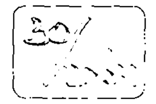

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# Communications and Community Participation in the Control of Diarrheal Diseases in Ecuador

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# COMMUNICATIONS AND COMMUNITY PARTICIPATION IN THE CONTROL OF DIARRHEAL DISEASES IN ECUADOR


Prepared by:

the Ministry of Public Health

Dr. Ligia Salvador U.
Head, Morbidity Division

Lic. Eduardo Salazar M.
Health Educator

the Office of the Secretary of Integrated Rural Development

Lic. Eliana Franco
Professor of Social Communication and Development
Head of IRD

and

Dr. Mathias Thorner
FAO Expert

Dr. Reynaldo Pareja
Academy for Educational Development



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INTERNATIONAL REFERENCE
CENTRE FOR COMMUNITY WATER SUPPLY
AND SANITATION (IRC)
P.O. Box 93190, 2509 AD The Hague
Tel. (070) 814911 ext. 141/142
RN: ISN 2064
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## PREFACE

The Communication for Child Survival (HEALTHCOM) project, formerly the Mass Media and Health Practices Project, is pleased to present this translation of an original document produced by the Ecuadorian Ministry of Health in 1984. It represents a particularly articulate description of how systematic health communications have been successfully applied to a diarrheal disease control program. The HEALTHCOM Field Director has collaborated in this effort since 1983. Based on its experience with the program, the Ministry of Health has decided to apply this methodology on a national scale to child survival programs including diarrheal disease control, immunizations, growth monitoring, and breastfeeding. HEALTHCOM wishes to thank the Ministry of Health for their permission to translate and distribute this excellent publication.

HEALTHCOM is a research and development program supported by the U.S. Agency for International Development (AID) to apply communications to change behavior related to diarrheal disease control. The project has worked successfully in six countries--Honduras, The Gambia, Ecuador, Peru, Swaziland, and Indonesia. In all cases project staff worked with the local ministry of health to develop a communication strategy adapted to each country's particular needs and circumstances, drawing on a consistent and coherent approach called public communications. Activities in Ecuador were jointly funded by the Office of Education and the Office of Health, Bureau for Science and Technology, and the USAID Mission in Ecuador and were carried out by the Academy for Educational Development.

This work is the result of one and a half years of investigation and methodology development in which the fundamental elements were village participation in the design, production, and processing of educational material and interaction among the different levels of the Ministry of Public Health, the Office of the Secretary of Integrated Rural Development (IRD), and the rural communities in the IRD project areas of Ecuador chosen for this experiment, Quimiag-Penipe and Jipijapa.

This publication will serve to share these experiences at the national and international level with groups and institutions, both public and private, who might benefit from them. It highlights the importance of involving the beneficiaries in project activities throughout the process as a means of insuring the project's usefulness and credibility.

Thanks are due to all those who contributed to this publication: to the rural communities whose contact with reality made it possible to specifically address their health needs and concerns and to the staff of the Ministry of Health, the Office of the Secretary of Integrated Rural Development, the IRD projects, the literacy educators and community representatives who supported the programs and who committed themselves to continue in this joint effort.

# 1. BACKGROUND

In accordance with Decree No. 305, the Office of the Secretary of Integrated Rural Development (SEDRI) is the body in charge of coordinating public and private activities in the IRD project areas and distributing the technical and financial resources.

## IRD Methodology

Integrated Rural Development, according to SEDRI methodology, is "a dynamic and participative process to promote conditions which strengthen production and social organization and improve the quality of life of the rural poor."

An important part of the IRD methodology is the participation of rural organizations in the development process. With this in mind, the Ecuadorian National Development Plan emphasizes the need for "integration and participation of the sector's population in the development process and in its benefits through training, publicity for the organization, and involvement of rural institutions."

The Office of the Secretary of Integrated Rural Development, through the Project Task Units, encourages this participation not only in the various project stages (diagnostic, task implementation, and evaluation), but also as a continuing process on the part of the rural people themselves and in recognition of their rights as an integral part of society.

This approach implies a change in the traditional focus of village training. It overcomes the stereotyping of the villager as incapable of understanding his own reality or of finding adequate solutions or making valid contributions to the development of a project. According to the IRD methodology, training is a process of action and reflection by the village groups, a way to overcome the vertical vision which has traditionally been maintained by organizations working with villagers. Previously, the urban, academic knowledge of the trainer prevailed over the needs, interests, knowledge, and practices existing in rural areas resulting in the beneficiaries being treated as passive receivers and not as thinkers and doers able to influence processes which affect them. This approach recognizes villagers' capability in dealing with daily life and the problems which must be confronted and solved. In addition, it is necessary to support the training in the different areas so it meets the greatest needs. This can only be accomplished when the priorities for training activities are determined jointly by technical experts <u>and</u> villagers. It is through experience that knowledge is exchanged and strengthened.

Criteria established to insure that community participation will respond to reality include the beliefs that:

- o social participation is an inherent community process. The community's values, traditions, and practices must be respected and its experiences constructively incorporated into the projects;

- such participation should be manifested not only in projects, but at all levels of rural life;

- participation requires a training program which is directed at the project staff and technical personnel as well as the beneficiaries.

In the past, audiovisual materials have usually been developed in the institutions' communications departments, without taking into account whether they responded to the point of view, language, and needs of the villagers. Many of these materials failed because they could not be understood or used by their potential beneficiaries.

## Institutional Coordination

To assure institutional coordination and community participation, technical experts assigned by the various institutions to the Project Task Units outline the activities of each component cooperatively with the participating rural organizations. These activities are discussed, evaluated, and prioritized in the Annual Operating Plan for each of the IRD projects.

One of the public institutions with which SEDRI coordinates activities is the Ministry of Public Health (MPH). The MPH collaborates in project development and execution through its provincial Health Offices. SEDRI and the MPH agreed to work together in implementing infrastructural, educational, and training activities in the Integrated Rural Development Projects. In the context of this organizational structure and in accordance with the SEDRI-MPH agreement, the MPH provided personnel support in the research and design of the health component in the Salcedo, Quimiag-Penipe, and Jipijapa Projects.

The results of their studies showed that diarrheal disease, especially among children, is the principal cause of death in the region.

## Research on Cultural Patterns

The MPH, through the Division of Morbidity and the Division of Health Education, participated in formative research in November 1982 in the IRD areas of Salcedo, Quimiag-Penipe, and Jipijapa. The objective of this research was to identify beliefs and practices in the treatment of infant diarrhea. The results would be used to design and implement the educational component within the already existing MPH Program for the Control and Prevention of Diarrheal Diseases (CDD).

The methodologies used in this research were group discussion, individual interviews, and direct observation. Experienced facilitators helped to create an atmosphere which permitted an open discussion of the problem of diarrhea. One of the facilitators was Indian which made it possible to communicate with the community in its own language, Quechua. The other facilitator was a mother of three children, so she was able to approach the subject from her own knowledge and experience.

The individual interviews quantitatively confirmed the results of the group discussions and identified radio listening patterns as well.

Direct observation of mothers mixing oral rehydration salts (ORS) in their homes revealed problems and constraints which had to be overcome for effective use of the salts. The interviewers used tape-recorded instruction to teach the mothers how to mix the salts.

Analysis of results showed the process of treatment of infant diarrhea followed by rural mothers. The first treatment was generally home remedies combined with medicines purchased locally. Many mothers were able to identify most of the signs of a child suffering from slight to moderate dehydration, although they did not associate these signs with the dangerous loss of liquids from diarrhea.

With regard to illiteracy and the need to develop graphic materials, investigators found that there was almost always someone in the house who could read.

The results of the research on radio listening patterns indicated that the majority of households had a radio. Data were also collected on programs, listening times, preferred music, and stations most listened to. The results of this research clearly justify the use of radio as a means of coverage for delivery of educational material.

A work plan and a timeline of activities were developed which integrated mass media, group discussion, and interpersonal communication.

The decisions as to which materials to develop and which channel to use for each message were made based on the results obtained in the research. This permitted standardization of messages in diagnosing dehydration, the appropriate use of the rehydration salts, and the feeding regimen to follow when a child is suffering from diarrhea.

To communicate the specific content, the project team decided to use the following methods:

- personal communication through training,
- group communication through the use of the printed plastic bag, label, poster, flipchart, and training manual, and
- mass communication via radio.

Each of these media transmits a portion of the specific content:

- Identification of the envelopes of Suero-Oral (ORS salts)--what it is for and when to give it.
- Preparation and administration of Suero-Oral.
- The problem of dehydration.
- The feeding regimen
- The prevention of diarrhea

## 2. PRODUCTION OF THE EDUCATIONAL PACKET AND USE OF MASS MEDIA

### Developing Graphic Material

Following the methodology outlined in the Implementation Plan, the graphics were designed to integrate the program content with the mass media. This meant that the information transmitted by radio and in the training of personnel was also to be transmitted by the graphics (see Table 1, below).

The graphic media packet is composed of a logo, label, printed plastic bag, flipchart, poster, and learning manual. Each of these materials is characterized by a particular production process, message, and specific function.

### The Logo

Following the work with the IRD projects, the Diarrheal Disease Control Program produced the following logo:

After the IRD areas were identified for the pilot educational program, this logo was tested among the mothers of Jacho (a Salcedo IRD community) and nearby areas. It was found that mothers had difficulty understanding what the child seated on the potty represented and how it related to the CDD program. Most of them did not see a child suffering from diarrhea, although they were able to identify the potty. They saw the child smiling and "playing with a ball."

TABLE 1

Integration of Communications Media by Content

| PHASE ONE<br>September 1983-January 1984 | Trg. | Radio | Bag | Label | Poster | Fpchrt | Manual |
|---|---|---|---|---|---|---|---|
| Identification of envelope (logo) | x | x | x | x | x | x | x |
| Purpose of Suero-Oral | x | x | x | x | x | x | x |
| Where to get Suero-Oral (free) | x | x | | x | | x | x |
| When to administer Suero-Oral | x | x | x | x | x | x | x |
| How to prepare/administer Suero-Oral | x | x | x | | x | x | x |
| Diarrhea is a serious problem/ causes of diarrhea | x | x | | | | x | x |
| What dehydration is | x | x | x | | x | x | x |
| Product promotion-Suero-Oral | x | x | x | x | x | x | x |
| Prevention of diarrhea | x | | | | | x | x |
| **PHASE TWO<br>January-June, 1984** | | | | | | | |
| Signs of dehydration | x | x | | | x | x | x |
| Signs of recovery (testimony) | | x | | | | | x |
| Correction of errors found in formative evaluation | x | x | | | | | |
| Problem of diarrhea | x | x | | | | x | x |
| Dehydration | x | x | x | | x | x | x |
| Preparation of Suero-Oral | x | x | | | | x | x |
| Causes of diarrhea | x | x | | | | x | x |
| Prevention behavior | x | x | | | | x | x |

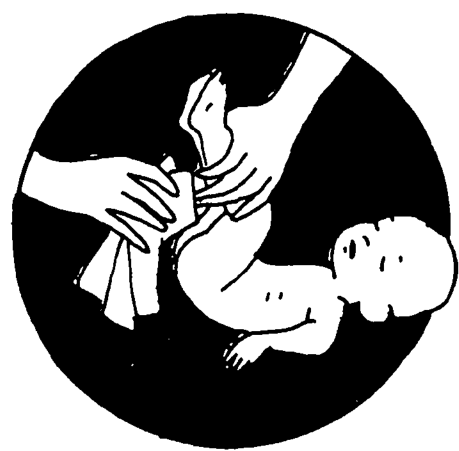
These results led to the design of three new models, developed with the help of a professional illustrator and the advice of the team. The models were tested among the mothers of the rural areas in the Quito district. From these three, they selected the following:

The mothers who looked at the three models easily associated this drawing with the diarrhea problem, but the team rejected it for the following reasons:

- o It did not present a solution to the problem.
- o The child was older than two years. (The focus of the CDD is children under two since this is the group with highest mortality from diarrheal disease.)
- o It was inappropriate for coastal areas.

With this in mind, the team designed the following model:

This logo was printed on the paper envelope packages containing Suero-Oral and distributed in several provinces. After some months of testing, the team found the mothers were not able to connect the logo with the problem of diarrhea. For this reason, the team decided to design three more models. The mothers chose the following:



This drawing depicts the problem of diarrhea as the mother perceives it. However, some opinions expressed during the pretest merited making a few changes. The main problem was that the mother was not shown, except for her "cut off hands." Therefore, the next drawing included a full view of the mother holding the child on her lap, the way she customarily washes him.

Nevertheless, even though the logo expressed the problem very well, it gave no solution. The mother was shown with the child who had diarrhea, but there was no indication of what she should do about the problem. Thus, the decision was made to add another drawing next to the first drawing, showing the same mother giving the child an oral solution, and indicating that giving liquid was the essential behavior. The final result was the following:

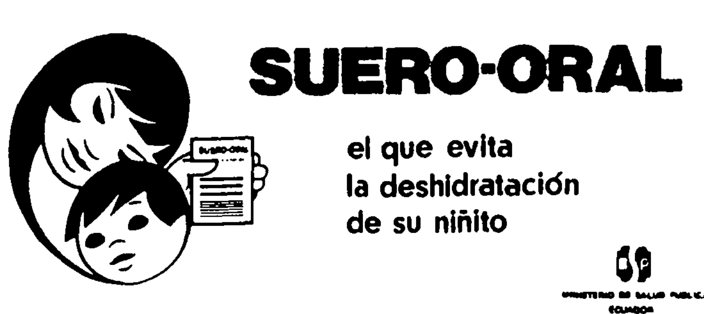
Today this logo is found on bags, on flipcharts, and on the Suero-Oral label. It is also mentioned in the radio spots and programs. Radio spots tell mothers that they can obtain Suero-Oral where they see "the mothers in the red circles."

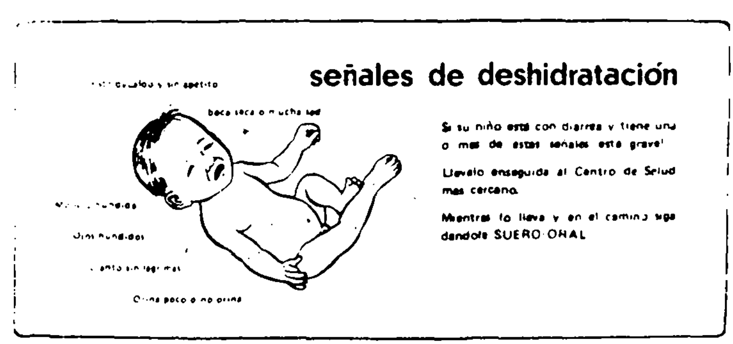
**Developing the Sign**

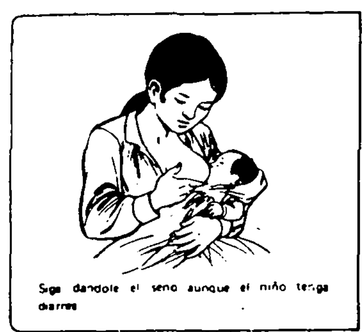
A sign was conceived for the purpose of identifying the house or place where a mother could obtain Suero-Oral. This sign went through a process of several trials to improve the design. The final production included the CDD logo, the name of the product (Suero-Oral), the MPH logo, the IRD logo, and an accompanying caption indicating what Suero-Oral was for.

**Developing the Bags**

One of the objectives of the educational component of the Diarrheal Disease Control Progam was to teach mothers how to prepare and administer correctly the rehydration salts. This objective was partially achieved through an envelope which served as a bag for two ORS packets.





The testing of this material over a period of three months in several provinces led to the following conclusions:

- The envelope contained too many messages; it showed the process of preparing ORS (four steps), how to administer ORS, how to know if ORS is working, the signs of dehydration, and a message about breastfeeding during the diarrheal episode.

- The messages presented in this way turned out to be too complicated for easy assimilation.

- The envelopes containing the instructions were easily discarded after the mothers took out the ORS packets.

- The mothers associated the envelope with written prescriptions which were easily thrown away.

- Mothers needed a liter measure to follow the directions.

With this in mind, the SEDRI-MPH team decided to replace the paper envelopes with a plastic one, which would solve the existing problems and simplify the instructions for the mothers. A plastic bag was considered to have the following advantages:

- The plastic bag can be used as a liter measure. A liter measure is needed to prepare the Suero-Oral and is not easily obtained in all areas.

- A plastic bag is durable, so it can be used for other household needs.
- The instructions for preparing and administering printed on the bag can be seen by the mother while she is measuring the liter of water.
- The bag holds the two envelopes of Suero-Oral.

The redesign of the instructions brought the following results:

- It simplified the number of messages.
- It converted most of the written instructions into illustrations to be understood by illiterate persons.
- It made the design instructions more attractive, different from most product instructions, thus attracting the mothers' attention.

The final version of the graphic on the bag is shown on the next page.

**Production of the Flipchart with Villager Participation**

The decision to produce a flipchart as an audiovisual aid to teach the causes of diarrhea, the concept of dehydration, and the correct use of rehydration salts was based on the need to extend community educational activities.

In order to achieve this, it was necessary to provide the health worker with a tool to motivate the community and raise its awareness about the seriousness of infant diarrhea and diarrhea prevention and treatment. One of the most effective methods, which the MPH had also tested, was the flipchart.

The flipchart was one of the first educational materials designed for the project, and its production affected the methodology used to produce other educational materials. The most interesting aspect was the exchange of methodologies developed by the Ministry of Health on the one hand and by the Office of the Secretary of Integrated Rural Development on the other.

The Ministry of Health had experience in creating flipcharts which were designed at the central level, pretested in the field, and then produced. The Office of the Secretary of Integrated Rural Development, on the other hand, was experienced in designing educational materials with community participation in all phases.

# SUERO-ORAL

## ASI SE PREPARA EL SUERO-ORAL

**Recuerde:** Mezcle cada sobre en un litro de agua.

- Si su niño tiene diarrea dele enseguida SUERO ORAL.
- EL SUERO-ORAL repone los líquidos perdidos por la diarrea.
- La pérdida de líquidos, llamada deshidratación, causa la muerte a los niños con diarrea.

**IMPORTANTE**

Si el niño no mejora con el SUERO-ORAL consulte a la persona que le entregó los sobres.

When the work began, the MPH communicators had developed the first drafts of the flipchart. The SEDRI communicators suggested beginning the design process with a group of villagers with no preconceived ideas of what the graphics should look like. Finally it was agreed to create the flipchart with a group of rural mothers on the basis of the following important themes:

1. Environmental sanitation

2. Diarrhea/dehydration

3. Signs of dehydration

4. Recovery of liquids with ORS

5. Preparation and administration of ORS

6. Feeding and breastfeeding the child

7. Personal cleanliness

8. Care of the healthy child

The communicators knew that it was important to use a good illustrator. They contracted with one who had experience in diagraming and illustrating educational texts. It was decided that he would work with the villagers to design the various illustrations. Another important decision made during this stage was to produce one flipchart for the highland areas and another for the coastal region, taking into consideration the specific cultural features of each area.

The Salcedo region was chosen for the design of the highland flipchart. Two meetings were organized, each one lasting two days. At the first meeting, village leaders as well as rural women participated. At the second meeting, only mothers from the community of Jacho participated. During the first part of the meetings, there was a brief explanation of the Diarrheal Disease Control Program, and the purpose of the meetings: to produce together a series of drawings which would help to explain diarrhea prevention and treatment to other rural communities. During the second part of the meetings, the work done by the first group was modified through the participants' interpretation of the drawings. Then the first group continued until they had all the necessary illustrations. At the beginning of the meetings there was no participation, but as soon as the participants saw what the drawings looked like, their interest increased. To illustrate the dynamics of the meeting, the process followed in designing the first illustration is described below:

1. The health worker explained to the villagers that personal and environmental cleanliness can affect a child's health.

2. Someone asked how the problem of cleanliness and health could be expressed in a drawing.

3. The villagers suggested a drawing of a child playing on the floor.

4. The illustrator painted on a large board a picture of a child playing on the floor.

5. One villager suggested that the child should be shown eating off a plate on the floor. Another suggested including in the picture a dog licking the child.

6. The illustrator drew a child eating off a plate and a dog licking the child.

7. One mother said that the child should have no pants and that the child in the drawing looked too fat.

8. The illustrator drew the child thinner, without pants, and younger than the first one.

9. Various mothers suggested that the scene should be located in the yard of a house.

10. The group talked about including a chicken and flies.

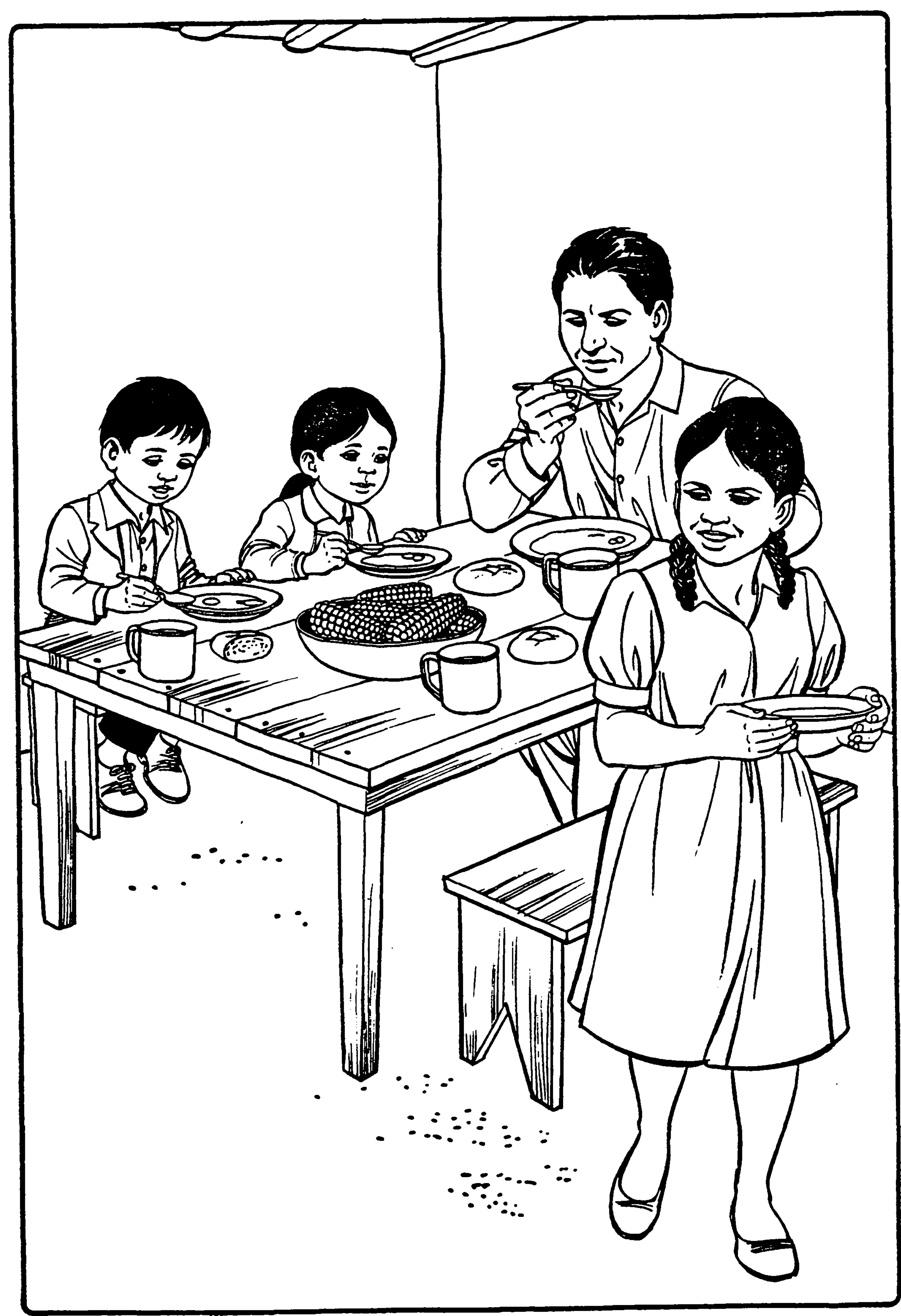
11. All the versions were shown and the group chose the last one. In this way, 19 illustrations were designed on the themes outlined.

Another interesting example of the design process is the illustration on feeding during diarrhea episodes. The first drawing showed a rural family eating at a table with different types of food. The mothers found fault with the drawing, saying that they could not possibly give all the foods in the picture to the child. The problem was resolved when a village leader said that his wife could not feed all these foods to their child unless their land produced good crops. The suggestion was made to include an illustration showing their "beautiful" fields, because only in that way would their children have food to eat. The drawing showing a rural couple stripping ears of corn, with more fields planted in the background, had enormous importance for all the villagers. This drawing, in fact, was the connection with the villagers' reality.

One important point is that almost no illustration had explanatory text. This is feasible because the participatory method allows images to speak for themselves, with no need to include text. This allows the flipchart to be used for other programs, such as agriculture, and facilitates teaching illiterate people as well.

The selection of colors for each illustration (for cost reasons, four optional colors were available) was based on two criteria. First, color would have a specific function, highlighting the most important point of each illustration--the water, the fire for boiling it, the flies, the dirty diaper. In this sense, the designers sacrificed using "realistic" color, which would run the risk of neutralizing the most important point. The selection of colors also took into account the different coastal and highland cultural characteristics.

The development process was the same for the coastal flipchart; it was designed with a rural community in the IRD-Jipijapa Project area.



Production cost estimates revealed that the difference in price for printing on cardboard or on cloth was not significant. The decision was made to silkscreen the flipchart on cloth because of its greater durability and ease of transport.

## Production of Radio Materials

Keeping in mind the volume of information which the mother must manage concerning how to mix and administer the Suero-Oral correctly, the feeding regimen during diarrheal episodes, and diarrhea prevention, the decision was made to divide the content for the radio messages into two phases. Phase One (lasting for six months) discussed the preparation and administration of Suero-Oral. The other phase focused primarily on preventative behaviors, while still including treatment messages which were not learned in the first phase.

The content selected was organized as follows:

**Phase one:**

1. Elements of the overall problem of diarrhea--its causes, dehydration, ORS.

2. Identification of the Suero-Oral packet.

3. Where to get Suero-Oral.

4. When to administer Suero-Oral.

5. How to prepare and administer Suero-Oral.

**Phase two:**

1. Emphasis on diarrhea prevention behavior.

2. Signs of recovery (testimonials).

3. Correction of errors in preparation and administration found in the training evaluation.

Spots and an eight-minute dramatization were chosen to present the information by radio. These were selected by defining what information can be communicated in a one-minute message and what information needs more time to explain because it is more complex.

Six one-minute educational radio spots were assigned the following content:

Spot 1. Diarrhea: A loss of liquids or dehydration. It is dangerous and can lead to death. Suero-Oral replaces lost liquids.

Spot 2. When and why to give Suero-Oral: Each time the child has diarrhea. To replace liquids.

Spot 3. Obtaining Suero-Oral. Where to get it. (It's free.)

Spot 4. How to prepare <u>Suero-Oral</u>. One envelope only. In one liter of water (use the bag). Look for the instructions on the bag.

Spot 5. How to give <u>Suero-Oral</u> to a child. Spooning from a cup, throughout the day. Don't forget feeding.

Spot 6. Community education process. Summary of the preceding content.

The radio programs started with the problem of diarrhea and gradually amplified the theme. Each program begins with a summary of the information in the preceding programs so that a mother who did not listen to the first programs has a basis for understanding new information (Table 2).

Table 2

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RESUMEN | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | |
| ALIMENTACION | | | | | | | | | | | | | | | ●* | ● |
| LACTANCIA MATERNA | | | | | | | | | | | | | | ●* | ● | ● |
| RESULTADOS S.O. | | | | | | | | | | | | ●* | ●* | ● | ● | ● |
| ADMINISTRACION S.O. | | | | | | | | | ●* | ●* | ●* | ● | | ● | | ● |
| PREPARACION S.O. | | | | | | | ●* | ●* | ● | ● | ● | ● | | ● | | ● |
| SUERO - ORAL | | | | | ● | ●* | ● | | ● | | | | | | | ● |
| REPOSICION DE LIQUIDOS | | | | | ●* | ● | ● | ● | ● | | ● | ● | TESTIMONIOS | | | ● |
| HIDRATACION | | | | ●* | ● | ● | ● | ● | ● | | | ● | | | | ● |
| PERDIDA DE LIQUIDOS | | ● | ●* | ● | ● | ● | ● | ● | ● | ● | | ● | | | | ● |
| DIARREA | ● | ●* | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● |
| ENFERMEDADES DE LOS NIÑOS | ●* | | | | | | | | | | | | | | | ● |

Nota:
●* Enfasis en ese contenido

The sequence of information begins with a discussion of how diarrhea is the most common disease in rural communities (two programs). Next, two programs expand the concept of dehydration and its deadly effect. One program discusses the need to replace salts and liquids lost because of diarrhea, and one program describes how Suero-Oral works. The correct preparation and administration of Suero-Oral is discussed in detail in five programs. Positive results with Suero-Oral are featured in two programs. Feeding, including breastfeeding, is featured in two programs, and the last program contains testimonials.

Both the educational spots and the programs use a drama format depicting typical rural personalities in a variety of believable situations. An example of a dramatized radio program follows.

HIGHLAND PROGRAM: Diarrhea

| | |
|---|---|
| Control | MUSIC |
| Announcer | Hello, let's talk about health. |
| Control | MUSIC |
| Announcer | Conversations with Doctor Benigno Sabesanar. |
| Control | MUSIC |
| Announcer | A program dedicated to children's health. |
| Control | MUSIC. SOUND OF HOEING, INTERRUPTED. |
| J. Manuel | Hello... My name is Jose Manuel Carpio; I work in the fields and... |
| Zoila | And my name is Zoila Llaguarcos; I work in the fields too... |
| J. Manuel | That's my wife, Zoila Llaguarcos de Carpio; she's my wife. |
| Zoila | We have three children: Rosa is seven, Manongo is five and the littlest one is a year and a half. We had another baby, but he died last year... |
| J. Manuel | Gabriel, the littlest, almost died once too. |
| Zoila | It wasn't very long ago that it happened: We were here digging potatoes, when all of a sudden we heard a scream... |
| Control | VERY BRIEF PAUSE |
| Rosa (distant) | Mama Zoila, Mama Zoila! |

| | |
|---|---|
| J. Manuel | What is it? It looks like our little Rosita. |
| Zoila | It's Rosa alright, carrying the baby. |
| J. Manuel | She looks really scared. |
| Rosa (distant) | Mamita Zoila! |
| Control | BRIEF PAUSE |
| J. Manuel | It was little Rosita, looking scared, running down the hill carrying the baby. So Zoila went running up the hill to see what happened, and I went running after Zoila. I wasn't going to stay standing there, you know what I mean? ... |
| Zoila (out of breath) | Right here in the middle of the road we realized that the baby was dying. He had had diarrhea for two days and he was dry, so dry, the poor little thing, really weak... |
| Control | PAUSE. CHILD CRYING. |
| Zoila | Poor little Gabrielito! What is it, what's happening? |
| J. Manuel | He looks shriveled up to nothing. |
| Zoila | What could be wrong? The poor little guy's eyes are sunken in. You can't even see his tears. |
| J. Manuel | He's crying without tears. |
| Zoila | Let's go! Come on, quick! |
| J.M. (shouting) | Where are you running to, Zoila? |
| Zoila (distant) | Hurry up, come on! |
| Control | BRIEF PAUSE |
| J. Manuel | Zoila grabbed the baby and went running off again, but down the hill, toward town. And I went running after her. I wasn't going to leave my wife alone, see. You can see we're always together. We didn't know what was the matter with the baby, except he was real thirsty and vomiting... and that he was gonna die. So we were more together than ever, you see, so we went running over to the Health Center. |
| Control | BRIEF PAUSE. CHILD CRYING AND SOUND OF RUNNING IN BACKGROUND. |
| J.M. (out of breath) | We're going to the Health Center, aren't we, Zoila? |

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| Zoila | The doctor'll fix him up. What happened last year is not going to happen again. |
| J. Manuel | Last year the baby died because we didn't get him quickly to the Health Center. |
| Zoila | And it was diarrhea that he had, too. |
| J. Manuel | Rosaura's baby died of diarrhea. |
| Zoila | And Gertrudis' baby, and the neighbor Carmela's... |
| J. Manuel | Too many babies dying of diarrhea, why do you suppose? |
| Zoila | Come on, quick, Jose Manuel! |
| J. Manuel | Give me the baby. With me carrying him, we'll get there faster. |
| Control | BRIEF PAUSE |
| Zoila | On the way, we remembered all the babies that died in our community. With almost all of them it was on account of diarrhea... and all of a sudden we realized. |
| J. Manuel | Terrible diarrhea, like you wouldn't believe, shriveled up to nothing... |
| Zoila | So bad that babies were dying from it. So we got even more scared and we ran as fast as we could. Little Gabriel cried and cried, and he was getