added. Table 8 in Section Two shows the typical diet profile that appeared in our household surveys. These data conform to findings by other diet surveys.

2. Coast

Manabi Province is a contrast to Imbabura. It has a population of over one million, largely occupied in extensive agriculture of coffee, cocoa, peanuts, corn, bananas, and cotton. These crops have prompted the development of industries of oil processing and milling and fish canning.

In contrast with Imbabura, the government has made a major health investment in Manabi Province. This has given the area an excellent infrastructure of health posts and programs with an enthusiastic and trained staff. These people proved to be invaluable during the campaign since we were unable to station a project leader in the region. They were able to collect some media monitoring data, and they made more frequent contact with the radio stations.

Mortality rates for infants and children, usually a sensitive indicator of overall health status, are nearly four times higher in Imbabura than in Manabi.*

The diet in Manabi is more varied than in the other test area, including rice, yucca, corn, beans, fish, banana, and some vegetables.

As an indication of the greater prosperity of the region, breast-feeding has become a greater problem on the coast than in the Sierra. In most parts of the country, particularly in the rural areas, breast-feeding until the second year is common. But in the coastal towns and cities, nutritionists and doctors have noted an increase in the use of bottled milk and formula. We selected this problem as one of those that we would attack on the coast.

*Instituto Nacional de Estadisticos, *Anuario de Estadisticos Vitales*, 1970.

III. INSTITUTIONAL AND POLITICAL ENVIRONMENT OF THE PROJECT

GENERAL

When we began the project, we did not have sufficient appreciation for the importance of linking the project from its first moment to a stable institution within the government and obtaining the support of key individuals at the highest levels of government. We seemed more concerned about the technical aspects of the project.

While these are important, we found out that the principal barriers to an effective project are not technical but are personal and political. We believe that this is particularly true since we are working in the mass media, a resource about which nationalists are highly sensitive if foreigners are involved.

When Manoff International Inc. was invited to Ecuador, USAID had already identified the Ecuadorian National Nutrition Institute as the institutional recipient of its grant for technical and training assistance.

INNE is an autonomous institute, separate from the Ministry of Health. It had responsibility for running food inspection and quality tests, for writing the guidelines for the nutrition programs such as the school lunch program, for conducting nutrition research, and some of its staff managed to do some nutrition education in the nearby hospitals.

The Ministry of Health at that time did not have an active nutrition program, although now it has assumed many of the responsibilities of INNE.

It is significant that in the first studies that we did of the country as a possible site for the project, we did not mention the institutions with which we would be linked in the project's execution. At the time this did not seem to be a major problem. We were more concerned about details of the campaign: messages, production, monitoring, etc

This was an indication of our misdiagnosis of the environment. Since we were to rely on the Ecuadorian Government for many of the resources of the project, our relationships to government entities would prove to be very important to its smooth running.

Within six months after the contract began, INNE moved out of its spacious but frigid headquarters to a cramped high-rise apartment. The twelve professional employees plus clerical staff were jammed together, making it impossible to work. This did little to bolster an already sagging morale, and this was the institution with whom we were to work and whom we were to influence and to help become the leaders in the use of mass media for nutrition education.

Before the second wave of interviews could begin, the Ministry of Health asked for the resignation of all but three of the INNE employees. Since we were counting on them to provide staff employees, their forced resignations decreased their incentives to work on our project. And since we were counting on them to conduct the interviews and code the responses, the work went slowly, and we were increasingly frustrated as the pressure to complete work mounted.

By the time of the third wave of research in April 1975, the personnel issue seemed to have resolved itself, with most of the people and authority being moved to the Nutrition Division of the Ministry of Health. The people we had worked most closely with, Lucia de Gavilanez and Jamie Rodriguez, and whom we had trained in New York remained in the program, but at least in the case of Lucia her full-time attention was now shared with the management of public feeding programs.

Our on-again, off-again relationship with the Ministry of Health, INNE, and the Minister himself was the source of several compromising decisions about the research questionnaire and field procedures. They are discussed in detail in the chapter about limitations of the research. But they are worth mentioning because they are part of the institutional and political environment in which we operated.

The Ecuadorian Government officials, from the Minister down, misunderstood the purposes of the project and their responsibilities under it. We should have made these more clear.

When one is involved in a project full time, one tends to believe that others who are key to the functioning of the project, but who have other responsibilities as well, understand and agree with the project equally or in the same terms. This was not the case in Ecuador with many Ministry of Health officials.

From 1972-1975, U. S.-Ecuadorian relations were strained, and this was reflected in the daily contact that USAID and we had with the Ministry of Health. This was a period of resurging nationalism, and there

was understandably some resentment of the technical assistance offered from the United States.

All these elements contributed to the difficult working environment in Ecuador during the period, and in several instances they influenced decisions made about the research and about the resources made available to us by the Government of Ecuador.

IV. MASS MEDIA SITUATION

A. GENERAL

There is an abundance of radio stations in Ecuador and in many cases the competition among them is high for advertising revenues. Local radio stations exist in many towns that barely have electricity and paved streets. Television has a reach beyond the bounds of the main cities, through repeaters to the secondary and tertiary cities of the country.

Radio ownership is high. Our studies showed that rural families in the three target groups have radios or access to radios. (See Table 3 in Section Two.)

Television ownership does not penetrate much below the middle classes in the large cities, though there is some group viewing in lower income areas.

Based on experiences in other countries, we find that the Ecuador media situation is very common and can be summarized as follows:

- Numerous radio stations, privately owned, give all parts of the country, except the sparsely populated Oriente, coverage of at least two or three stations.
- Some stations, through repeaters and powerful transmitters, have region-wide reach, but most stations are low power, extending no more than 25-50 mile radius.

- Radio, serve as the primary means of communication for the rural areas, linking them to province capitals and to Quito and Guayaquil. Radio ownership is widespread.
- Stations have characteristic programming that limits their audience to a particular sector, such as youth, country music, and soap operas.
- Few of the local stations are sold out commercially, except at a few peak hours such as noon or between five and six in the afternoon.
- The government uses the radio for education in an Escuela Radiofonica that has a very limited audience. Except for some brief, intermittent campaigns of spots, all government programs are 15 to 30 minutes in length, inviting the audience to switch to more entertaining programs.
- Facilities for production of radio spots and programs exist in the country.
- Television is mostly an urban medium, confined to the middle and upper classes.
- The government does not use television systematically to educate or inform the public.
- Television programming is composed primarily of imported materials, much of it from the United States, with little cultural relevance and no educational value.
- Although television time is not sold out commercially, free access is more difficult than radio.

- Video production facilities are inadequate for professional quality work.
- Reasonably reliable data on radio and TV audiences exist for the major cities only.
- Although cinema seems to be an effective means of reaching low-income people, attendance is too infrequent among large sectors of the rural and urban populations to achieve impact through short messages.
- Newspaper readership is low compared to the total population, though access is relatively easy for short campaigns.
- Low literacy, high cost of purchase, limited distribution keep readership low.

B. OUR USE OF THE RADIO

In the two experimental areas there are about 30 radio stations, most of them with a local reach, though some covering large portions of the province. Quito stations reach into Imbabura Province, but we were unable to use them.

This experiment was to be a new use of the radio in Ecuador. In the past, short announcements have been used by government agencies to make the public aware of a service or a fundraising campaign. Educational programs through the Evangelical Church station HCJB, broadcasting from Quito, have been very popular for years, but they lacked the continuity of a campaign.

Education through the spot radio announcements, however, was new. The station owners felt that the listeners would get tired of hearing the same messages over and over again, unless there were some catchy jingle to go along with it. Furthermore, they felt that they might not be able to sustain a heavy schedule of the spots for the whole 12-month time. But without exception the station managers and owners agreed to join in the campaign.

C. RESULTS OF MEDIA MONITORING

The media monitoring system that we used was not effective, and we have only rough estimates of the amount of exposure the messages received during the campaign. During the first six months of broadcast, up to about September 1974, the messages were probably broadcast at a rate of 200 times daily, or about 50 each, in each study area. As far as we can tell from interviews with the station managers and from partial monitoring data, all messages received equal exposure.

In August 1974, Dr. Portilla, head of the INNE, sent a letter to each of the stations thanking them for their coöperation in the campaign, leading several station managers that were interviewed later to believe that the campaign was over. These stations stopped playing the spots. Some resumed when visited by the local Manoff International Inc. representative. During the Christmas shopping period, the frequency also fell off generally and did not recover by the end of the campaign in April 1975.

These impressions of the frequency of broadcast gathered during intereviews with each of the Sierra stations in April 1975 tend

to be confirmed by the drop in message awareness that occurred between the second and third wave of interviews. In these interviews all but one of the station managers said that they enjoyed participating in the campaign, that they thought that listeners did not get tired of the messages, that the messages were professionally done, and thus attractive material for their stations, and that they thought that the campaign had ended shortly after Christmas.

Even though the opportunity costs for most of the donated time are low or zero, the station managers need to be reminded of the service that they are performing to the country and of the importance of maintaining the schedule. While this was done occasionally by our local project director, the Provincial Health Ministry people who had prime responsibility for this continual contact did not fulfill their job. This failing was particularly evident in the Sierra.

The failure of the media monitoring system will keep us from making cost benefit calculations. However, we can estimate that to purchase the amount of time that the campaign received free would cost about \$5,000. This is a very low amount for two provinces that cover about one-fourth of the population. Costs were kept low in this estimate by excluding from the calculations the cost of buying time from the more expensive Quito stations.

To stage a national campaign using the same frequency would probably require about \$20,000 annually if air time were purchased.

D. USE OF TELEVISION AND OTHER MEDIA

Since the breast-feeding message on the coast was for urban mothers, we wanted to use television spots. In addition, the spots on boiling water, washing hands, and protein were made on 16mm and 35mm film for use in television and the cinema in Guayaquil. No attempt was made to measure the effect of the posts or to monitor their scheduling or frequency. The story boards for the video spots are found in Appendix J.

In addition to radio and television, posters were produced and distributed that displayed the themes of the campaign: "Wash hands with soap and water"; "Mother's milk is the best milk"; "Give your child every day some of these (protein) foods"; "Eat Iodized Salt and Avoid the Goiter"; and "Boil Drinking Water." A logo was developed for the posters and could have been used on numerous other items such as flyers, iodized salt packages, and for future campaigns.

We had a minor role in the development of the posters.

For each theme, 4,000 copies were printed and paid for by private companies in Ecuador. No records were kept of their distribution, nor was any evaluation made of the impact they had. In our field evaluations, we often saw one or more in the health centers and hospitals, but there were plenty stored in INNE's offices in Quito.

V. A WORKING MODEL OF A MASS MEDIA REACH AND FREQUENCY CAMPAIGN

This project was the first attempt to use the reach and frequency technique to change diet and personal hygiene habits without using a new product. It was the adaptation of the commercial advertising technique to the marketing of new behaviors, beliefs, and knowledge.

Until this report, the best statement of this Working Model has been contained in our proposal to AID in April 1974 in competition for the contract to conduct similar campaigns in two other countries. Since that time our experience in Nicaragua and the Philippines has enriched our knowledge of how to start and execute and evaluate these projects. However, our work in Ecuador and our reflections on it in light of our subsequent experience have given us valuable insights about how to proceed.

A. REVIEW OF THE NUTRITION PROBLEMS OF THE COUNTRY

Working with the Ecuadorian National Institute of Nutrition (INNE) and the USAID nutrition advisor, Dr. David Nelson, we examined available data about nutrition problems and dietary practices. We did not confine ourselves to strictly nutrition problems, but we also looked at major causes of infant mortality such as gastrointestinal diseases. Since we wanted to direct messages to two distinct radio market areas, one on the coast and another in the highlands, our initial data review concentrated on the problems of urban slum dwellers in Guayaquil and the rural families of Chimborazo Province.

INNE itself had done some studies of a few communities, but the only national study had been completed ten years earlier by the Inter-agency Committee for Nutrition for National Defense (ICNND). Another important source of information was less statistical than impressionistic, but the doctors and health workers assigned to each region proved to be a rich source of information.

As problems were identified, such as protein calorie malnutrition, we proposed trial solutions; and then as we proceeded through the diagnosis, these solutions were tried with numerous experts at all levels while continuing the search for the additional critical problems. This two-level inquiry — problem identification and search for solutions — enabled us to consider and test many alternatives in a short period of time.

By going out to the countryside frequently during these stages, we were able to try out alternative solutions with local health workers and housewives, rather than relying on a panel of experts in the city.

Even though some of the proposed solutions implied involvement of the agricultural sector such as in the increased planting of legumes so that they could be consumed in increasing numbers, we did not consult with officials from the Ministry of Agriculture. This was a mistake.

We believe that by being more cautious about the institutions with whom we immediately associate in a country, we will avoid being confined or restricting ourselves to one point of view. Frankly, nutritionists and the nutrition community in Ecuador have a low status and

little influence even in the Ministry of Health. By reaching to a higher level, perhaps within a planning ministry or ministry of communications, we would have obtained a government-wide perspective of the organizations that should have been involved in the diagnosis, and in sustaining the project.

In our first visit to Ecuador in April 1972, we identified several problems that were appropriate for nutrition education:

- Protein deficiency, with recommended increases in consumption of *cui*, a guinea pig-like animal commonly raised in the Sierra; in the consumption of eggs, and of legumes and *quinoa*, a pulse unique to the Sierra.
- Vitamin A deficiency with recommended increases in carrots, green vegetables, and other foods.
- Vitamin B₁₂ (riboflavin) with recommended increases in pulses, green vegetables, and cocoa.
- Goiter, with recommended increases in the consumption of iodized salt.
- Intestinal parasites, with a recommendation that all water for drinking should be boiled.

More than a year later when Mr. Manoff and Elbrun Revere returned to Ecuador, these choices had changed and the following problems were decided upon by them in consultation with local officials:

- Protein calorie malnutrition
- Early departure from breast-feeding (coastal area cities)
- Unsanitary drinking water
- Parasites, diarrhea, and other intestinal problems
- Iodine deficiency (in the Sierra)
- Vitamin A deficiency
- Vitamin B₁₂ deficiency

In the design of the messages which followed, the two last problems were eliminated from consideration.

Five problems were chosen, three of which were common to both the rural Sierra and the Coast, while iodine deficiency and cessation of breast-feeding were most severe in the Sierra and the Coast, respectively.

Since our experience in Ecuador, we have realized the importance of using more nonnutritional data, such as information on pricing, availability, and seasonality of foods or products that we are recommending for consumption.

The agricultural sector assessments that have been completed in more and more countries are invaluable sources of information.

More importantly, we become suspicious of the information and prejudices of the capital city-bound physicians and nutritionists. Too frequently their recommendations are based on a very narrow view of the rural areas.

Of course, it would be ideal if there would have been national food and personal hygiene habit surveys before we began, but it clearly is not necessary for the mass media communicator to wait for these expensive surveys to be completed. Partial information gathered informally

from a wide variety of sources can serve at the outset, but it must be updated continually.

If the mass media project had been considered by USAID and the Government of Ecuador as only the first step in a long and continuing series of campaigns, then there would have been continual refinement of the diagnosis of the problems and refinement of the approach that the messages could take for their solution. However, both USAID and the Government of Ecuador viewed this project as a one-time effort, an experiment, rather than the beginning.

B. IDENTIFY SITES FOR THE EXPERIMENT

The rural poor of Ecuador, in comparison to city folk, are like their brothers all over the developing world: they are poorer, less educated, more isolated from transportation, less access to health, education, potable water services, less nourished, etc. And like their counterparts all over the world, most rural families in Ecuador, even the most isolated Indian families, have radios.

Like other developing countries, Ecuador finds that delivering services to rural areas is expensive and difficult. Radio offers a unique means of reaching into the most remote village, ignoring the lack of roads, the weather, and travel budgets.

One of the sites selected, Imbabura Province in the Sierra, is rural, with a population largely indigenous whose first language is Quechua, but located only two hours from Quito. To communicate with the indigenous people, we used Quechua in the messages.

The province has a population of 350,000, of which 56% live in rural areas. Most of the land is owned by a few large landowners, but there are many small farmers who own or rent very small parcels of land, barely large enough to support their family at the most miserable standard of living. The most important crops are corn, beans, potatoes, oats, *quinoa*, and vegetables. These foods are the staples for the low-income rural families. Milk, meat, eggs, and fish are rarely consumed by the target group.

The site on the Coast was very different. There had already been an important investment made by the government in rural health programs, and our project would be a complement to their work. The population in Manabi is less isolated, better educated, more affluent, and in better health than in the Sierra.

We selected Manabi because of the opportunity for close-by, well-supervised assistance that we could count on from the staff of the Ministry of Health in the area. Generally, we were not disappointed with the assistance we received in this region.

The Government of Ecuador also urged us to select this region. Since we are sensitive to the unspoken agendas of governments, we concurred. We have found in every other country that we have visited and considered working in, that the governments have high-priority areas for which mass media projects would provide an important service.

Our inquiries at the outset of a project always include questions related to priority regions, and ways in which a mass media project can be linked to other projects.

The government and USAID concurred in the selection of Manabi and Imbabura Provinces for the sites. They also realized that because of the participation of some of the more powerful regional stations, more than the populations of these two areas would benefit from the project.

C. IDENTIFYING SPONSORING INSTITUTIONS

Mass media projects require coordination across several ministries. Since the Ministry of Health or INNE in Ecuador was not experienced in working with the mass media, we were forced to create new relationships among the Ecuadorian agencies themselves as well as establish ourselves as collaborators. This is a delicate task and the identification of the lead institution is especially important because it will be the spokesman for the project within the government councils.

While the project was about nutrition improvement, we should have considered government agencies with a broader perspective of the use of the media than INNE. For example, the planning or communications ministries would have been a more logical home for this project, offering a base from which we could draw upon the expertise of INNE and Ministry of Health, but also a base of power from which we could talk to the station managers and owners, research managers, and others.

Another advantage of a more powerful sponsoring agency is that when it is necessary to call on private industry to assist in the financing of the campaign, as was done with iodized salt and poster production, greater responsiveness is obtained.

Finally, the project receives greater exposure within the government, and it is more likely that the technique will be adopted by other agencies.

D. OBJECTIVES

From the analysis of the nutrition problems, the INNE nutritionists and we selected several as priorities. Then causes of each problem were discussed; we could not conduct extensive analysis of each since we were limited in both time and money. In Ecuador, as in most countries, there is a shortage of reliable data about causes of problems, but no shortage of descriptive information. These discussions would help us to select the behavioral, knowledge, and attitude change objectives as well as form the basis of information on which the scripts would be written.

While the counsel of the nutrition experts formed one source of information for selecting objectives, we also considered what was realistic to expect from the target group given their living conditions. We believe that the messages must have only demands for actions that can be realized by the target group in their present circumstances, without more income, without more land for planting. The sources for information about these constraints came from our interviews with numerous people in Quito, but more importantly, from our observations and interviews in the countryside.

In "Lesson Five" below some of the shortcomings of our approach to constraint analysis are presented. In short, while we interviewed

about 50 - 75 people in Ecuador about the objectives for the campaign, we should have interviewed about twice as many, with the vast majority coming from visits to the homes of the target group families. ✓

The objectives of the campaign were as follows:

- *Protein-Calorie Malnutrition*
 - Increase the frequency with which beans and other low-cost sources of protein are served.
 - Increase the knowledge about which foods are sources of protein.
 - Increase the knowledge about the function of protein in the body.
- *Early Departure from Breast-Feeding**
 - Increase the status of breast-feeding among low-income mothers as compared with giving other milk to their babies.
 - Increase the recognition of the valuable attributes of breast milk as compared with other types of milk.
 - Increase the knowledge about the steps for preparing other kinds of milk.
- *Unsanitary Drinking Water*
 - Increase the incidence and frequency of boiling drinking water for the family.
 - Increase the understanding that drinking unboiled water can result in illness.
 - Increase the number of families who consider their drinking water to be contaminated or not pure.

*We were unable to present in the message an exact age until breast-feeding is recommended because the nutritionists and doctors in Ecuador were unable to agree among themselves. The message simply stated that the mother should breast-feed as long as she is able. Under these circumstances it is, of course, impossible to test for behavior change.

- Increase the number of families that cover their drinking water.
- *Parasites, Diarrhea, and Other Intestinal Problems*
 - Increase the frequency of adults and children that wash their hands after using the latrine, before eating or preparing food. . .
 - Increase use of soap when washing hands.
 - Increase the number of respondents who understand that washing hands may kill parasites and will help to avoid illnesses.
- *Iodized Salt*
 - Increase the frequency of purchasing iodized salt.
 - Increase the number of respondents who understand the cause of goiter.
 - Increase the number of respondents who know that iodized salt is sold only in a distinctive package.
 - Increase the number of respondents who understand that goiter is a serious illness.

As we point out in later sections, we were unable to confront some of these objectives as directly as we would have preferred in some of the messages. For example, we would have preferred to have said that all water must be boiled, but this encountered opposition from the Ministry of Health who understandably would not agree that all water in the country was not potable. And in other instances, we were not permitted to ask questions in our interview schedule that would have determined with greater accuracy the achievement of the objectives.

E. WRITING AND CREATING

The scripts were written by Richard K. Manoff during a two-week visit at the beginning of the project. They were revised after the copy testing. We worked closely with the INNE staff in writing the messages to assure their technical accuracy and to get their opinions about the acceptability of the messages by the target group.

The scripts were approved at one level in the government only to be reviewed and disapproved in another level. We learned the hard way that the radio message campaigns, especially one that would have high exposure over long periods of time, must be approved at the highest levels in the government. Our failure to realize this caused some delay in beginning the broadcasts and some misunderstandings about our intent and method.

The scripts for each message are presented in a soap opera format, with a young mother with a sick or underweight infant coming to see the doctor. He listens to her describe the symptoms and he gives her advice. At the end of each message INNE is credited as sponsor. All scripts are in Appendix I (radio) and Appendix J (television).

F. PRODUCTION

All radio production was done in Ecuador, under the supervision of the local representative of Manoff International Inc. We did not attempt to impose New York commercial standards on the radio spots, but a high quality was reached without the use of high-cost directors and engineers.

Professional voices were used for the radio spots and stock music, rather than composing an original piece. The Quechua versions also used professional voices and a popular Indian melody for background music.

Production of the spots for the cinema and television was a different matter. We used local equipment, our own television/film producer, Wayne Lachman, and a local cameraman and sound crew. The film was finished in New York since facilities for editing do not exist in Ecuador.

The radio spots were pressed into discs, one spot per side, and distributed to the stations. Use of discs required their periodic replacement, but this also meant an opportunity for our local director to visit the stations.

G. MEDIA PLAN

The lack of audience data made sophisticated media planning unnecessary and impossible. Only after we completed our last household interviews did we find data about radio listening habits. When we were planning the campaign, all we had were some estimates by local health officials, field workers, and station owners about the most popular stations and listening times.

Since we were not buying spots, we would not expect the stations to guarantee scheduling only at the prime listening times. We accepted "run of station" scheduling, or at the pleasure of the manager. Furthermore, we did not exclude stations in the experimental

regions from participation even though their programming might have little appeal to our target audience. When the program began, there was a blanket appeal to all the stations for their collaboration.

This approach of accepting "run of station" scheduling, asking for a frequency of at least 10 spots per day per message, per station, though accepting more, and including all stations regardless of their penetration of the target, is a far cry from the carefully calculated media plans of our commercial clients. Nevertheless, this was the most appropriate approach for the first project in Ecuador.

In addition to the radio and limited use of television and cinema on the Coast, we assisted INNE to develop some posters and a logo for the campaign. An excellent local graphics artist designed posters for each of the messages and a logo that can be used in future campaigns.

No study was done on the impact of the posters nor on their distribution, but as we were conducting interviews in the experimental sites, we noticed posters in most of the hospitals and health posts.

H. RESEARCH AND MONITORING ACTIVITIES

This project contemplated several data-gathering procedures that would assist us to document the effect of the messages on the target group and the cost of producing the effect. In addition, we conducted field interviews to test the messages before they were broadcast. Descriptions of these steps are included in the Appendix D. Additional information about Effectiveness Tracking is found in Section Two of this report, "Summary of Findings."

VI. LESSONS LEARNED

A. GENERAL

There have been two important outcomes from this project: First, we have demonstrated that the reach and frequency technique can affect the behavior, knowledge, and attitude of low-income consumers about health and nutrition issues. This assertion is documented in Section Two below. Secondly, we have learned a great deal about how to execute a program of this type in the developing countries. When we began nearly four years ago to consider Ecuador as a site, we were inexperienced in the processes of planning, executing, and evaluating these projects. If these projects are to be repeated in other countries, then this experience ought to be analyzed and shared.

We have called this chapter "Lessons Learned" because that is exactly what happened. To some of the readers who are old hands in doing field work in Ecuador or other developing countries, some of our lessons may be stating the obvious, but to many others what we have learned will provide some valuable insights about how to do the next project.

B. RELATIONS WITH THE CLIENT AND HOST GOVERNMENT

Lessons about relations with the host government were the most important we learned in the project. Our relations proved to be crucial to the project since there was the assumption that the government

would provide many of the resources for the project. Their understanding of the project and continued commitment to its success were essential.

The institution in the Ecuadorian Government with which we were to work during the project was chosen for us by USAID. They had chosen INNE prior to this project as the organization that they would assist so as to strengthen the Ecuadorian nutrition program. It was only natural that our program would also be attached to this institution.

While it was not a mistake to have worked with INNE, it was a mistake to have assumed that was the only part of the government that should have been recruited into the campaign. As it developed, INNE's role diminished and then disappeared, to be replaced by the Ministry of Health and the Minister himself.

Lesson One

From the first day and throughout the project we should have insisted that we and our counterpart personally brief all persons in the government who might be remotely interested in the project. In these briefings we should have had printed statements of the purpose of the project, the decisions made to date, who was responsible for each action, the sequence of actions, and the resources that each party would supply.

This briefing should have been based on a formal agreement between Manoff International Inc., USAID, and the Government of Ecuador. The responsible person for the Government of Ecuador should have been the Minister of Health or someone of his rank so that commitments of resources could be made.

Lesson Two

Support throughout the project from the highest levels in the host government is essential. Selling the project is not done just at the beginning, but all the time. The involvement of foreigners in the mass media of Ecuador is a sensitive issue, as it is in many other countries. If the project is not continually endorsed by a Minister or someone of higher rank, then the coöperation of the media, the Ministry staff, and other sectors is difficult to assure, and it is unlikely that the project will continue after our involvement is over.

If there is to be a continual education and selling of the local government about the merits of the approach, then there must be someone employed full time by the project in the country who has access to the highest levels in the coöperating ministry. This should not be a North American, but a local person trained by the contractor in the procedures and rationale for the campaign.

Lesson Three

The host government and the local AID Mission should be led to understand that the project is not just a one-time effort and an experiment, but that one of its purposes is to establish a permanent, ongoing mass media program in the country.

In our proposal to USAID, the transfer of technology to Ecuadorians was stated to be of secondary importance compared with the implementation and measurement of the project. However, we soon realized that the Ecuadorians demanded, and rightfully so, that they participate

in project decisions. Some of the decisions that were made by them about the research design and the implementation of the research were incorrect, but only because we failed to explain completely the purposes of the project and the processes of field research.

We learned that if the project is an experiment and the country is content to be used in this way and it has no ambitions to adapt the technique to their own programs, then our role is easy and straightforward. If, however, as was the case in Ecuador, the host government wants to take an active role in the project, project management must allow more participation by them. So that this participation is informed and useful, a greater effort at training is necessary.

Furthermore, the establishment of a permanent use of radio for health and nutrition education requires technical assistance over long periods of time, perhaps three to five years. This contract did not plan for further contract with Ecuador, not even for the translation of this report into Spanish -- nor does the current contract of Manoff International Inc. which is sponsoring similar projects in the Philippines and Nicaragua.

Lesson Four

Projects called "demonstration," "pilot," or "experimental" should include funds in the budget to return to the host country after the project is completed and the data are analyzed. Even though AID is terminating their program in Ecuador, the country itself may wish to finance a similar project once they have seen the report and interpreted

the data. However, this interpretation will be assisted greatly by a personal visit of the persons who executed the project and analyzed the results.

C. RESEARCH PRECEDING MESSAGE PRODUCTION

In Ecuador, and now in the Philippines and Nicaragua, we have depended on available data about food habits, cultural and economic constraints, resource availability, and media habits. While usually these data are adequate to make the first effort in mass media education, a more thorough study at the outset would improve project planning.

Lesson Five

When the topics for the campaign have been narrowed to two or three, a large interview schedule ought to be undertaken. From 300 - 500 households selected in villages spread throughout the target area would be sufficient.

The purpose of the interview would be to identify characteristics in the family and the community that would inhibit the achievement of the proposed behavior attitude and knowledge changes. For example, if we were to propose that mothers increase the frequency and amount of legumes given to young children, we ought to know their availability, price, price variations, acceptability, reasons for reluctance in feeding now, forms of preparation that would be most acceptable, etc.

This information that we now gather on the basis of a limited number of interviews, many of which are with doctors, nutritionists, and

community workers, would enable us to choose campaign objectives more wisely and to draft messages more accurately. Media habit data would help us to select more exactly stations and schedules.

This step would require about 4 - 6 weeks' delay in implementation and would cost from \$5,000 - \$7,000, depending on the quality of the local research firms and the extent to which we would have to be onsite the whole time, supervising interviewing and coding.

These interviews would not substitute for copy testing that is conducted among about 100 households after the messages have been recorded.

Lesson Six

When the principal constraint to changed behavior is money and not knowledge or attitude, then radio messages by themselves can do little to cause change. We found out that if the price of fuel increases 30%, it is unlikely that radio messages will cause mothers to boil drinking water, even though they increasingly recognize that their water is not necessarily safe for drinking.

Had there been more detailed factfinding either through a sample survey or informal surveys in the communities, the difficulty in finding and buying fuel would have become evident before the message was written. While we might have written the message anyway, we would have known that the possibilities for success might be compromised by other variables.*

*In the copy testing that preceded the final recording of the messages we found that the cost of fuel might be a constraint to boiling water; however, we reasoned, after observation in several homes, that mothers could boil drinking water at the same time as they cooked other foods, and thus not require additional fuel. While this may be true, from the interview results it is evident that mothers still perceive the cost of fuel as a reason for not boiling water.

D. RELATIONS WITH THE MEDIA

Given the amount of effort that was given to contacting and motivating the media during the campaign, we had surprisingly good cooperation from them. We learned that almost weekly contact with station managers and owners is necessary and that this contact is best made by host government officials, not just an employee of Manoff International Inc. After all, what better way to learn about the uses of the radio for health and nutrition education than for the educators to begin serious businesslike relations with station managers?

Lesson Seven

Participating radio stations need constant attention and encouragement if they are to remain with a campaign for more than a few months.

The stations are contributing valuable time, and they are submitting to a difficult discipline — that of maintaining a schedule of spots over a period far longer than any other public service campaign they have ever had. They need to be visited, to have their broadcast logs reviewed, to stimulate them to meet their commitments if the monitoring shows that they are falling away, and to give them the recognition they deserve for their participation.

At the beginning of the campaign in Ecuador, the Governors of the two provinces brought the station managers together to inform them of their obligations under the project and to ask for their

coöperation. Province-level nutrition committees were formed at the same time and could have been useful in maintaining the momentum in each area. However, within a few months the interest of the Governors and the local representatives of the Ministry of Health, at least in Imbabura Province, waned and all but disappeared.

In our preproject planning we had assumed that the liaison with the stations would be done by the local Ministry of Health officials, but we soon realized that this was not occurring. This obligation on their part was not made crystal-clear by us, but even after their informal agreement to do their part, we found that they were not reliable.

We believe that if there had been a formal agreement with the Ministry of Health, stipulating their obligation to make contact with the stations, then it would have been done by the local people.

An excellent way to train local and national health officials about the value of the radio as a resource, and how to exploit it, is to obligate them to visit the stations at least once per month. This would also serve the goal of encouraging the stations' coöperation.

Lesson Eight

Long-term continual use of the mass media for nutrition and health education will require some type of financial incentive for the stations. We do not believe that this should be direct payments as if these messages were commercial promotions. The incentives might take the form of tax rebates, reduced time taken by government radio hours or programs, or discounted rates for spots paid for by local industry or joint radio/television industry funds.

If some funding arrangements are not made, the burden of donating time will fall disproportionately on those stations that are appealing to the low-income target audiences. This burden should be shared among all the radio stations, at the least, and perhaps among the larger business community.

One alternative is that a fund sponsored by local businesses purchase time on the radio for programs. It is clear to us that the foreign advisors can have only a modest role in the development of such as an institution. The most that we could do is to point out the need for it and the benefits that it would yield.

Our contract in Ecuador did not contemplate the establishment of such an institution. However, some businesses were approached and they gave some funds for posters, pressing the records, and other minor items.

E. EXECUTION OF THE PROJECT

In many of the "lessons" mentioned above, issues in implementation have been treated. Mentioned here are comments about the necessity for a local project manager and for greater care in developing monitoring systems. We are also concerned about the involvement of the health community in the goals of the project.

Lesson Nine

One of the most important aspects of the use of mass media that we can transfer is the pace of our work.

In Ecuador we attempted to introduce a pace of work that the urgency of the work merits. While we fell afoul of bureaucratic wrangling and we were slowed considerably, we were able to put together a campaign in the space of only a few months.

Using the lessons we have learned in Ecuador, we have found that we can move much faster in other countries, without the misunderstandings that cause delay.

Education using the mass media does not have to be a leisurely executed academic experiment. It can be done with the same enthusiasm and singlemindedness that characterizes our commercial campaigns. We have demonstrated that the steps used in commercial campaigns can be used for social change objectives, with some modification. The sense of purpose that social workers often envy in the business world can be translated to the sphere of nutrition and health improvement.

Lesson Ten

There should be a full-time local project director paid for out of project funds or under some special agreement with the Ministry of Health. A mass media project generates a very high exposure for one or two topics and as a result, interest in these topics spreads beyond the usual circle of professionals. We saw in Ecuador the formation of Province-level nutrition committees that foundered when they received

little support. Some funds from private business were generated but we did not feel that this was the job of the American who served as part-time project manager, so this effort to expand the project's support was also stillborn.

With a full-time person, knowledgeable in the ways of the government and business, many of the ideas and energy that are generated by the project can be exploited. Furthermore, there is a greater chance that the approach will be institutionalized if there is a permanent advocate within the government.

Finally, for the smooth operation of the project, even in its most modest conception, a local project director is necessary. If the Ministry of Health is responsible for maintaining contact with the radio stations in each region, then far better to have a local person reminding the Ministry of their obligation than a North American. Approval of the scripts, research questionnaire, and field controls also requires a local representative.

Lesson Eleven

A greater effort should be made to recruit into the campaign doctors, nurses, nutritionists, community workers, and others whom the target audience may consider to be authorities in the campaign's subjects.

The radio may be perceived as complementing what the health workers are already doing or they may complement the radio campaign. Much depends on the campaign's design and the condition of health and nutrition services in the target area. Regardless of the situation, we

feel that the effectiveness of the radio message will be enhanced if the health workers are given special indoctrination about the goals of the campaign and the rationale for the messages.

If the messages propose a new method of preparing a weaning food, for instance, the doctors ought to be prepared to explain the radio message to those who consult them. If as it happened in Ecuador, one of the messages treats the importance of breast-feeding, then the health workers ought to be saying the same thing as the message. We found numerous instances in which this was not the case.

It is not enough that the project design contemplates that health workers will learn along with the public about the new health practices through the radio. While they may absorb some of the message, they may also have very strongly held beliefs that only personal contact or some official statement could change.

In the Philippines and Nicaragua we have included in our design print communications with the health workers about the campaign. We feel this is particularly necessary since each message urges the mothers to seek additional advice and assistance from the health centers or community workers.

Lesson Twelve

Establishing and maintaining a monitoring system requires more time, money, and effort than we assigned to it. Reliable reach and frequency information is necessary if cost/benefit comparisons are to be made to alternative methods of education.

In only the most advanced of the developing countries have we found professional media monitoring firms, and these did little more than review performance in the capital city. Local advertising agencies were not interested in monitoring the performance of stations outside the capital cities since the costs of the spots are so low and since they believe that most stations play the commercials as agreed.

With voluntary participation of the stations, monitoring is even more important. Station logs have not proved to be reliable in Ecuador, though in each country the situation may differ.

A good monitoring system requires paid listeners, checking each station on a random basis throughout the broadcast day. One monitor is required for each four stations.

These monitors must be closely supervised. This supervision must be done on a daily basis until the project director is satisfied that the workers are reliable. This requirement is more evidence that a local project director is necessary.

If the use of the mass media is to be institutionalized in the country in which the pilot or experiment takes place, then development of a good monitoring system ought to be an important objective. Until some way of compensating station owners is developed, constant review of their performance in public service campaigns will be necessary.

F. IMPACT RESEARCH

Many of the lessons that we have included in other sections also influenced the quality of research and the ease with which it was accomplished. For example, misunderstandings about the purposes and processes of behavioral science research caused the government to eliminate some of the questions that should be asked in the household interviews. The need for a full-time local project director is most evident during research episodes when demands for government cooperation are greatest. Beyond these examples three specific lessons related to research merit mention here.

Lesson Thirteen

When the messages assume the availability of a product or service, its availability and price ought to be monitored independently of the household interview. Many protein foods are seasonal, with great fluctuations in prices, or in availability. Medical services vary greatly from village to village, and are often at variance with what is claimed to be provided by the Ministry of Health or provincial authorities.

While the perceptions of the target group about food prices and availability, etc., are important, verification of these perceptions with independent observation is required because many of the respondents do not understand questions such as, "Is corn more or less available now than one month ago?" The number of questions and probes that are necessary to get an accurate understanding of their perceptions is too

time-consuming. It is far easier to check these variables with investigations in the marketplace.

Research into these variables requires time and money. Furthermore, it requires the coöperation of the government so that they understand the purposes of the questions and make available to the project team, already prepared information about food prices and other data.

Lesson Fourteen

All instructions to the staff who remain in the country should be written and agreed upon before the project supervisor leaves the country. Meetings about procedures and mutual obligations ought to be recorded or elaborate notes should be taken so that there is no mistake about what steps should be taken and areas of responsibilities.

We found that in spite of written instructions for field research procedures, there remained wide areas of misunderstandings. It is clear that written instructions are not sufficient; these must be confirmed by extensive conversations and written agreements.

In countries where there are no experienced field interview firms or where the person who is the local project director has had little or no experience in behavioral science research, then these steps in supervision become training.

The experience of nutritionists doing limited samples of clinical and biochemical tests for nutrition surveys is not equivalent to the requirements for these impact surveys. Extensive training is still required.

Lesson Fifteen

Pilot and experimental projects should include funds for extending the research results to other countries or at least through the bureaucracy in AID. ✓

If the project has merit, it deserves immediate consideration by other Missions, international agencies, and foreign governments. It is far easier to include a provision in the contract from the outset for informing others about the project than to wait until the end to amend the contract.

At the least, the contractor should be required to translate the final report into the language of the country that hosted the project. We know that a report in English will receive very limited readership in Ecuador, just as reports in Spanish can be read by only a few people in the technical office of AID/Washington, not to mention Health, Education, and Welfare or other domestic agencies.

SECTION TWOI. GENERAL STATEMENT OF RESEARCH DESIGNA. THE ROLE OF RESEARCH IN THE PROJECT

The role of research in developing and evaluating the mass media nutrition education program in Ecuador was aimed at two objectives:

- Refining the Design: to make sure that the messages were coherent, meaningful, and motivating. Hence the copy test of the original and revised messages — see Appendix D for a summary of the results of each of these studies.
- Interpreting the Effect: to be able to evaluate the impact of the campaign on three different target audiences.

The investigation undertaken to help interpret the effect was an Awareness, Attitude, and Behavior Tracking Study which was conducted in three waves, over a period of one and one-half years. It is the basis of all information on the effect of the program.

B. PURPOSE OF AWARENESS, ATTITUDE, AND BEHAVIOR TRACKING STUDY1. Objectives of Research

The overall objectives of this research were to provide data for evaluating the effectiveness of the mass media nutrition education program and for modifying the program while it was in progress. The

approach established benchmark measures of nutrition awareness, attitudes, and practices specifically related to the priority subjects of the campaign, and followed, at 6 and 12-month intervals, the changes in these attitudes and practices.

Specifically, the research objectives determined -

- awareness of the nutrition messages
- awareness of the subjects and advice covered in the messages
- attitudes toward the message recommendations
- practices related to the messages
- media habits
- demographic profile

2. Background

A radio-based mass media nutrition education program began broadcasting in two regions of Ecuador during February 1974. Advertising techniques were used to promote health and nutrition practices throughout the coastal province of Manabi and the Andean region including Tabacundo and extending through the southern part of Imbabura Province.

The specific messages were developed with the cooperation of Ecuadorean nutritionists. Message subjects were selected on the basis of health and nutrition priorities. The advice in the messages was aimed at improving nutritional practice without requiring additional resources in the family or community. Nutrition, health, service, and government agencies reviewed the messages for correctness of the advice and conformity to established directives. Then the messages were tested among people

in the respective target audiences for coherence, believability, and persuasiveness. The revised messages were retested prior to being produced in final form.

Because this education program employs advertising techniques, it was appropriate to employ an advertising effectiveness test design. The test design established awareness, attitudes, and, to a lesser extent, behavior as the criteria for success. These are the same criteria used to evaluate any "advertising" which introduces a new idea (product).

C. EFFECTIVENESS TRACKING

It is generally conceded that there are several consecutive steps in changing a behavior pattern:

- *Problem Awareness*

Awareness of a problem or shortcoming of current behavior.

- *Solution Awareness*

Awareness of one or more alternative behavior patterns which allegedly would solve or contribute to the solution of the known problem.

- *Solution Trial*

Experimentation with these solution alternatives. This can be actual experimentation in cases where the behavior would be ongoing (such as food habits) or philosophical in cases where the behavior would be at one point in time (such as getting a vaccination).

- *Satisfaction*

The new behavior alternative is adjudged to contribute significantly if not entirely to solving the problem and does not appear to create any new problems.

- *Changed Behavior*

The new behavior is adopted on an ongoing or one-point-in-time basis.

In tracking through time the degree to which the target audience goes through these steps, a velocity of change is established. It has been assumed that the mass media reach and frequency technique will probably affect social patterns in Ecuador in the same way it has been known to affect commercial consumption patterns, and social patterns in other countries.

However, the amount of time needed to change a social behavior in Ecuador was not known. Nor were all the pitfalls that might work against a behavior change known. For example, the advertising technique could be extremely effective in imparting awareness and belief that iodized salt is better because it prevents goiters. However, if there were no iodized salt available or it costs too much, then people would not be able to change their behavior. So that while the communication could be successful, it would be possible to result in no changed behavior.

The study design provided for measuring the velocity of change as well as for uncovering any impediments to the anticipated change. An additional measure of success was to be available for the iodized salt message because it involved a commercial product. Factory shipment data before and after the campaign were to be supplied by the salt companies as an indication of the effectiveness of the salt message. An increase in iodized salt consumption would be reflective of success.

II. METHODOLOGY

A. PRE-POST MEASUREMENTS

Three waves of interviewing were conducted. The first wave was implemented in February 1974 before the messages went on-air. It constituted the base or benchmark measure. Subsequent measures were made 6 to 12 months after the start of "advertising" (November 1974 and May 1975).

1. Sample Size

For each wave a total of 1,200 personal interviews were completed. The completion rate was as follows:

	<u>Coastal</u> <u>Mestizos</u>	<u>Sierra</u> <u>Mestizos</u>	<u>Indigenous</u>
Wave 3	192	149	145
Wave 2	601	437	161
Wave 1	600	452	145

Samples were cut to minimal sizes in Wave 3 due to budget considerations.

2. Sample Site Selection

There were two general areas of research: urban and rural in both Imbabura and Manabi Provinces. In both areas sampling procedures were designed to make the sample representative of the province and region where testing was to take place. The findings of the surveys, however, are not projectable to the region or the province.

Urban areas were considered cities of more than 8,000 inhabitants. The rural areas consisted of communities with less than 250 families.

The research design called for representative sampling points on the Coast and in the Sierra. The design was as follows:

<u>Region</u>	<u>Category</u>	<u>No. of Points</u>	<u>No. of Interviews</u>	<u>Total</u>
Sierra	Rural Mestizo	5	30	150
	Rural Indigenous	5	30	150
	Urban Mestizo	6	50	300
Coast	Rural Mestizo	6	50	300
	Urban Mestizo	6	50	300
		<u>28</u>		<u>1,200</u>

In the Sierra, all sample points were selected by a committee from the Ministry of Health in Imbabura, personnel from INNE, and the Manoff International representative. They were chosen to be representative of the region and to be a cross-section of typical towns and cities in the Imbabura Province.

On the Coast, sample points were selected by the Ministry of Health for Manabi Province. Again, due care was given to select points that represented a sample of common characteristics for that region. In all cases, sample points were selected by Ministry of Health and INNE officials, with Manoff International representative concurrence.

Maps were to have been secured for all urban sites and drawn for all rural communities chosen. Reconnaissance trips were made in advance to sample communities to plan the research, and to elicit key governmental authority support in conducting the research. These trips were used to determine and obtain data on housing so that adequate household samples could be drawn.

3. Respondent Selection

Using the maps, household surveys were conducted in every fourth house from a predetermined starting point. The interviewers were assigned specific block or areas to cover by the supervisor of the research.

The female head of house was in all cases sought as the respondent. However, it was expected that when other family members were present, particularly the husband, their opinions were sought and integrated into the interview summary. The interviewers were expected to memorize the question areas and conduct the interview in a conversational manner using only a guide list of questions, so as not to forget one, but not filling in answers during the interview. This was to allow interviewers to probe extensively and challenge and doublecheck respondents' first answers due to a very strong "yea"-saying tendency among the target

audience. Except for media habits and demographics, all answers were recorded on a tabular form after the interview and out of the respondents' sight. Media habits and demographics were recorded in the respondents' presence at the end of the interview. However, due to the fact that all demographic questions were eliminated by the Ministry of Health, only the media habits were recorded. (wh)

4. Interviewers

All interviewers were trained and supervised by the field team of Louis Sabia and Hector Ordonez, who in turn reported to Donald Swanson, the local Manoff International coördinator at INNE.

Interviewers were recruited from local service and health organizations.

Long training sessions were held with the interviewers to go over all working plans before actually conducting research. Many hours of instruction in research techniques were required to get Ministry of Health officials to levels in which they could conduct research within reasonable conditions of confidence. While many had conducted research before, it was not of the same type for the needs of this project. Since many habits had been formed from previous research, in many cases interviewers had to be retrained. Quechua-speaking interviewers were specially recruited and trained for interviewing the Indians. The field team was also responsible for translating the questionnaire into Quechua and validation of all of the interviewers' materials.

5. Pretest of Procedures and Questionnaire

After pretesting with several alternative procedures, it was decided to record on tapes all interviews. The reasons for the tape recording of the interviews was to be less intimidating to the respondent than filling out forms in front of others and to provide 100% validation and also to allow the supervisor a chance to review the interview to keep track of the quality of the fieldwork.

Interviewers went into the field armed with tape recorders, cassette tapes, and a question guide. After introducing themselves appropriately, interviewers placed the tape recorder in front of the respondents and began the interview. In all instances, interviewers received permission to tape the answers and openly stated their mission to ask certain questions about their health and food habits. In no circumstances did interviewers record answers without permission nor pretend that they were not recording. This is made clear due to some unfortunate circumstances in which social scientists have wrongly portrayed who they are and have taped interviews without the knowledge or permission of the respondents. (See Appendix C, Testing Questionnaire and Use of Tape Recorders.)

6. The Interview and Question Areas

Each interview consisted of approximately 70 questions. After introductions, interviews usually lasted about 15 - 20 minutes. They were conversational, relaxed, and in most cases enjoyable for both interviewer and respondent.

Interviewers recorded the name of the person interviewed, the sample point, the date of interview, and the interview number in a "control notebook." The interview was also identified by the same number on the tape. It would subsequently be transferred to the questionnaire score sheet using the interview number and the control notebook for triple-checking to assure that the correct answers were being recorded.

Interviewers were originally instructed to fill out a sample point description prior to entering an area (see Appendix F for sample point description form). The purpose of this was primarily to get an indication of business activity and available facilities of the various sample points. They were then to ask each respondent questions on the various message areas. (See original sample questionnaire in Appendix A.) Originally there were many questions for which there were to be two answers. The first was to be what the respondent *claimed*; the second answer was to be what the interviewer felt was the "true" answer.

It was felt that there would be many instances where a respondent would claim to do things because they were too proud or afraid to admit the truth. By having two answer possibilities it was hoped that the tendency to exaggerate could at least be accounted for.

Unfortunately, our first questionnaire was changed to omit sample point descriptions and interviewer evaluations as well as many question areas (see Appendix B for final questionnaire and question guide).

7. Data Processing

After all interviews were completed, interviews from tapes were duly recorded on the questionnaire sheets. This required listening to all interviews for the second time. While this process took extra time, it assured more accuracy in recording the data. Each interviewer tabulated his/her own interviews.

Final questionnaire sheets were reviewed and verified by Manoff International representatives. They were turned over to an Ecuadorean keypunch company for transfer to computer cards. Those cards were verified and sent to New York for data processing.

The complete interviews were edited, coded, and transferred to IBM cards by Jim Foley in Ecuador who, in turn, reported to Don Swanson.

One set (a duplicate) of the cleaned IBM cards was forwarded to Elbrun Revere in New York for data processing by TCA (Trehella, Cohen and Arbuckle).

B. SUPPLEMENTARY RESEARCH TO HELP CORROBORATE TRACKING STUDY

A series of research projects were developed to be conducted in conjunction with the Awareness, Attitude, and Behavior Change Tracking Study. They were:

- Sample point description study to outline the availability of food stores, health care centers, type of economic activity, source of water, etc., of each sample point (see Appendix F).

- A collection and analysis of salt shipment data into the area of Imbabura and Pinchincha (see Appendix G).
- Media monitoring study to help estimate the amount of exposure each message had by each station over the period of the broadcast (see Appendix H).
- Multipliers study to help determine the effect of the messages on local health and nutrition workers who would, in effect, be in a position to expand upon the radio messages and multiply their effectiveness (see Appendix E).

However, with the exception of the salt shipment data, these projects were not conducted with sufficient rigor in the field to warrant their inclusion in the findings of the study. They have given us, however, strong impressions that tend to support our findings from the household interviews.

III. SUMMARY OF FINDINGS

A. A POINT OF VIEW

Analysis of the data takes into account available data as well as their limitations and presents a point of view about what happened as well as what would happen if the program were to continue.

The major value in tracking one's success is to utilize the knowledge of inexperience in order to help prevent failure in the future. And, therefore, the analysis takes the approach of learning rather than of absolute judgment of success or failure.

B. COMPARISON OF WAVE ONE AND WAVE THREE

Throughout the analysis Wave One and Wave Three results are usually compared. This is because in most cases while both Wave Two and Wave Three results represent significant increases along the lines recommended by the messages, the Wave Two levels are usually higher than Wave Three.

Since the reason for the decrease cannot be completely documented, but is consistent across measures, it was felt that comparing figures obtained at similar times of the year and analyzing the less "successful" results would be less confusing.

The primary reason for a falling off from Wave Two to Wave Three is a lowering of message exposure. The effects of advertising follow its exposure and resemble the classic learning curve. The result of lowering the pressure or frequency of a message is to reverse the

We feel that the analysis can best be understood within the context of understanding some of the limits of the data and, if you will, problems with the research; therefore, these are detailed as follows:

1. Compromising the Questionnaire

As has been mentioned elsewhere, the original questionnaire to be used in the Awareness, Attitude, and Behavior Change Tracking Study suffered severely because of the sensitivity the Ministry of Health felt about certain questions and their lack of understanding of the usefulness of other questions. As a result, the final questionnaire did not contain:

Demographics - which made it impossible to check the matching of our samples from wave to wave as well as impossible to describe or know who our target audience was in terms of income, family, size, occupation, and access to food. Since this also precluded asking some of the questions about pregnancy, it made evaluating the Mother's Milk messages almost impossible.

Questions about habits or beliefs other than those of the respondents. This prevented us from using the technique of indirect questions. Often respondents will not tell the "truth" about their own behavior but they will tell the truth about the custom of the area or their neighbors' behavior which, in turn, can be used to track changes.

Questions directly regarding the messages, such as awareness, in Wave One. The reason for wanting to ask these questions was to establish a benchmark of what people would say even before they were exposed to a

message. The official reason for excluding these measures were that they were insulting to their intelligence.

- Many specific questions which were not liked or were thought unnecessary. The absence of such questions resulted in the elimination of some possible answers such as the source of drinking water being a tap instead of well, spring, river, etc.

Omissions in the final questionnaire resulted in uneven probing by interviewers within the same wave and among the waves for the same questions.

2. Limitations of the Interviewers

No amount of training can make up for lack of experienced professionals working on the job. There were none in Ecuador familiar with broad-scale survey work among rural poor.

As a direct result of inexperience, interviewers did not always ask the questions in the same way, or probe the same amount, or cross-examine respondents to get at the real answer. The problem was compounded by having interviewers code the answers from their own tapes because they did it to varying degrees of carefulness.

The interviewer biases were different from wave to wave because:

- There were different interviewers in Wave Three than in Wave One or Wave Two in the Sierra.
- There was more supervision of the two Spanish samples and interviewing in Wave Three than in Waves One and

Two. The increase in supervision meant an increase in probing and getting at the "truth."

- Despite instructions to the contrary, interviewers in Wave One recorded only single answers and entered all answers for which there were no precoded possibilities in the "other" category, without specifying what the "other" was. Since this happened at the level of the interview and not the coding, it was impossible to return to the questionnaire to correct the errors. In fact, some of the "other" categories in Wave One were as high as 40% of the responses. A longer discussion of this problem is presented in the "Detailed Findings."

3. Translations

Both in translating the questionnaires and the responses important shades of meaning were lost. For example, instead of asking "Do you wash your hands?" respondents were asked "Should you wash your hands?"

4. Noncompletion of Supplementary Research Projects

Except for the iodized salt shipment data collection, we were completely unsuccessful in getting any of the other research projects completed in a satisfactory manner. The causes for these failures centered around insufficient personnel to see that they were carried out. Even the stopgap study which was instituted in Wave Three to make up for the lack of demographics (see Appendix G) and took the place of the sample

point description was filled out differently in each area, thereby negating its primary usefulness in providing a basis for comparison.

The result of not having this additional information is that there is no concrete numerical data to substantiate findings from the tracking study.

D. THE TARGET AUDIENCE

While it was not possible to gather specific demographics and lifestyle data due to a series of problems detailed in the section on data limitations, there are certain characteristics of the population that can be detailed from observation and which will help the reader visualize the groups and understand the differences between each group.

The coastal Nestizos are the most affluent, educated, and economically involved of the three target groups. The particular coastal area for the experiment was the province of Manabi which we were told by Ecuadorean officials has the best health delivery system of all the provinces in Ecuador. The people of Manabi not only have radios but in the neighborhood of 10% of them have access to television. It should be noted that on the coast, messages were broadcast both on radio and television. And, while there was no attempt to measure the difference in effect of the two media, it is axiomatic that television is more effective than radio. Certainly it can be agreed that the Coast had the added benefit of the television messages. The messages were recorded and broadcast in the coastal Spanish dialect and included messages on protein and boiling water, and washing hands.

The Sierra Mestizos, near the provinces of Imbabura and Pinchincha, were the second most affluent, educated, and economically involved group. They did not have as good health delivery as the coastal Mestizos and they did not have sufficient access to television to warrant a television campaign; however, ownership of radios was widespread. Messages were broadcast to this group in the Sierra dialect of Spanish and covered the subjects of protein foods, boiling of water, washing of hands, and iodized salt.

The indigenous or Sierra Indians, also from the provinces of Imbabura and Pinchincha, were the least affluent, working for the most part as subsistence farmers. They were the least educated in terms of knowing Spanish or information relevant to that culture, undoubtedly had the least access to health care services, and radio ownership was low. Messages were broadcast in Quechua, the Indian tongue, so that this target group was likely to be exposed to both Spanish (many Indians have a working knowledge of Spanish though they may not speak it well or read it) and Quechua versions of the messages.

E. MESSAGE PENETRATION

1. Radio Ownership or Access to a Working Radio Was the Key to Whether or Not a Person Was Aware of the Message

Most Mestizos had access to a working radio, and most heard the messages.

Among the Indians, there were fewer radios and, therefore, there was less message awareness. Awareness of the messages among those with radios was similar to the Mestizos' awareness.

TABLE 3

 % WITH ACCESS TO A WORKING RADIO
 BY WAVE THREE

Coastal Mestizos	83%
Sierra Mestizos	85%
Indians	64%

2. *The Patterns of Awareness and Claimed Behavior Change in the Data as Well as Other Factors Suggest That There Was a Letup in the Number of Times Each Message Was Aired Between Waves Two and Three and, Therefore, a Decline in Message Effectiveness from Wave Two to Wave Three*
-

An attempt was made to have each participating station air each message at least ten times a day and rotate the messages so that each message wave be aired equally. Accordingly, over time and repeated exposure the target audience would learn the advice in the message.

The messages were duplicated and distributed, one message per side of a 45 RPM record so as to avoid always playing the first band of a longer playing record and to encourage the desired rotation. Because the records were all worn when the project coördinator visited the stations and managers claimed that they were rotating the messages, it is assumed that the messages were aired at similar rates at least within any given target audience.

The media monitoring was not sufficiently well executed to be useful in verifying the frequency with which the message were aired by the various stations over the period of the program. However, examination of the station records by the local project coördinator and the

perceptions of those involved in the project in Ecuador suggest that enthusiasm for the campaign waned at the station level. As time passed, the spots were aired less frequently and it required more and more effort to gain even a verbal commitment to air the spots from some stations.

Most measures of awareness, attitude change, and claimed behavior adoption were highest or more positive in terms of conforming to the message advice in Wave Two, and declined in Wave Three to levels that while they were above those in Wave One, were significantly below those in Wave Two. This pattern is the opposite of a learning pattern and typically occurs when, in the commercial world, advertising is withdrawn or diminished for a specific product. Unfortunately, the picture is somewhat muddled because the interviewing procedures were more rigid and the interviewers more experienced in Wave Three than Wave Two, which led to more "truthful" answers than in Wave Three. For example, in Wave Two if respondents said they boiled their water all the time, they were not cross-examined. In Wave Three, many such "all the time" answers turned out to be "occasionally" or "only for coffee."

3. *It Should Be Noted That Throughout the Analysis, Comparisons Are Made Between Wave One and Wave Three Data*

Although Wave Two data often suggest that the messages were most effective midcampaign, it is felt that the more modest Wave Three "success" is easier to understand because it was not influenced by seasonal differences and the data were more painstakingly and accurately gathered.

F. PROTEIN MESSAGE

1. The Protein Message Was Very Successful Among All Three Groups in Changing Awareness and Knowledge About the Value of Proteins

Awareness and recall of the protein message were good among those with radios in all three target groups. It should be noted that message awareness is a proven message awareness and probably lower than the actual awareness of the message. In order to be included among those aware of the message, respondents had to say they were aware of a message on proteins and recall some specific aspect of the protein message which would prove that they were, in fact, aware of the message.

TABLE 4

PROVEN AWARENESS OF PROTEIN MESSAGE
 AMONG RADIO OWNERS IN WAVE THREE

Coastal Mestizos	59%
Sierra Mestizos	58%
Indians	48%

2. Learning About Proteins

All three groups remembered that the message identified which foods contained proteins. The Indians also remembered that the message explained what proteins do. Their higher sensitivity may be due to their general ignorance about proteins prior to the campaign.

TABLE 5
 INFORMATION RECALLED FROM PROTEIN MESSAGE BY
 WAVE THREE AMONG THOSE AWARE OF THE MESSAGE

<u>Unaided Recall of Message Saying:</u>	<i>Coastal</i>	<i>Sierra</i>	
	<u>Mestizos</u>	<u>Mestizos</u>	<u>Indians</u>
Proteins are found in specific foods (legumes, quinoa, chocho, lentejas, meat, fish, milk, eggs)	87%	100%	77%
Something special that many foods have	2%	5%	21%
Each child should receive a protein food every day	6%	5%	14%
Children who eat proteins will be strong and intelligent	6%	6%	11%

All three groups learned more about proteins over the course of the campaign from Wave One to Wave Three. The fact that the learning was stimulated by the message is illustrated by the difference in learning between those who were and were not proven to be aware of the message, as is found in Table 6. In the first two columns (in Table 6) of each target group, those aware of the message are compared with those who were not aware of the message.

TABLE 6
PERCEPTION OF HOW PROTEINS ARE USED

	COASTAL MESTIZOS			SIERRA					
	MESTIZOS		Wave One	MESTIZOS			INDIGENOUS		
	Wave Three Aware	Not Aware		Wave Three Aware	Not Aware	Wave One	Wave Three Aware	Not Aware	Wave One
Feeds and Reinforces Body/Gives Calories/ Gives Energy/To Grow/Firm Muscles	83%	50%	10%	78%	46%	15%	81%	40%	
Prevent Illness/ To Live	+1%	-	2%	+15%	+5%	4%	19%	12%	1%
Other	-	-	*	-	+1%	*	2%	1%	4%
Don't Know	22%	55%	88%	23%	51%	83%	21%	52%	95%

* Less than 0.5%.

3. Attitudes About Low Status Protein Sources

The message was very successful in changing attitudes about legumes from a common staple, and in some instances "Indian food," to an elevated position of a protein food source.

The message was successful in educating all three target groups as to which foods contain protein. While the increased interest in protein caused some misattribution of foods to the protein group (like fruits), most correctly identified foods rich in protein. Most significant was the positioning of legumes as a good protein source.

TABLE 7
PERCEPTION OF WHICH FOODS ARE PROTEINS/RICH IN
PROTEINS BY AWARENESS OF THE MESSAGE

	COASTAL MESTIZOS			SIERRA					
	Wave Three		Wave One	MESTIZOS			INDIGENOUS		
	Aware	Not Aware		Aware	Not Aware	Wave One	Aware	Not Aware	Wave One
Foods of Animal Origin (milk, meat, eggs)	71%	44%	14%	52%	31%	15%	52%	30%	1%
Legumes	42%	23%	1%	54%	29%	4%	46%	26%	1%
Incorrect	45%	16%	6%	40%	46%	18%	45%	16%	3%
Don't Know	11%	46%	80%	16%	53%	76%	20%	48%	95%

4. Changing Food Behavior

- a. *The message was only marginally successful in changing behavior, probably because overall economic influences are more important than are wants.*

The typical diet of the three groups reflects their absolute and relative poverty. Those on the coast being the most affluent, they consumed three protein sources a day. The Mestizos in the Sierra are the second most affluent and they consumed two protein sources a day. The desperate poverty of the Indians is reflected by their lack of consumption of protein even once a day, as is shown in Table 8.

TABLE 8

TYPICAL DIETS

	AVERAGE NUMBER OF TIMES EACH FOOD IS SERVED PER MONTH IN WAVE THREE					
	<u>Coast</u>		<u>Sierra</u>		<u>Indigenous</u>	
Daily (20+ times a month)	Sugar	30	Fats	30	Fats	29
	Cereal	29	Sugar	29	Sugar	22
	Fats	29	Tubers	27	Tubers	20
	Fruits	22	Cereal	27		
	Milk	21	Milk	21		
	Eggs	20				
Occasionally (almost every other day)	Tubers	17	Fruits	17	Vegetables	17
	Legumes	17	Legumes	17	Legumes	16
	Meat	16	Vegetables	15	Cereals	15
	Fish	16	Eggs	12		
	Vegetables	14	Meat	12		
Once a week or less (5 or less times a month)			Fish	1	Fruits	6
					Meat	5
					Milk	5
					Eggs	5
					Fish	1

b. Increased consumption of certain foods

The message definitely increased consumption of certain foods (fish among Mestizos and Indians, eggs and milk among Indians). However, because there was universal acceptance of most food, the importance of this increased acceptance is minimal.

TABLE 9
CHANGE IN WHAT FOODS ARE EATEN

	CHANGE IN ACCEPTABILITY OF SELECTED FOODS					
	COAST		SIERRA		INDIGENOUS	
	Wave 3	Change from Wave 1	Wave 3	Change from Wave 1	Wave 3	Change from Wave 1
	%	%	%	%	%	%
Base: Total Sample						
<i>Food</i>						
Milk & milk products	99%	+1%	97%	+1%	90%	+4%
Eggs	99%	+1%	91%	-5%	86%	+9%
Meat	100%	±0%	97%	-1%	96%	+2%
Fish	100%	+1%	62%	+12%	54%	+4%
Legumes	99%	+2%	98%	-2%	99%	±0%
Cereals	100%	±0%	100%	±0%	100%	+1%
Tubers	99%	±0%	99%	-1%	99%	±0%
Fruits	99%	+2%	96%	-2%	93%	+1%
Vegetables	92%	-5%	95%	-5%	96%	-3%
Fats	100%	±0%	99%	±0%	97%	-3%
Sugars	100%	±0%	100%	±0%	99%	±0%

c. Inconclusive evidence for increased frequency

The area in which there is a definite need for change is the frequency with which various protein foods are served. The increased frequencies of serving protein foods and even legumes cannot clearly be attributed to the message alone since the frequency of serving protein foods also increased among those not aware.

TABLE 10

SUMMARY OF CHANGES IN MEAN MONTHLY FREQUENCY OF SERVING
SELECTED FOODS, WAVE ONE VERSUS WAVE THREE

	COASTAL MESTIZOS			SIERRA			INDIGENOUS		
	% Change from Wave 1 to Wave 3			% Change from Wave 1 to Wave 3			% Change from Wave 1 to Wave 3		
	Not Aware	Not Aware	Wave 1**	Not Aware	Not Aware	Wave 1**	Not Aware	Not Aware	Wave 1**
	Aware	Aware		Aware	Aware		Aware	Aware	
Milk & Milk Products	+1.40%	+1.16%	19.45	+3.45%*	+4.95%*	17.22	+3.54%*	+2.06%	2.18
Eggs	+5.74%*	+1.72%*	16.41	+5.58%*	+4.60%*	7.30	+3.87%*	+2.03%*	2.00
Meat	+0.10%	+0.02%	16.07	+2.11%*	+1.03%	10.37	+1.39%*	+2.17%*	3.22
Fish	+1.40%	+1.62%	14.64	+0.62%*	+0.64%*	0.71	±0%	-0.01%	0.71
Legumes	+8.07%*	+7.11%*	9.17	+8.07%*	+5.19%*	10.37	+4.80%*	+5.43%*	10.87
Cereals	-0.21%	-0.84%*	29.76	+6.53%*	+5.11%*	20.65	-2.02%	-1.66%	16.40
Tubers	-4.65%*	-1.71%	20.76	-1.32%*	-2.12%*	29.05	+1.71%	-2.90%*	20.84
Fruits	+8.73%*	+8.81%*	13.41	+5.29%*	+4.44%*	12.92	+4.74%*	+1.37%*	3.39
Vegetables	+2.34%*	+1.63%	12.61	+5.28%*	+3.77%*	10.75	-0.56%	-4.40%*	19.41
Fats	+0.24%	-1.14%*	29.49	+0.32%*	-0.52%*	29.68	+2.13%*	+0.73%	27.87
Sugars	+0.05%*	+0.05%*	29.95	-0.05%*	-0.14%	29.40	+14.23%*	+9.72%*	10.57

* Statistically significant change at the 95% confidence level.

** Average number of times each food is served per month in Wave One.

5. Summary and Recommendations

- The nutritional concepts concerning proteins and probably such things as vitamins, minerals and calories, etc., can be taught to those in the lower socioeconomic groups via radio.
- Proteins from local and non-market value sources can be given status by associating them with the traditional sources of protein which are understood to be desirable if only by their high price.
- If the program of short messages is to continue in Ecuador, we recommend the development of a new message which would place even more emphasis on legumes as protein sources. Secondly, the message should stress the importance of some protein at each meal.

G. BOILING WATER MESSAGE

The Message on Boiling Water Was Very Effective in Teaching Those Who Did Not Previously Know, Particularly the Indians, About the Dangers of "Bichos" or Germs and the Importance of Boiling Water to Destroy Them. However, It Did Not Successfully Communicate that the Listeners' Water Might Be Contaminated.

1. Message Awareness

Proven awareness of the boiling water message was good among those with radios in all three target groups.

TABLE 11

PROVEN AWARENESS OF BOILING WATER MESSAGE
AMONG RADIO OWNERS IN WAVE THREE

Coastal Mestizos	73%
Sierra Mestizos	69%
Indians	60%

2. Message recall

Recall of what was said in the message was good and relevant.

TABLE 12

INFORMATION RECALLED FROM BOILING WATER MESSAGE BY
WAVE THREE AMONG THOSE AWARE OF THE MESSAGE

<i>Unaided Recall of Message Saying:</i>	<i>COASTAL</i>	<i>SIERRA</i>	
	<u>MESTIZOS</u>	<u>MESTIZOS</u>	<u>INDIGENOUS</u>
Boiling kills bichos	65%	57%	50%
Water should be boiled, cooled, and stored in a covered container	22%	54%	48%
Water is bad when it has biochos	10%	19%	20%
It is better to boil water than to have sickness and death	9%	16%	26%

3. Knowledge Changes About Water

In all three groups, people learned that bichos caused sickness, that they came from dirty water and dirty food, and that they can be destroyed by boiling water, washing your hands, and being clean.

While there was a great deal of knowledge about bichos among the Mestizos prior to the messages, they learned even more. For the Indians who were totally ignorant, the messages brought the most new knowledge.

TABLE 13

SUMMARY OF CHANGES IN KNOWLEDGE ABOUT BICHOS

	COASTAL MESTIZOS			SIERRA					
	MESTIZOS		Wave One	MESTIZOS			INDIGENOUS		
	Wave Three Aware	Not Aware		Wave Three Aware	Not Aware	Wave One	Wave Three Aware	Not Aware	Wave One
<u>What Bichos Are:</u>									
Do not know what biochos do	10%	24%	17%	4%	14%	14%	16%	45%	65%
Believe they cause sickness/are prejudicial to health & cause damage	90%	82%	76%	100%	83%	82%	78%	78%	30%
<u>How They Enter the Body:</u>									
Do not know how biochos enter the body	12%	31%	19%	5%	21%	18%	26%	60%	64%
From dirty water	29%	29%	37%	54%	45%	49%	42%	28%	11%
From hands to food	30%	15%	25%	22%	17%	34%	22%	9%	14%
Unwashed foods	29%	15%	11%	47%	31%	16%	17%	3%	-
Uncleanliness	15%	15%	3%	19%	16%	6%	10%	3%	-
<u>How They Are Destroyed:</u>									
Do not know how bichos are destroyed	15%	31%	12%	11%	17%	23%	18%	45%	66%
By boiling water	29%	17%	33%	51%	28%	31%	25%	8%	4%
By washing hands/with soap	29%	13%	9%	26%	14%	13%	10%	7%	4%
By being clean	24%	21%	23%	25%	25%	31%	13%	7%	-
By going to doctor/ taking medicine	14%	24%	20%	13%	22%	15%	46%	43%	11%

4. Perception of Drinking Water Quality

The messages did not significantly change people's perceptions about their own source of drinking water, and this was the significant weakness in the message.

This message weakness was predicted in the copy test prior to airing (see Appendix D). However, we were prevented, for local political reasons, from saying that all water was bad, and therefore, with encouragement from our Ecuadorian colleagues, aired the message on a "let's see what happens anyway" basis.

TABLE 14

SUMMARY OF CHANGES IN PERCEPTION OF QUALITY OF WATER

	COASTAL MESTIZOS			SIERRA					
	Wave Three		Wave One	MESTIZOS			INDIGENOUS		
	Not Aware	Not Aware		Not Aware	Not Aware	Wave One	Not Aware	Not Aware	Wave One
Water is:									
Good	60%	64%	76%	65%	64%	68%	71%	78%	75%
Regular	29%	24%	17%	8%	13%	3%	12%	9%	-
Bad	9%	7%	6%	24%	17%	29%	14%	12%	15%
Other/No Answer	2%	0%	1%	0%	0%	*	3%	1%	10%
* Less than 0.5%									

5. Changed Behavior

Among the Mestizos there were no positive changes in boiling habits, although the Sierra Mestizos did claim to increase their tendency to store their water in covered pots, which was also part of the message advice.

Among the Indians there was a significant shift towards boiling and more frequent boiling. However, this shift as well as the tendency to claim that they covered their water cannot be directly attributed to the message, since it occurred to an equal degree among those not proven to be aware of the message.

TABLE 15

SUMMARY OF CLAIMED CHANGES IN HABITS
OF BOILING WATER BY WAVE THREE

	COASTAL MESTIZOS			SIERRA					
	Change by Wave Three		Wave One	MESTIZOS			INDIGENOUS		
	Not Aware	Aware		Change by Wave Three	Not Aware	Wave One	Change by Wave Three	Not Aware	Wave One
<u>BOILING</u>									
Base = Those Answering									
Claim to boil drinking water	73%	65%	78%	30%	26%	29%	42%	45%	26%
Don't boil	27%	35%	22%	70%	74%	71%	58%	55%	74%
<u>FREQUENCY</u>									
Base = Those Answering Who Boil									
Always	81%	93%	81%	44%	46%	69%	62%	73%	32%
Occasionally/for tea or coffee	6%	7%	19%	52%	54%	28%	23%	27%	62%
Never	-	-	-	-	-	3%	-	-	-
<u>STORAGE</u>									
Base = Total Sample									
Preserve water	82%	80%	82%	70%	52%	47%	72%	75%	43%
covered pot	57%	60%	60%	58%	48%	34%	49%	50%	9%
uncovered	25%	20%	22%	12%	4%	13%	23%	25%	34%
Do not preserve water	3%	3%	8%	29%	45%	33%	14%	12%	30%
Other	15%	14%	4%	2%	3%	1%	9%	8%	-
Don't know/no answer	-	3%	6%	-	-	21%	6%	6%	28%

6. Summary and Recommendations

- A complex concept like *bichos* or germs which cannot be seen, can be conveyed via a radio message.
- Even the subtlety of preventing *bichos* from getting in by covering the water apparently can be taught via radio and will be acted upon.
- The most critical idea, namely, that the listeners' water was contaminated, was not communicated because it was not specifically stated that *all* water was contaminated.
- Copy testing can be utilized to predict such communication failures.
- An alternate message which would have avoided a loophole and probably would have been politically acceptable would have been: "All babies under two years old need to have their drinking water boiled to prevent sickness."

II. WASHING THE HANDS MESSAGE

1. Message Recall

The washing-the-hands message was remembered by all three target groups and was very successful in changing people's reasons for washing their hands from cosmetics to health.

Awareness and recall of the washing hands message was high for all three groups.

TABLE 16

PROVEN AWARENESS OF WASHING HANDS MESSAGE
AMONG RADIO OWNERS IN WAVE THREE

Coastal Mestizos	64%
Sierra Mestizos	68%
Indians	75%

People in all three target groups remembered the message as detailing many reasons for washing your hands.

TABLE 17

INFORMATION RECALLED FROM WASHING HANDS MESSAGE
BY WAVE THREE AMONG THOSE AWARE OF THE MESSAGE

	<i>COASTAL MESTIZOS</i>	<i>SIERRA</i>	
		<i>MESTIZOS</i>	<i>INDIGENOUS</i>
<i>Unaided Recall of Message Saying:</i>			
You should wash your hands with soap and water	39%	45%	52%
You should wash your hands before eating and after using the latrine	41%	66%	49%
Your hands can carry bichos/be your enemy	12%	16%	10%
Bichos pass from hands to food/ can enter body	12%	13%	7%
Bichos can't be seen	2%	1%	1%
Bichos cause diarrhea	1%	-	1%
Better mothers raise better children	1%	3%	1%

Over the period of the message campaign, people changed their reasons for washing their hands which directly related to having heard the message. Before the message campaign, people washed their hands because they were dirty and after the campaign they washed them to kill bichos or be clean in the hygienic sense.

TABLE 18

SUMMARY OF CHANGES IN REASONS FOR WASHING HANDS

REASONS FOR WASHING HANDS:	COASTAL MESTIZOS			SIERRA					
	Change by Wave Three		Wave One	MESTIZOS			INDIGENOUS		
	Not Aware	Not Aware		Not Aware	Not Aware	Wave One	Not Aware	Not Aware	Wave One
To kill bichos	68%	52%	42%	52%	55%	36%	23%	3%	1%
To avoid sickness	5%	2%	4%	8%	11%	7%	9%	6%	-
To be clean	13%	20%	5%	30%	33%	5%	23%	36%	-
Because visibly dirty	26%	29%	48%	35%	33%	65%	53%	52%	88%
Other	-	-	*	2%	2%	1%	5%	9%	3%
Don't know	1%	1%	1%	1%	-	3%	6%	8%	6%

* Less than 0.5%

2. Inconclusive Results

While people changed their reason for washing their hands, the line of questioning was insufficient to determine whether any behavior change took place or not.

Virtually everyone in every group believed hands should be washed prior to the message.

The occasions for washing hands increased along the lines recommended in the message (before cooking, eating, and after latrine).

However, there were no major differences between those aware and those not aware of the message, with the exception of the Indians who seem to be the most positively affected by the message.

TABLE 19
CLAIMED CHANGE IN OCCASIONS FOR ADULT WASHING
OF HANDS BY WAVE THREE

	COASTAL MESTIZOS			SIERRA					
	Change by Wave Three		Wave One	MESTIZOS			INDIGENOUS		
	Aware	Awake		Aware	Awake	One	Aware	Awake	One
<i>Occasions for Adults Washing Hands:</i>									
Before cooking	13%	12%	9%	41%	40%	36%	13%	10%	31%
Before eating	54%	49%	24%	48%	51%	45%	31%	14%	10%
After the latrine	7%	5%	1%	12%	2%	2%	2%	-	-
When getting up	15%	17%	17%	14%	30%	14%	44%	47%	6%
When dirty	9%	5%	27%	45%	12%	34%	26%	19%	19%
All the time/every day	37%	45%	-	37%	35%	-	39%	47%	-
Other	6%	4%	9%	7%	13%	5%	8%	9%	13%
Don't know	-	-	*	1%	1%	-	-	-	2%
* Less than 0.5%									

Even the increase in the use of soap for hand washing can only be attributed to the message among the Sierra Mestizos.

TABLE 20
CLAIMED CHANGE IN THE USE OF SOAP
BY WAVE THREE

	COASTAL MESTIZOS			SIERRA					
	Changed by Wave Three		Wave One	MESTIZOS			INDIGENOUS		
	Aware	Not Aware		Changed by Wave Three	Wave One	Aware	Not Aware	Wave One	
<i>Use of Soap:</i>									
To wash hands	57%	56%	41%	73%	54%	67%	48%	53%	14%
To kill microbes	1%	4%	1%	1%	3%	*	-	-	-

* Less than 0.5%

It may be that without asking a series of bathing questions, it would be impossible to trace even a claimed change in washing hands since hands get washed, without any reasons, but rather as an effect of doing laundry, bathing, whatever.

3. Summary and Recommendations

- Washing of hands may be a subject that is impossible to measure in terms of behavior since all people wash their hands at some time. Hence, education on the reasons and occasions for washing hands should probably be the only goal for a washing hands message.
- If the program were to continue, this message should probably be continued either in its current form or perhaps focusing more on the two most important ideas: (1) the use of soap; and (2) washing before touching anything that goes in your mouth. ✓

I. MOTHER'S MILK MESSAGE

1. Message Awareness

The mother's milk message which was aired only on the coast was successful in gaining high awareness and dramatically changing people's perceptions about mother's milk being best.

Proven awareness of the message reached 78% among those with radios in Wave Three.

The primary aspect of the message that was remembered was that mother's milk is the best.

TABLE 21

INFORMATION RECALLED FROM MOTHER'S MILK MESSAGE
BY WAVE THREE AMONG THOSE AWARE OF THE MESSAGE

	<i>Coastal Mestizos</i>
<i>Unaided Recall of Message Saying:</i>	
Mother's milk is the best in the world	83%
You should give the breast at least three times a day	13%
Mother's milk is always available/ never spoils/no need to boil it/ no need to refrigerate	28%
Other	6%

2. Message Change Perceptions

The message was directly responsible for changing people's perceptions about mother's milk being better than powdered or cow's milk.

TABLE 22

CHANGES IN PERCEPTIONS ABOUT MOTHER'S MILK

	<u>COASTAL MESTIZOS</u>		
	<u>Wave Three</u>		<u>Wave</u>
	<u>Aware</u>	<u>Not Aware</u>	<u>One</u>
<u>Perception of Which Milk Is Best</u>			
Mother's milk	73%	47%	30%
Fresh/cow's milk	21%	28%	47%
Powdered milk	5%	17%	16%
Other	-	3%	1%
Don't know	1%	7%	7%

Convenience rather than superiority was the main reason for thinking mother's milk was best among those who heard the message and believed that mother's milk was best.

TABLE 23

REASONS FOR CHANGES IN PERCEPTIONS
ABOUT MOTHER'S MILK

<i>Reason for Believing Mother's Milk Is Best</i>	<i>COASTAL MESTIZOS</i>		
	<i>Wave Three</i>		<i>Wave</i>
	<i>Aware</i>	<i>Not Aware</i>	<i>One</i>
<i>Convenience</i>	75%	11%	11%
No need to boil	41%	7%	1%
Doesn't spoil	20%	-	6%
Easy to get	14%	4%	4%
<i>Superiority</i>	37%	65%	73%
Feeds the child better	35%	61%	28%
Child doesn't get sick	2%	4%	44%
Cheaper	-	-	1%
<i>Other</i>	4%	4%	16%
<i>Don't know</i>	4%	18%	-

3. Behavior Change

There is an indication that breast-feeding increased (18% in Wave One to 25% in Wave Three) over the course of the message campaign.

However, the increase is not greater among those proven aware of the message. More importantly, because the question was not correctly administered, the results may be misleading.

4. Summary and Recommendations

- The breast-feeding message should be aired again in urban areas where the problem, according to Ecuadorian nutritionists, exists most specifically.
- The message could probably be strengthened by stating a specific amount of time during which breast-feeding should be continued.
- Measures of intent to breast-feed the next child and experience with feeding last child would probably yield meaningful results.

J. IODIZED SALT MESSAGE

1. Message Awareness and New Knowledge

The iodized salt message was aired only in the Sierra but to both the Mestizos and the Indians. It was successful in gaining awareness among both the Indians and Mestizos, and educating both groups as to why iodized salt was important, and informing the Indians as to the dangers of goiter and which salt is iodized.

Awareness of the iodized salt message was moderately high among both Mestizos and Indians with radios by Wave Three (48% and 22%, respectively).

Specific recall of the message among those who remembered it centered around iodized salt being good because it prevented goiter.

TABLE 24

INFORMATION RECALLED FROM IODIZED SALT MESSAGE
BY WAVE THREE AMONG THOSE AWARE OF THE MESSAGE

<i>Unaided Recall of Message Saying:</i>	<i>SIERRA</i>	
	<i>MESTIZOS</i>	<i>INDIGENOUS</i>
Iodized salt is good	45%	79%
You can avoid goiter by eating iodized salt	56%	7%
Lack of iodine produces goiter	18%	11%
Goiter in pregnant women can cause damage to the child before birth	16%	
Goiter is a sickness	2%	14%
Iodized salt is white and comes in plastic bags	6%	11%

Among those aware of the message, there was an increase in knowledge that goiter is a sickness, causes sickness, and is caused by using the wrong salt. The changes were most dramatic among the Indians.

TABLE 25

SUMMARY OF CHANGES IN KNOWLEDGE ABOUT GOITER

	SIERRA					
	MESTIZOS			INDIGENOUS		
	Change by Wave Three			Change by Wave Three		
	Aware	Not Aware	Wave One	Aware	Not Aware	Wave One
Believe goiter is a sickness	87%	74%	73%	54%	24%	16%
Causes sickness	42%	41%	49%	36%	14%	5%
Causes abnormal children	6%	5%	1%	4%	1%	2%
Goiter is caused by:						
Grain salt	40%	44%	15%	36%	18%	-
Salt	23%	32%	11%	23%	32%	1%
Lack of iodine	26%	6%	7%	4%	-	3%
Bad water	2%	4%	14%	7%	-	-
Too much salt	16%	22%	26%	7%	14%	-
Don't know	13%	18%	29%	11%	38%	53%

Awareness of which salt was iodized and a perception of iodized salt being the best increased for both groups over the campaign.

However, by Wave Three many Indians could still not even guess at which salt was iodized. What the Indians did learn was that iodized salt was white, not red, and that it was refined as opposed to coarse. It may be because of their inability to read that they often confuse iodized with refined.

TABLE 26

CHANGES IN PERCEPTIONS OF WHICH SALT
IS IODIZED AND WHICH IS BEST*

	SIERRA					
	MESTIZOS			INDIGENOUS		
	<i>Wave Three</i>			<i>Wave Three</i>		
	<i>Aware</i>	<i>Not Aware</i>	<i>Wave One</i>	<i>Aware</i>	<i>Not Aware</i>	<i>Wave One</i>
<i>IODIZED SALT IS:</i>						
<i>Course (Net)</i>	2%	1%	5%	7%	18%	16%
<i>Refined (Net)</i>	90%	73%	86%	53%	38%	32%
<i>Refined</i>	3%	5%	9%	14%	24%	10%
<i>White Refined Salt that says "Iodized"</i>	87%	68%	77%	39%	14%	22%
<i>Don't know</i>	10%	30%	9%	40%	47%	53%
<i>BEST SALT IS:</i>						
<i>Course (Net)</i>	2%	2%	9%	14%	36%	67%
<i>Refined (Net)</i>	98%	98%	85%	89%	60%	33%
<i>Refined</i>	5%	6%	80%	29%	33%	20%
<i>Iodized</i>	95%	92%	5%	64%	27%	14%

* Totals which exceed 100% are due to multiple responses.

2. Changed Behavior

There were dramatic shifts among both Mestizos and Indians in claiming to use iodized salt.

Among the Mestizos there had been a fairly high awareness that refined salt was the best quality and a high usage of refined salt prior to the message. However, the effect of the message was to cause the Mestizos to discriminate between ordinary refined salt and iodized refined salt. Prior to the message, only 5% used iodized salt, but by Wave Three

98% of those aware of the message used iodized salt. As previously noted, among the Mestizos there had never been any confusion as to which salt was iodized; they just didn't know that iodization was important. Among the Indians, however, the shift to using iodized salt was less dramatic. The reasons for the difference is that the Indians had to learn which salt was iodized. Since there is a pattern of shifting to white, to refined, and to iodized which is white and refined, it is probable that the learning process was piecemeal and that many Indians switched to types of salt they thought were iodized.

TABLE 27
CLASS OF SALT USED

	SIERRA					
	MESTIZOS			INDIGENOUS		
	<u>Wave Three</u>	<u>Not</u>	<u>Wave</u>	<u>Wave Three</u>	<u>Not</u>	<u>Wave</u>
	<u>Aware</u>	<u>Aware</u>	<u>One</u>	<u>Aware</u>	<u>Aware</u>	<u>One</u>
<i>Use Coarse Salt (Net)</i>	2%	3%	9%	29%	51%	66%
Red	-	1%	-	7%	9%	39%
White	2%	2%	9%	21%	45%	27%
<i>Use Refined Salt (Net)</i>	100%	97%	88%	68%	55%	17%
Refined	2%	7%	84%	14%	36%	11%
Iodized	98%	90%	5%	54%	19%	5%

3. Perceptions of Salt Availability

Both the respondents' perceptions of increased availability of iodized salt and the salt company data on sales increases substantiate the claimed increase in usage of iodized salt.

Among Mestizos, 5% thought their stores carried iodized salt in Wave One, and 93% thought so in Wave Three. Among the Indians, the perception of availability of iodized salt went from 13% to 31% in the same period. (See Appendix G for salt company data.)

Undoubtedly many were not aware that their stores carried iodized salt until they went to look for it. Therefore, the increased availability of salt in the stores recorded in the interviews is probably more the result of their perceptions rather than a real increase in availability.

4. Summary and Recommendations

- The relative speed with which a behavior can be changed when ignorance is the only barrier to change, as opposed to when ignorance is coupled with an economic barrier, is illustrated by the speed of the salt message adoption versus protein use. Also, it is illustrated by the relative speed with which the Mestizos switched to iodized salt (which is the same price as refined salt) over the Indians who had more cost implications in their decision to switch from the cheapest red grain salt to the more expensive white refined salt.
- The fact that knowledge and a change in behavior can be built up in a piecemeal fashion over time enforces the need to continue broadcasting in order to avoid partial solutions.

- If the iodized salt campaign were to be continued, it would be recommended that the messages be continued only for the Indians.

K. RESPONSIVENESS OF THE COASTAL MESTIZOS VERSUS THE INDIAN MESTIZOS VERSUS THE INDIANS

1. Geography Was Less Significant to Message Acceptance than Socioeconomic Class or Perhaps Even Language

The two Mestizo groups, though geographically and culturally separated by an altitude of 10,000 feet, were more similar than the Mestizos living in the Sierra and the Indians who live in the Andes. The Mestizos have similar and higher levels of radio access and proven message awareness, premessage knowledge, and claimed behavior.

The Indians, because they had fewer radios, had less message awareness. Because they had less awareness in their general population, as opposed to among those with radios, and more initial ignorance concerning the message subjects, they probably experienced the least synergistic benefit from the messages.

Because of their greater initial ignorance of the message subjects, those Indians exposed to the messages exhibited the most learning of any group and the most meaningful behavior changes across all messages (for example, in adopting iodized salt, the eating of new foods, the drinking and storage of water, and the use of soap for washing). In contrast, the Mestizos did not learn as much since they already knew much of the information; and while they exhibited some dramatic claimed behavior changes, as in the case of adopting iodized salt, they were less responsive to all of the messages.

2. *It Is Probable That Messages Directed at the Indians Should Be Simpler and More Informational, and Should Be Aired Longer*

Due to the need to use more sounds and pauses to express the messages in the Indian language, it is necessary to simplify the amount of information to be covered in order to fit it into 60-second spots. In recording the messages, what would take 60 seconds to say in Spanish took 2½ minutes in Quechua.

Because in many cases the Indians had not been exposed to the information prior to the campaign, it is probable that the information need not be presented with as many motivating elements as for the Mestizos. Many of the Mestizos knew the message information before the campaign and many were, in fact, behaving in the desired fashion. Therefore, the message had to convince people who had rejected doing the "correct" behavior for some reason other than ignorance. The need for motivation is therefore in proportion to resistance.

Probably because of the shortage of radios and, hence, the limited effect of synergism, the messages directed to the Indians should be broadcast more often and over a longer period of time. *or till*

L. COMMUNITY EFFECTS OF MASS MEDIA EXPOSURE

Throughout the study there were demonstrated positive changes in knowledge, attitudes, and claimed behavior regarding message advice, both among those proven to be aware of the message and those not proven to be aware of the message. This comes about for two reasons:

1. The strict definition of awareness undoubtedly excluded some people who were aware of the message, but couldn't remember it consciously, or couldn't articulate their awareness in sufficient detail as to be proven aware.
2. More importantly, however, is the synergistic effect of widespread knowledge affecting even those not directly exposed to the source (the message) by making them think that everyone "has always" or "is not" doing things a certain way, so they will too. With this, the broader the base of awareness or behavior, the more synergism.

FIELD TESTING RESULTS OF USING TAPE RECORDER OR QUESTIONNAIRES
FOR NUTRITION EDUCATION MASS COMMUNICATION STUDY

Field tests were made to determine if it were more appropriate to utilize tape recorders for testing or questionnaires in the mass communication nutrition education project being conducted by Manoff International with the Institute of National Nutrition in Ecuador. There was some question about possible results that might be gotten from using either procedure. One hypothesis was that using tape recorders openly would inhibit answers and break up the normal conversational pattern of the interview. Since there was some doubt about which procedure was better, a field examination was made. Equally important, we wanted to determine if respondents would negate being interviewed more with tape recorders or with questionnaires filled out in front of them. We also were pre-testing the revised questionnaire in the field to determine where changes should be made and what revisions were needed.

Field testing took place in three different locations outside of Quito. These three rural towns were Calderon, Guayllabamba, and Conocoto. Testing was administered by six Catholic University students, four INNE personnel, and the Manoff International supervisor in Ecuador.

The following is a summary of the data received:

Total # of interviews: 41

- 2 -

Interviews with recorders:	17
Interviews with questionnaires:	24
Negations with recorders:	2
Negations with questionnaires	6

Time Required for Questionnaires

It takes an average of 20 minutes to finish the revised questionnaire for both recorders and filled-in questionnaires. Some interviews were finished in 15 minutes, one in 40 minutes, but most around 20 minutes. There is no marked difference, time-wise, for completing the questionnaire, either by with recorder, or with filling the questionnaire by hand. The tests were done with pairs, except in one case, where one individual filled in questionnaires alone. This individual alone averaged 20 minutes for filling in questionnaires.

Questionnaire Vs. Recorder Analysis

- 1.- There is little rejection by respondents for being recorded or by having the questionnaire filled out in front of them. The rejection level was actually higher for filling in questionnaires, as we had 6 rejections, while only 2 for recorders. It appears that they do not mind being recorded, in fact many like the idea, confusing the idea of being interviewed with possibly being recorded to be put on the radio. (They consistently asked when they would be on the radio.

Review these for program material transferred from waste tapes

- 3 -

They confused the interviewers introduction that the study was to test radio messages with the recording of their own voices for an interview.)

2.- The answers received were equally profound for both methods. We expected less profound answers if they were recorded - but this was not so. There is no real difference in responses.

3.- The recorder is more positive than the questionnaire for maintaining control over the interview. By recording, the interviewer is able to turn the interview into a more open-ended type interview. Answers which might be clear with the initial guideline question can be more easily probed since both interviewers are concerned with getting answers recorded instead of worrying about tabulation.

4.-) It is more difficult to coordinate one person asking questions with the guideline questions and another tabulating than it is simply to tape record the answers. It is somewhat confusing for one person to be asking questions and another to be tabulating as coordination is somewhat complex. It could be possible to write the guide questions right on the questionnaire since coordination would be helped.

5. -

5.- The researchers agree that simply asking guideline questions and then filling out the questionnaire form afterwards does not enhance the answers received. Unless there is strong reason to do otherwise, this procedure should be dropped as an alternative.

6.- By using the recorder, tension is relived from making sure that the tabulator is correctly receiving the correct answers. The interviewer asking the questions usually starts a pace for asking the question and the tabulator must keep up with the pace of question and answer. Again, it could be possible for the questions to be written on the questionnaire, in which case the same person asking the question also tabulates the answers. This conventional way of handling interviews was positive in the study made. In fact, I would recommend that we may use this technique for some interviewers who are responsible and could work alone.

How can this be when our experience is constant

October 26, 1973

76

^{Pre}
Summary of ~~Copy~~ Testing of Nutrition Education Questionnaire

The overall questionnaire is deemed to be in good condition. The questionnaire itself is in much better shape than the probing questions. After ^{pre} copy testing, many questions were revised so that low-level target audiences could understand the questions without difficulty.

I. Time required for Interviews

The average length of time to ask all questions is 35 minutes. This includes a small introduction. The introduction was worked out with the trainers, Hector Ordoñez and Luis Subia. It is a short description of the project, but without much detail that the study is for surveying their habits. Interviewers tell respondents that they will be hearing information on the radio in the future that will help them in their food habits.

After the interview is completed, the interviewers go a short distance away from the house to record the answers. This takes approximately 10-15 minutes. In some interviews, there was confusion as to whether they should fill in sections 49-54, so that many did not fill in this section. Therefore, the average time for filling in forms will increase slightly.

II. Pairing

We tested interviews with single interviewers and in pairs. Single interviewers had no significant problems with the respondents. They appeared to have more problems remembering the answers to the questions when recording. Interview pairs had no problems whatsoever in asking questions, getting into the homes, or recording answers after the interview. Interviewers in pairs felt more comfortable in pairs and more assured that they were getting the right answers. The mutual backstopping between one interviewer and another is positive. Unless it cannot be worked out financially, pairs are definitely more positive than single interviewers.

III. Recorders

The questionnaires have not been tested with recorders. The general lack of availability of getting recorders is a problem. However, the trainers and INNE staff feel that if recorders are available, that they would enhance the recording process. There is probably not much difference in recording answers with a tape recorder and by using recall with paired interviewers, since experience to date shows that the paired interviewers are capable of recording well.

There is one slight advantage of recorders, however. In recording the interviews, interviewers can go from one interview to another without recording the answers between interviews. In this way, more interviews can be made in one day and answers can be recorded later at a more convenient time and place. Since many of the Sierra interviewers are married, and are women, they cannot stay out in the field for great lengths of time. Recorders available would enable them to do more interviews and record answers in Quito.

IV. Asking Questions

Interviewers use the probe guides for asking all questions. It is impossible for them to memorize all the questions, and would not be a good idea to try. They might skip questions, or feel they have sufficient answers, later to find out that they have insufficient data. In training sessions there was a tendency for interviewers to skip over some questions which they felt were already answered. Afterwards, when they recorded, they found that they simply did not have the data. In most cases, the interviewers were able to maintain a conversational tone in asking the questions, referring casually and unobtrusively to the question guide.

The questions have been blocked out according to categories for easy reference. This appears to be positive since interviewers can block their thoughts together

and make probing questions. After practicing with the questions over and over, the interviewers have learned to structure their questions according to their audience.

Some questions are difficult to read and are confusing. These must be corrected before final questioning begins. (Some comments are provided later in this report.) They can be corrected easily and be ready for final presentation.

V. Recording Answers

Interviewers had little problem recording answers. It is a simple measure of leaving the house, walking 100-200 yards away, and recording on the questionnaire form. The questionnaire is designed well so that recording is easy. By keeping the answers all on one side of the page instead of all over the paper, the interviewer can more easily place the answers.

There was some difficulty in answering questions and recording answers when little information existed by the respondents. This is due to the fact that respondents have not heard the messages yet, and will be corrected once that takes place.

VI. Specific Questions not Clear

Question #3. Many respondents did not know what kind of water their neighbors had. This might be difficult question to get good data.

Question #11. The rationale behind the question is obscure. Interviewers confused as to what we are looking for.

Question #17. Interviewers had problems getting answer to this question. People resisted giving answers.

Question #21. Interviewers had problems getting answers to question.

Question #22. The question does get to the core of the problem. The respondent has different answers he can give. Do we only have one answer? If so, then unclear.

Question #25 Requires different categories. Most people in campo could not answer this question within confines of possible answers. Suggested other responses:

- A. Once a month
- B. Special festivities
- C. Once in a while

Question #28-32. Respondents did not know about proteins in all cases. Difricult for interviewer to go to all questions since they are all related to Question #28. When response is negative to Question # 28, difficult to go to rest.

Questions #45-48. If interview too long, these could be suppressed.

APPENDIX D

COPY TESTING RESULTS

SUMMARY OF PRELIMINARY COPY TEST RESULTS

Overall the test messages were well received by the respective Coastal and Andes target audiences. With minor changes the messages are felt to be both understandable and motivating. The results of preliminary copy testing are presented in two parts as follows: For All Messages, By Message.

For All Messages

The Novella format of the messages is captivating and presents the nutrition education in a way that is attention getting. Listeners not only identify with the stories but also find them believable.

Whole families listened enraptured with the messages. The popular novella format is an excellent vehicle for attracting the attention and involvement of the target audience. During the playing of the messages women respondents would speak out and say "that's me", meaning the resistant mother who is being taught a lesson in the message. They would bow their head in guilt when they discovered that they were not following the message's advice, or grin with self-pride if they already practiced what the message taught. Little children examined their hands when the "washing hands" message said "look at your hands" and one husband mandated that his wife boil the water after he eavesdropped on the interview.

Longer (1 to 2 minute) messages, perhaps supported by (10 to 30 second) reminder spots, should be considered for the 6 month launch phase of the project.

There seems to be many exceptions and popular misconceptions that must be covered in order for the messages to be meaningful. For purposes of copy testing, the messages were longer than the final messages were envisioned as being in order to allow for exploration of various message components. As a result of those tests, however, it appears feasible to use these longer messages (more than 60 seconds) in the campaign kick-off in order to include enough reasons to justify a change in the listeners' behavior.

Fortunately the test messages were not perceived as either too long or boring by the respondents, in spite of the fact that the average test message was 2-1/2 minutes. One lady even volunteered that she wished the message was longer because it was so interesting.

The presence of music seems desirable though the specific music to be used deserves additional testing.

Though messages using "typico" music were only tested in the Andes region, listeners definitely preferred messages with music. For the Quechua message versions, the typico music will probably be more involving than any others. Not only the Indian respondents but also the Andean Mestizos said that it was their preferred type of music. For the Indian particularly, the use of "his" music may have the more subtle affect of giving status and therefore being more acceptable. The Mestizo or Spanish versions of the messages may be enhanced by U.S. music; however, more testing is necessary. The only non-typico music tested so far was "elevator" type music which was rejected by respondents.

The introduction concerning the Ministry of Health could more effectively be placed at the end of the message.

While the Minister of Health was perceived as a good source for advice on how to care for children the messages do not need that authoritative substantiation at their beginning. By placing the reference to the Ministry of Health at the end, the message could be made more initially involving. The target audience seems more responsive and interested in music and stories (novellas) and less responsive to officialdom.

In addition, INNE is not a recognizable or meaningful organization to respondents from the Coast who think of their local health center as PISA. Actually PISA was the name of the pilot program of integrated health facilities and is no longer in existence; however, the name persists much like the use of Punto Quatro for USAID.

"Mama Nutritionista" was the only slogan-type phrase that tested out to be confusing. All the others were memorable and psychologically acceptable.

On the coast and in the Andes it was agreed that "better mothers make better children". People want to make better children and tend to believe that their child's health is their job. "Mama Nutritionista" was confusing in that the meanings of nutrition and nutritionist are not known, so the phrase was not meaningful.

The messages in Quechua should use a teacher rather than a doctor since many Indians do not have experience with doctors.

BY MESSAGE

Protein - "Mothers Love Is Not Enough" - scheduled for both Andes and Coast.

This message was only tested in the Andes area. However, since the coastal respondents appeared to be more knowledgeable about health and nutrition, the results would probably be at least as favorable on the Coast as in the Andes. Andean women are fairly ignorant of the words protein and nutrition. After listening to the message they could play back that protein was necessary for their children's growth and should be fed to children every day. They could also play back most of the protein foods mentioned.

Most respondents seemed to know that most of the "protein" foods mentioned were good before they heard the message, though they may not have known why they were good. Aside from the general purpose of building nutrition knowledge and encouraging protein consumption, another value of this commercial could be that it elevates the status and desirability of such foods as quinoa and fish by naming them alongside milk and meat. Quinoa and Indian food that is difficult to prepare is not particularly liked by Mestizos and fish consumption does not seem to be popular. Yet both quinoa and fish are protein sources and available at either low or no cost.

Washing Hands: "Your Hands. Your Enemies," scheduled for both Andes and Coast.

The Coastal people seemed to know, before they heard the message, that they should wash their hands before eating or cooking and after their toilet, however the practice of doing so is not widespread. The Andean people seem to know that being clean is

desirable though, in contrast to the Coastal respondents, they do not appear to have been told to do so for any health or sanitary reasons. Coastal people bathe more often than Andean people. However, the practice in both groups seems to be more socially than hygienically motivated. In both areas people clean up for parties or to go to market but not for health.

The only change in the message should be the translation of the phrase "there are some things in life you can not see". Apparently the Spanish as it stands is interpreted as "may not see", otherwise the message appears to be clear and meaningful. After hearing the message, mothers said they would wash their hands as well as their children's hands, in order to get rid of the "bichos".

Boiling Water: "Sick Water" scheduled for both Andes and Coast

This message should probably be produced in three versions: Coastal, Andes-Spanish and Andes-Quechua, because the water problems appear to be different.

On the Coast, mothers know they should boil the water, at least for their infants, and many people probably do boil their water. As it is, the message is clear and will undoubtedly increase the number of people who boil water not only for their children but for the whole family.

In the Andes, many people apparently believe they have good water. While there appears to be some awareness that boiling water is necessary if you have water which is not fresh,

many people don't realize their water is not fresh. In addition, there doesn't seem to be the same "guilty" attitude that was expressed on the Coast toward not boiling water.

There are two additional complicating problems in the Andes that make the only "safe" message - boil all water before using. These spring from confusion between the words paso and pogio and the fact that both grifo and llave could supply bad water. Paso is, by literal definition, a spring and theoretically should supply good water. A pogio (Quechua) is a small sectioned off area of still water, which is not good for drinking. However, a paso is often called a pogio and vice versa, so that the use of either word could incorrectly recommend that both spring and still water need not be boiled.

The second problem has to do with grifo, which is intended to mean piped (fresh) water. However, sewer water also comes from a grifo and is drunk by Andean people. Llave meaning spigot, would be a better way to designate drinking water grifos but, still, many of the spigoted grifos are connected to nearby streams which also are not good water. The Andean message should say that all water must be boiled.

Iodized Salt "A Little Thing Like Salt". - Andes only

The message appeared to be perfect the way it is.

Goiter is fairly common in the Andes. The use of iodized salt is also fairly common because it is saltier and does not need to be boiled as the coarse salt does. People do not know that iodine prevents goiter, and were very impressed with the message information.

Interestingly two salt vendors were interviewed and they know there is a difference between iodized salt and coarse salt. However, the dealer who stocked only the coarse salt said that refined salt caused goiter and was bad for the stomach.

Breast Feeding "Your Good Luck Belongs To Your Baby" -
Coast only.

Most of the mothers interviewed on the Coast were quite poor and breast fed their children for at least a year. They responded to the message with pride because they did what the message said. We also tested the message in IBARRA in the Andes. In this town, the women have been told to breast feed for only 6 months by a local doctor and were somewhat resistant to the message. They said that anger and being overtired from working would boil their milk.

Eggs - "The Last Should Be First" - Coast only

While no egg farmers could be located for testing the message it was tested with two mothers. They interpreted the message to mean that they should give their children more protein and, especially, eggs.

The message seems to have a broader meaning than originally intended and it should be tested further.

General Nutrition: "The Secrets Your Foods Can Tell You" -
both Coastal and Andean Areas.

This message is fairly long and was only exposed to two

women in the Andes. Both of them could play back that you should combine foods but, after only one exposure, they were somewhat confused.

Because of the large amount of new information it contains, the message would probably require several exposures just to be comprehended.

Other Message Possibilities

While conducting the copy testing, several other areas for messages became evident. They are ... on the coast... Wear Your Shoes - Don't Save Them For Dressing Up. In the Andes ... Don't Eat Raw Snails Because You Get Liver Flukes and information on where to get free medical help. This last message would be intended to encourage the use of available health facilities and discourage the current graft in such free clinics.

Donald A. Swanson

November 30, 1973

Revised Message Copy Testing of Final Messages

The final messages were copy tested in two different Sierra areas outside of Quito November 26-29, 1973. The purpose was to determine if any additional changes should be made in the revised copy, to test the messages before they go to final production. The study took place in San Antonio de Calderon for the Quechua messages, and in Guayllabamba and Conocoto for the Spanish messages. A total of 16 subjects listened to the Quechua messages, while 37 subjects listened to the Spanish messages.

We asked mothers to listen to the messages. Some fathers and also children listened and gave their opinions. The results here stated are not quantitative, but qualitative.

Quechua Messages

These messages were tested among indigenous populations in the Sierra, near the place where the messages will actually be heard. It was difficult to get overwhelming responses to the messages since the indigenous populations are shy to foreigners and resist giving direct answers. However, by non-verbal as well as verbal responses, we were able to get indications about the messages.

- 1.- The local music is popular and appears to be a good choice. They respond well to hearing their own indigenous music.

- 2.- All the messages are clear and well understood. After one playing, all respondents could identify the major theme in each of the four messages they heard.
- 3.- Since we only recorded the 30 second messages and made them into 60 second messages, much of the emotional wording is lacking. Still, many non-verbal responses indicated that people were interested in the messages.

Spanish Messages

These messages were tested in areas outside Quito, yet the locale where the actual messages will be heard, and by respondents typical of the audiences who will hear the messages.

- 1.- The international music is received very well. They like the rhythm and sound. There is a cool feeling after listening to the music.
- 2.- The basic content of each message is understood after one playing. They were asked, "What did the message say?", and they could respond positively in every case. By both verbal and non-verbal responses, we could analyze that they did indeed capture the essence of each message.
3. Salt Message Respondents captured the relationship between goitre and salt without difficulty. It was difficult for them to identify with the slogan of the campaign, "Better Mothers

raise better children". In one case, a mother heard the message played in a small store, and although she has already purchased her foods, she immediately purchased a one pound bag of salt. A very positive non-verbal response.

4.- Boil water Message Most respondents were impressed with the emotional part of this message concerning "burying the dead." This rings many emotional bells for them. They like the dialogue, can somewhat identify with the resistant mother being challenged by the doctor. This is probably the most powerful message.

Many believe that "sick water" produces infection, and not diarrhea or the other sicknesses. There may be need for revision of this part of message after while to include infections, although I would not make changes now.

5.- Wash hands message The slogan "Better mothers raise better children" is not captured readily. This will take more time. There is some problem with identifying with the word "letrine." Since many have no facilities for urinating, they cannot identify with washing their hands after "going to the letrine."

6.- Protein Message. Many proteins are identified with vitamins. Perhaps in a future revision, we might state that proteins are not only vitamins, but are also something else. It is difficult for respondents to recall all the protein foods mentioned in the message. The higher priced proteins

are mentioned first and are remembered more frequently, while the lower-priced proteins like beans and lentils are remembered less. It might be wise to reverse the order of stating these protein foods so that the target audiences remember the low-priced protein foods.

Some respondents, somehow, thought the message stated that all protein foods had to be eaten together each day in order for the muscles to grow, etc. I think they will capture the essence of this message with no problem after hearing it a couple of times. however.

Comments

I believe the messages should stay as produced as there are only some minor changes that could be made and we are not even sure those changes are valid.

APPENDIX H

MEDIA MONITORING

MONITORING BROADCASTS

Monitoring radio broadcasts by commercial advertising agencies is not done in Ecuador. We felt that this is an important part of any experimental use of the technique, but we did not realize how difficult it would be to maintain accurate and active monitoring teams in each region.

Monitoring must be done by listening to the entire broadcast day since spots are not scheduled. This requires at least two or three people working full time in each region since there were more than a dozen participating stations in each area. Furthermore, since some of the stations have a very limited reach, the monitors may need to be in the towns in which the stations operate rather than located centrally in the province capital. Because of the discipline involved, monitors need to be paid rather than volunteers.

When we began, we expected that we could rely on volunteers or, even better, count on the local health officers to listen to radio and record the frequency and scheduling of the spots.

LUGAR Chone -
 FECHA 19 of 25 de Enero
 NOMBRE _____

Sample sheet for monitoring in
 Manabi Province

ALIMENTO HORAS	PROTEINAS	LAVADO DE MANOS	HERVIR EL AGUA	LACTANCIA	TOTAL
5 a 6					
6 a 7					
7 a 8	✓		✓	✓	3
8 a 9	✱			✱ ✱	3
9 a 10	✱ ✱ ✱	✱ ✱		✱	7
10 a 11				✱	1
11 a 12					
12 a 1	✱	✱	✱	✱	4
1 a 2					
2 a 3					
3 a 4	✱	✱			2
4 a 5					
5 a 6	✱				1
6 a 7	✱	✱	✱	✱	4
7 a 8	✱	✱	✱	✱	4
8 a 9					
9 a 10					
TOTAL	11	6	4	4	24

E. Media Monitoring Experience

The media monitoring system was set-up to determine the frequency and time when messages were placed. It was used to evaluate the project, determine how often messages were actually played, and used to double check if stations were actually playing messages. The concern was to use the monitoring system as an aid to determine velocity of changes, abilities to change knowledge, and how many messages were needed in order to change certain types of knowledge and attitude functions.

The original plan was twofold:

- 1) Give media monitor sheets to radio stations to be filled out weekly and to be turned into Ministry of Health officials, and
- 2) Have health officials from the Ministry of Health designate people to listen to radio stations and record the times and stations when messages were heard.

Both systems used a simple monitoring sheet which included simply hours and messages.

This system worked well for about one month. Volunteer Ministry of Health officials faithfully listened to the radio and hospital-ridden patients were conscripted to pass their days listening to the radio and catching the messages when played. Radio station owners faithfully filled out monitor sheets for a month and health officials collected them regularly. This became burdensome, however, and the system quickly fell apart. The principal failure is probably the lack of follow-through which is characteristic of many Latin American government officials.

Once a program appears to be off the ground, and merits are earned sufficiently with subsequent toil rewarded lightly, work ceases.

Adaptations were made so that a truncated system could be applied as well as possible. Periodic visits were scheduled to radio stations to make personal visits that showed concern for the program and their participation in this government-sponsored project. During the personal visit, new records were presented to replace worn-out records. Monitor sheets were collected when available. Pep talks about the need for radio station support was made.

Some unobtrusive measures were also adapted. Project staff members looked to see if the campaign spots were on the daily commercial placement schedules. If they were, this would indicate that the radio stations were indeed interested. When replacing records, we looked to see if the records were actually worn down or not, indicating the frequency of use. Also, by observing where records were placed in the radio studio (near the turntable, in the rack) helped to determine their daily availability and use.

In Manabi, the Health Educators faithfully visited the radio stations on a weekly basis. Imbabura Health officials gave minimal assistance.

Ms. Elbrun Novera
Manoff Associates INC.
845 Third Avenue
New York, New York

Dear Elbrun:

The following information can be added to your report on the messages. These are the radio stations that we found to most popular in both Imbabura and Manabi. We found this information by using a questionnaire that the health educators of Manabi had filled out by people in their communities. For Imbabura, the IANE staff went on a trip to Imbabura and had the results filled out. I think they are fairly accurate.

Imbabura

Radio Punto Ibarra
Radio Otavalo Otavalo
Radio Urcuqui Urcuqui
Radio Turismo Otavalo
CRI Ibarra
Radio Municipal Ibarra
Radio Mensaje Tabacundo
Ecos de Cayambe Cayambe
Radio Continental Ibarra

These are listed in order of importance. All have been contacted and are willing to contribute to the campaign.

Manabi

All of the results are not in for this area. We are still conducting the campaign of finding out what radio stations are most important. Preliminary studies in this area indicate that we should concentrate on the following radio stations in that province. It should be noted that there are 19 radio stations in that region.

Canal Manabita Portoviejo
La Voz de Portoviejo Portoviejo
Radio Libertad Chone
Radio Costa Azul Portoviejo
Radio CENIT Manta
La Voz del Sur de Manabi Jipijapa
Radio Tropical Manta
Radio Manta Manta
La Voz de las Caras Bahia

We feel that we have an average of 15 messages per radio station per day guaranteed. This can be complemented with paid announcements if we need them. In overall, it is probably possible to get between 125-150 messages daily on the radio stations in each Province free. This includes the average of 12 radio stations that will undoubtedly end up giving messages to the program. I think this is pretty good collaboration. As I have noted elsewhere in my notes to Dick, it may be needed to

pay some of the radio stations in the future to keep their interest. I have calculated that it would cost 3360.00 a month for both provinces to double the number of messages that we have promised. It may be needed also to pay them to keep their interest.

Everything else is going quite well. We have more collaboration from INHE than I ever dreamed possible. We have the whole staff involved in the campaign, and they are all excited. This might not appear to be that important, but in the 20 year history of the ~~campaign~~ institution, this is the first time that they are working together as a team. Just as important, they are being trained to carry on the campaign without my assistance after my contract terminates. Hopefully, they will keep busy.

Toni talks about you alot and hopes to see you soon. We should keep in contact before you come back down again, so that you can bring soon goodies from the big PX in the North.

I hope you are getting my messages on investigation. I am convinced that we should handle the investigation ourselves here. It will save money, and I am confident that we can get good results. I still am not certain when the first wave will begin. Am I correct in assuming that that the first study will be done before the campaign begins? If so, the campaign is now scheduled to begin around October 15th, so that investigation should take place before that date.

For your information, and for Dick's, a staff from Dr. Jellife's group at U. of California is here doing some work on delivery systems for health in Ecuador under contract with AID. They are very interested in the project. Dr. Jellife made sure that his staff make an inquiry about the campaign. Dr. Jellife himself is expected in the country around September 10th, and I plan to make a presentation to him about the campaign.

Keep the faith and send the materials. I was happy to receive the material you sent.

Sincerely,



Donald A. Swanson

APPENDIX I

SCRIPTS FOR RADIO SPOTS
ENGLISH, SPANISH, AND QUECHUA

November 26, 1973

IODIZED SALT IMBABURA ONLY (SPANISH AND QUECHUA)

4th Revision

Eng/Spanish 60"
Quechua 90-120"

MUSIC: Theme in up and under.

ANNOUNCER: Better mothers raise better children. A story about a little thing like salt.

Mejores madres crían mejores hijos. Una historia sobre una pequeña cosa como la sal.

Alli mamacuna alli huahuacunatami huinachin. Yanuna cachimantami shuj huillashcata cunanca uyanguichij.

MUSIC: Up and under.

MOTHER: Doctor, why is my new baby not normal?

Doctor, ¿Porqué mi guagua tierno no es normal?

Doctor, ima nishpashi, nuca llullu huahuaca manamari alli huahuachu?

DOCTOR: Because of your Coto.

Porque usted tiene coto.

Campi coto unguy tiyajpimi huacuaca chashna.

MOTHER: Coto is nothing. Many people in my village have Coto.

El coto no importa. Mucha gente en mi pueblo tiene coto.

Ima pina coto unguy tiyajpipish. Shujtajcunapish nuca llajtapica coto unguyta charinllatajmi.

DOCTOR: Coto is a sickness from not enough iodine in your food. In a woman, Coto can damage her unborn child.

El coto es una enfermedad que dá porque su comida no tiene suficiente yodo. En la mujer encinta puede causarle daño al hijo antes de nacer.

Yodo illaj micunata micujpimi coto unguyca japin.
Chichu huarmi cashpaca mana alli huahuatami huachan.

MOTHER: What is iodine?

¿Que es yodo?

Imataj yodo?

DOCTOR: A special element of foods and fish and Sal Yodado.

Es algo especial de ciertos alimentos como: el pescado, la sal yodada.

Yodoca shuj jambimi. Chalhua aichapi tiyan, "sal yodada" nishca cachipipish tiyanmi.

MOTHER: We eat fish and use sal en grano.

Nosotros comemos pescado y usamos sal en grano.

Nucanchijca chalhua aichata micunchij, muru cachicuan yanunchij.

DOCTOR: No! Sal Yodado. The white salt in the plastic package.

No, Sal yodada. La sal blanca que viene en fundas de plástico.

Yodo jambiyuj cachihuanmi yanuna. Chashna cachimi sal yodada shuti plastico fundapi catuna tiyan.

MOTHER: (Sadly) Salt ... such a little thing. Sal Yodado ... such an important thing.

(Triste) Sal -- Algo tan común. Sal yodada -- una cosa tan importante.

Yodo jambiyuj cachimari tiyashca. Risha randinaman chaihuan ya nungapaj.

MUSIC: Up and out.

ANNOUNCER: You can prevent Coto. Always use Sal Yodado, the white salt in the plastic package. It costs a little more. But it does so much more. Be a better mother. Raise better children. A message from the Institute of National Nutrition of the Ministry of Health.

Usted puede evitar el coto, use siempre sal yodada, la sal blanca en fundas plásticas. Cuesta un poquito más, pero vale la pena. Sea una mejor madre, crfe mejores hijos. Un mensaje del Instituto Nacional de Nutrición del Ministerio de Salud Pública.

Can chai cachihuan yanushpaca coto unguyta mana japinguichu. Randilla chai cachita. Yuraj cachimi plástico fundapi. Alli mama cai, alli huahuacunata huinachi. Instituto Nacional de Nutriciónmi cancanaman huillan.

November 27, 1973

BREAST-FEEDING MANABI, COASTAL SPANISH

4th Revision

Eng/Spanish 60"

MUSIC: Theme up and under.

ANNOUNCER: Better mothers raise better children. A story why
mama's milk is the best milk.

Mejores madres crían mejores hijos. Una historia
del por qué la leche de madre es la mejor leche del
mundo.

MUSIC: Up and under.

MOTHER: Doctor, what is wrong with my baby?

Doctor ¿Qué pasa con mi hijo?

DOCTOR: You have stopped breast-feeding -- and he still
needs your milk.

Le quitó el seno a su niño cuando todavía lo
necesitaba.

MOTHER: But I work.

Es que yo trabajo.

DOCTOR: You should breast-feed him at least three times a
day ... in the morning, in the middle of the day
and at night. Mother's milk is the best milk in
the world.

Usted debe dar el seno a su hijo por lo menos 3
veces al día ... en la mañana, a medio día y por la
noche. La leche de madre es la mejor leche del
mundo.

MOTHER: Why?

¿Por que?

DOCTOR: It's available. It cannot spoil. You do not need to boil it or keep it in a refrigerator like store-bought milk.

Siempre está lista, nunca se corta, no tiene que hervirla ni necesita tenerla en refrigeradora como la leche que compra.

MOTHER: But many lactating women use store-bought milk.

Pero muchas madres que tienen leche en el seno dan leche comprada.

DOCTOR: Such women ... rich or poor ... are wrong, because mother's milk is the best milk in the world. Breast-feed at least three times a day -- but more if you can, for as long as you can.

Estas madres ... ricas o pobres ... están equivocadas, porque la leche de la madre es la mejor leche del mundo. Hay que dar al niño leche del seno por lo menos 3 veces al día, pero más si se puede, y por el tiempo más largo posible.

MUSIC: Up and out.

ANNOUNCER: Be a better mother, raise better children. A message from the Institute of National Nutrition of the Ministry of Health.

Sea mejor madre, críe mejores hijos. Un mensaje del Instituto Nacional de Nutrición del Ministerio de Salud Pública.

November 26, 1973

BOIL WATER

(BOTH AREAS: SPANISH COASTAL AND SIERRA/QUECHUA)

4th Revision

Eng/Spanish 60"
Quechua 90-120"

MUSIC: Theme up and under.

ANNOUNCER: Better mothers raise better children. The strange story about sick water.

Mejores madres crían mejores hijos. Una extraña historia sobre el agua enferma.

Alli mamacunami alli huahuacunata huinachin. Unguylla yacumanta parla shcata uyai.

MUSIC: Up and under.

DOCTOR: Your child almost died because of the bad water you gave him to drink. Sick water.

Su niño está grave por el agua mala que le dió de tomar. Por el agua enferma.

Unguylla yacuta ubyachishcamantami cambaj huahuaca ungushca.

MOTHER: Doctor, when is water sick?

Doctor ¿Cuándo está el agua enferma?

Doctor, ima shinataj unguylla yacu cashcataca ricuna?

DOCTOR: When it contains los bichos that cause typhoid, diarrhea, colic or temperatura.

Quando tiene bichos que causan: tifoidea, diarrea, cólicos o temperatura.

Bicho nishca curucunami tiyan: tifoidea, diarrea, cólica, calentura, cai unguycunatami cun, chai curucumaca.

- MOTHER: The water we drink is clear. I never see los bichos.
Tomamos agua clara. Nunca he visto bichos en ella.
Limpio yacutramari ubyanchij. Ima curuta mana ricunchijchu.
- DOCTOR: Los bichos are too small to be seen with your eye.
Los bichos son tan pequeños que no se les puede ver a simple vista.
Chai curucunaca uchillami. Nahuipica mana ricuringachu.
- MOTHER: How can I get them out of the water?
¿Cómo puedo sacarlos del agua?
Ima shinataj yacumantaca llujshichisha?
- DOCTOR: Boil the water. Boiling destroys and removes los bichos.
Hierva el agua, así mueren los bichos.
Yacuta timbuchijpica tucui curucunai huanun.
- MOTHER: I do not like the taste of boiled water.
Es que no me gusta el sabor del agua hervida.
Timbushca yacutaca mana ubyanayanchu.
- DOCTOR: Do you like the taste of sickness and death better?
¿A usted le gustan más las enfermedades, y peor aún, la muerte?
Shinashpaca, unguy japichun ninguichu, huanusha ninguichu?

- MOTHER: But it is more work to boil water.
Pero es mucho trabajo hervir el agua.
Yacuta timbuchinataca quillanayanmi.
- DOCTOR: Is it less work to care for the sick and to bury
the dead?
¿Es menos trabajo cuidar a los enfermos y enterrar
a los muertos?
Ungushcata jambinata, huanushcata pambanataca manachu
quillanayanga?
- MOTHER: (Slowly) Anything is easier than that.
(Espacio) Cualquier cosa es mas facil que eso.
(Allilla) Chaitajmari ashtahuan llaqui.
- DOCTOR: Then boil water for drinking. Keep it covered.
Let it cool.
Entonces hierva el agua, tápela y déjela enfriar.
Shinashpaca yacuta timbuchi, tapachishpa churai,
ubyanapaj tiyachun.
- MUSIC: Up and out.
- ANNOUNCER: Be a better mother, raise better children. A
message from the Institute of National Nutrition of
the Ministry of Health.
Sea una mejor madre, críe mejores hijos. Un mensaje
del Instituto Nacional de Nutrición del Ministerio
de Salud Pública.
Campish alli mama canata yachai. Alli huahuacunata
huinachi. Instituto Nacional de Nutricionmi
caicunata cancunaman huillan.

November 26, 1973

WASHING HANDS
(BOTH AREAS: SPANISH COASTAL AND SIERRA/QUECHUA) 4th Revision

Eng/Spanish 60"
Quechua 90-120"

MUSIC: Theme up and under.

ANNOUNCER: Better mothers raise better children. The story of
why your hands can be your enemies.

Mejores madres crían mejores hijos. Una historia
de como sus manos pueden ser sus enemigas.

Alli mamacunaca, alli huahuacunatami huinachin.
Maquicunapica unguy tiyanllami. Caitaca yacharcang-
guichu.

MUSIC: Up and under.

DOCTOR: Look at your hands. Can you believe they can be
bad for you?

¡Vea sus manos! ¿Usted cree que pueden hacerle daño?

Cambaj maquicunata ricui. Maquicunapica unguy
shamunllami.

MOTHER: How, Doctor?

¿Cómo, Doctor?

Ima shina, Doctor?

DOCTOR: Sometimes they carry bichos.

Sus manos pueden llevar bichos.

Bicho shuti uchilla cúrucunati tiyan

MOTHER: I see nothing on my hands.
Yo no veo nada en mis manos.
Nuca maquipica mana curu rucurinchu.

DOCTOR: The bichos are so small that they can't be seen by the eye, and they cause sickness and diarrhea.
Los bichos son tan pequeños que no se pueden ver a simple vista y causan diarrea.
Uchilla curucunami. Nahuipica mana ricuringachu.
Chaicunami diarrea unguyta cunlla.

MOTHER: How do los bichos get into the body?
¿Cómo entran los bichos al cuerpo?
Ima shinataj chai curucunaca cuerpoman yaicunga?

DOCTOR: From your hands to your food. That is why a mother must wash her hands before she cooks. With soap and water. That destroys los bichos.

De sus manos pasan a la comida. Es por eso que la madre tiene que lavarse las manos con agua y jabón antes de cocinar. Así mueren los bichos.

Maquicunamantami ricunapi rin. Chalmantami mamaca yanungajca maquicurata alli alli maillarina.
Jabonhuan, yacuhuanmi maillana, bichocuna huanuchun.

MOTHER: And my family?
¿Y mi familia?
Nuca cusa, nuca huahuacunapish maillarinachu?

DOCTOR: They must wash their hands with soap and water before eating, and after using the latrine.

Deben tener la costumbre de lavarse sus manos con agua y jabón, antes de comer y siempre después de usar la letrina.

Ari maillarini. Micunaman tiyarinapaj maillana excusadomanta tigrashpapish maillarinami.

MOTHER: Yes, unwashed hands can be a curse. A good mother should not risk the health of her child.

Sí, manos sin lavar pueden causar muchas enfermedades. Una buena madre no juega con la salud de sus hijos.

Shinashpaca mapa maquicunaca unguyta apamujllami cashca. Alli mamaca huahuacunata alli charinami cashca.

MUSIC: Up and out.

ANNOUNCER: Be a better mother, raise better children. Wash your hands. A message from the Institute of National Nutrition of the Ministry of Health.

Lave sus manos. Sea una mejor madre, críe mejores hijos. Un mensaje del Instituto Nacional de Nutrición del Ministerio de Salud Pública.

Alli mama cai, alli huahuacunata huinachi, maquicurata alli maillari. Ministerio de Salud Publicami cai huillanacunata cancanaman huillan.

November 26, 1973

PROTEIN FOODS(BOTH AREAS: SPANISH COASTAL AND SIERRA/QUECHUA)4th RevisionEng/Spanish 60"
Quechua 90-120"MUSIC: Theme up and under.ANNOUNCER: Better mothers raise better children. A story why
love is not enough.Mejores madres crían mejores hijos. Una historia de
porqué "Amar no es suficiente."Alli mamacunami alli huahuacunata huinachin. Canca
huahuata cuyanguichu. Cuyashpaca ima shinataj
charingui.MUSIC: Up and under.MOTHER: Doctor, tell me the truth. Why is my child small and
weak?Doctor ¿Dígame porqué mi hijito está tan chiquito y
débil?Doctor, ima nishpashi nuca huahuaca mana huinan, mana
recuyen?

DOCTOR: You do not take proper care of him.

Es que no le cuida bien.

Mana alli charijpi.

MOTHER: Me? But I love my child.

Pero si yo le quiero a mi hijo.

Nuca huahuataca cuyashpami charini.

DOCTOR: Love is not enough. A good mother must give her child enough protein.

Amar no es suficiente. Una buena madre también le dá suficiente proteínas.

Cuyanallaca mana allichu. Shuj alli mamaca achca proteinatami huachuacuna-man caran.

MOTHER: Protein? What is protein?

¡Proteína! ¿Que es Proteína?

Proteína, imataj proteína?

DOCTOR: Protein is a special element in certain foods. If your child eats these foods he will have strong muscles, and will be intelligent.

La proteína es algo especial que tienen ciertos alimentos. SI su hijo come de estos alimentos, tendrá buenos músculos, huesos fuertes y será inteligente.

Proteinaca shuj alimentomi. Maijan granocunaca achca proteinatami charin. Huahuacunaca chai alimentocunata micushpaca sinchimi huinanga, alli yuyaiyujmi huinanga.

MOTHER: Where do I get this protein?

¿En que alimentos están las proteínas?

Ima micunapitaj proteína tiyanga?

DOCTOR: In eggs, milk, meat and fish. Also in habas, chocho, quinoa, lenteja, arbecas, frijoles. For every child. For every day. A protein food.

En huevos, leche, carne, pescado, y también en habas, chocho, quinoa, lenteja, arvejas y fréjoles. A cada niño todos los días dele un alimento rico en proteínas.

Lechepi, lulunpi, aichapi, chahuapi, habaspi, tauripi, quinoapi, lentejapi, arvejapi, porotopimi tiyan. Cambaj huahuacunamanca cashna micuna cuata carangui.

MUSIC: Up and out.

ANNOUNCER: Be a better mother and raise better children. For every child. Every day. Combine a protein food with the other foods you feed him. A message from the Institute of National Nutrition of the Ministry of Health.

Sea una mejor madre, críe mejores hijos. A cada niño todos los días. Dele un alimento rico en proteínas con las otras comidas. Un mensaje del Instituto Nacional de Nutrición del Ministerio de Salud Pública.

Alli mama cai, alli huahuacunata huinachi.
Huahuacunaman achca proteinayuj alimentocunata carai.
Instituto Nacional de Nutricionmi caicunataca
cancunaman huillan.

APPENDIX J

SCRIPTS AND STORY BOARDS
FOR VIDEO SPOTS



MUSIC: Theme up and under

ANN: A message for Mamas!

MUSIC: Up and under

SOUND: Segue to music.

MUSIC: Up and segue to

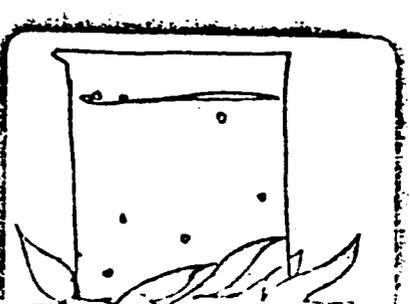
DOCTOR: Your child has a fever.

He almost died.

MOTHER: It is bad luck, doctor?

DOCTOR: No. It is bad water you gave him to drink. Sick water.

MOTHER: How can water be sick?



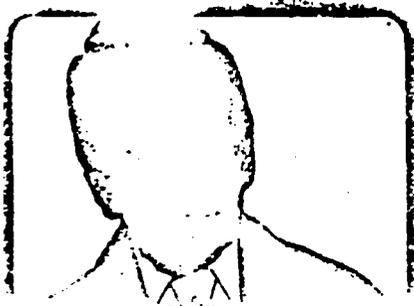
DOCTOR: When it is unclean and has bad things in it that cause typhoid, diarrhea, colic or temperature.

MOTHER: I never see these things in the water.

DOCTOR: You know, there are many things in life you cannot see -- good and bad. Los bichos cannot be seen with your eyes.

MOTHER: How can I get them out of the water?

DOCTOR: Boil the water. Boiling destroys los bichos los microbios.

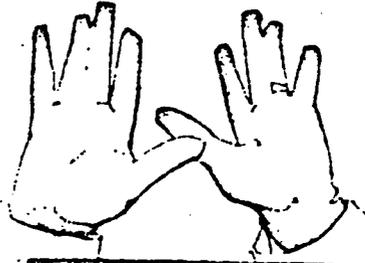


MUSIC UP AND UNDER

**ANNR: Remember: Wash your hands
with soap and water before cooking,
before eating and after using the
latrine. Be a better mother. Make
better children. You can learn more
about health from (names and
addresses of local agencies).**

MUSIC UP AND OUT

A MESSAGE FOR MAMAS

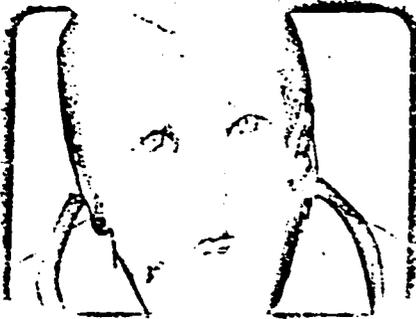


MUSIC TIME UP AND UNDER
ANNCH: A message for Mamas!
MUSIC UP AND UNDER

MUSIC UP AND SEGUE TO
DOCTOR: Look at your hands.

Can you believe they can be
bad for you?

MOTHER: How?

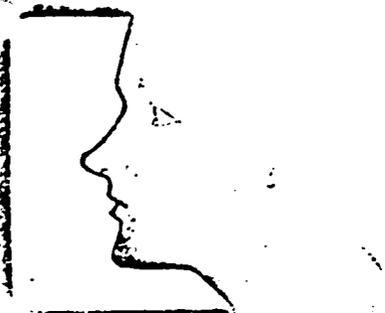


DOCTOR: Sometimes they carry
things you don't want.

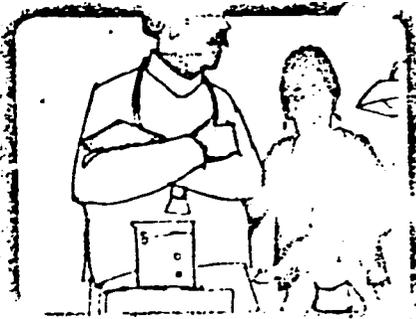
MOTHER: How can that be? I
look at my hands and I see nothing
but my palm and fingers.

DOCTOR: You know, there are some
things in life you cannot see.
Good things and bad things.

Some of these bad things, los
bichos cause sickness like diarrhea.

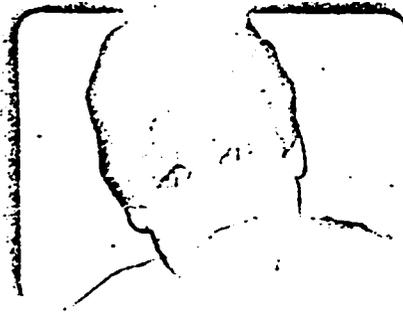


MOTHER: I do not like the taste of boiled water.



DOCTOR: Do you like the taste of sickness and death better?

MOTHER: But it is more work to boil water.



DOCTOR: Is it less work to care for the sick and to bury the dead?

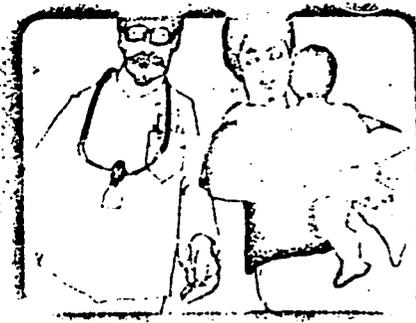


MOTHER: But how can I be sure if I can't see them.

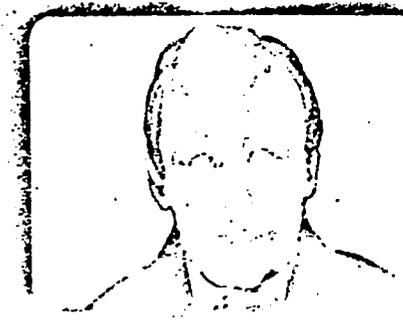
DOCTOR: Why risk the possibility. Boil the water to be sure. Pour it into a clean bottle or pot. Keep it covered. And let it cool. Good mothers never take chances.



MOTHER: You must think I am a bad mother.



DOCTOR: Not at all. But even a good mother must learn to be better. Better mothers make better children.



MUSIC: In, up and under

SPOKESMAN: Remember: Boil water for drinking. Store it in a clean bottle or pot. Cover it. Let it cool. Be a better mother. Make better children. You can learn more from (names and places for health and nutrition education).

MUSIC: Up and out



MOTHER: How do they get into the body?



DOCTOR: When your hands touch the food you cook.



When your children's hands touch the food they eat.

MOTHER: What should a mother do?



DOCTOR: Wash her hands before she cooks. With soap and water. That destroys the germs.

MOTHER: And the children? And my husband?



DOCTOR: They should make it a habit always to wash their hands with soap and water before eating. And always after using the latrine. Unwashed hands can be a curse.



MOTHER: It is hard to believe.



DOCTOR: Why risk the possibility. A good mother never risks the health of her child.



MOTHER: You think I am a bad mother?

DOCTOR: No. But everyone cannot know everything. We learn from each other. Even a good mother must learn to be better. Better mothers make better children.

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Job No.

Program:

Client:

Product:

Date:

Time:

Network:

MUSIC:

TITLE: Better mothers raise better children.

ANNOUNCER: (VOICE OVER)

Open on mother's hands.

MUSIC:

DOCTOR:

ll back to see doctor holding her baby.

MOTHER:

DOCTOR:

Reverse cut through mother's hands.

MOTHER:

DOCTOR:

Mother walks over to doctor and baby.

DOCTOR:

MOTHER:

Doctor puts hand to baby's mouth.

DOCTOR:

Theme up and under.

The story of why your hands can be your enemies.

Up and under.

Look at your hands. Can you believe they can be bad for you?

How?

Sometimes they carry bad things.

I see only my palm and fingers.

There are many things -- good and bad -- you cannot see.

Some of these, los bichos, cause sickness like diarrhea.

How do they get into the body?

From your hands to your food.

... continued

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Job No.

Page 2

Program:	Date:
Client:	Time:
Product:	Network:

Cut to mother and move in on
her hands.

MOTHER:

What should I do?

Dissolve to water pouring over
mother's hands and widen to reveal
family.

DOCTOR:

Wash your hands with soap and water
before cooking to destroy los bichos.
My family too?

MOTHER:

DOCTOR:

Everyone must wash their hands with
soap and water before eating.

Pan across to see a child coming
out of latrine.

DOCTOR:

And after using the latrine. Unwashed
hands can be a curse.

Dissolve back to mother taking
baby from doctor.

MOTHER:

It is hard to believe.

DOCTOR:

Perhaps. But a good mother should not
take risks.

MOTHER:

And a bad mother?

DOCTOR:

No. But even a good mother can learn
to be better.

... continued

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Job No.

Page 3

Program:

Client:

Product:

Date:

Time:

Network:

Hold on mother and baby.

MUSIC:

ANNOUNCER: (VOICE OVER)

MUSIC Up and Out.

Remember, before cooking, before eating
and after the latrine ... wash your
hands with soap and water.

Better mothers raise better children.
Come to the health center.

TITLE: Better mothers raise
better children.

SUPER ADDRESS:

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Job No.

Program:	Date:
Client:	Time:
Product:	Network:

MUSIC:

Theme up and under.TITLE: Better mothers raise
better children

ANNOUNCER: (VOICE OVER)

A story why love is not enough.

Open on child being examined.

MUSIC:

Up and under.

WOMAN:

Doctor, tell me the truth. Why is my
child small and weak?

DOCTOR:

You do not take proper care of him.

Cut to doctor.

MOTHER:

Me? But I love my child.

DOCTOR:

Love is not enough. A good mother must
give her child the right food.ECU Child

MOTHER:

I feed him. He eats well.

Mother picks up child.

DOCTOR:

You do not give him enough protein.

MOTHER:

What is protein?

DOCTOR:

Protein is a special element in certain
foods like milk.Cut to demo.

DOCTOR:

When he eats these foods the protein
in them ...

L. TOR:

Feeds the muscles, the bones and the
brains

... continued

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Job No.	
Program:	Date:
Client:	Time:
Product:	Network:

DOCTOR:

Without protein the child cannot grow.
His mind cannot develop.

Mother turns to doctor.

MOTHER:

Where do I get this protein?

Foods pop on.

DOCTOR:

In foods like eggs, milk, meat and fish.
Also legumes like habas, cho-cho,
quinoa, lenteja, arbecas, frijoles.
For every child. For every day. A
protein food.

Hold on mother thanking doctor
as she turns to leave.

MOTHER:

There is always more to learn

DOCTOR:

To learn is to be better.

MUSIC:

Up and out.

ANNOUNCER:

For every child. Every day. Combine a
protein food with the other foods you
feed him. Better mothers raise better
children. Come to the health center.

TITLE: Better mothers raise
better children.

SUPER ADDRESS:

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Job No.

Program:	Date:
Client:	Time:
Product:	Network:

MUSIC:

Theme up and under.

TITLE: Better mothers raise better children.

ANNOUNCER: (VOICE OVER)

A story why mama's milk is the best milk.

Open on whimpering baby.

MUSIC:

Up and under.

MOTHER:

Doctor, what is wrong with my baby?

Pull back to see mother and doctor

DOCTOR:

You have stopped breast-feeding -- and he still needs your milk.

MOTHER:

But I work

Doctor counts on fingers

DOCTOR:

What about the morning -- when you come home for lunch -- at night? At least those three times a day.

Cut to Mother

DOCTOR:

Mama's milk is the best milk.

MOTHER:

Why.

Cut to doctor.

DOCTOR:

It cannot spoil. You do not need to boil it or keep it in a refrigerator like store-bought milk.

MOTHER:

But many women use store-bought milk.

continued.....

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Job No.

Page 2.

Program:	Date:
Client:	Time:
Product:	Network:

Doctor continues talking

DOCTOR:

Some women have no breast milk.

MOTHER:

But many women do and they do not breast-feed.

DOCTOR:

Such women ... rich or poor ... are wro

MOTHER:

What happens?

Doctor picks up baby bottle fromtable. Holds up baby bottle withup on.

DOCTOR:

If they boil the milk, keep it in clean bottles in a refrigerator - it is good.

Cut to mother and baby.

MOTHER:

Otherwise it is bad for their children?

DOCTOR:

Almost certainly.

ECU Mother and Baby

MOTHER:

I see that even a good mother must learn to be better.

3 Shot: Mother, Baby, Doctor

DOCTOR:

Remember: breast-feed at least three times a day -- but more if you can for as long as you can. Mama's milk is the best milk.

.... continued

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Job No.

Page 3.

Program:

Date:

Client:

Time:

Product:

Network:

MUSIC:

Up and out.

ANNOUNCER: (VOICE OVER)

Better mothers raise better children.

Come to the health center.

TITLE: Better mothers raise
better children.

SUPER ADDRESS:

TELEVISION

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Job No.

✓ Program: Client: Product:	Date: Time: Network:
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MUSIC:

Theme up and under.

TITLE: Better mothers raise better children

ANNOUNCER:

The strange story about sick water.

Open on doctor stroking child's head.

MUSIC:

Up and under.

DOCTOR:

Your child has a bad fever.

MOTHER:

It is bad luck, doctor.

Pull back to reveal mother.

Doctor reaches for glass of water.

DOCTOR:

No. It is bad water. Sick water.

MOTHER:

How can water be sick?

DOCTOR:

When it has los bichos that cause sickness.

Doctor puts water in front of mother.

MOTHER:

The water we drink is clear. I never see los bichos.

DOCTOR:

There are many things in life you cannot see -- good and bad. Los bichos are too small to see.

Cut to MCU

MOTHER:

How can I get them out of the water?

DOCTOR:

Boil the water. Boiling destroys and removes los bichos.

MOTHER:

I do not like the taste of boiled water.

.... continued

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Job No.

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Cut to doctor CU

DOCTOR:

Do you like the taste of sickness and death better?

Cut to mother CU

MOTHER:

But it is more work to boil water.

Cut to child

DOCTOR:

Is it less work to care for the sick and to bury the dead?

Mother caresses child.

MOTHER:

(Slowly) Anything is easier than that.

Cut to boiling demo

DOCTOR:

Then boil water for drinking. Keep it in a clean bottle or pot. Keep it covered. Let it cool

Cut back to 3 shot as child

opens eyes and smiles at mother.

MUSIC:

Up and out.

ANNOUNCER:

Better mothers raise better children.
Come to the health center.

TITLE: Better mothers raise
better children

SUPER ADDRESS: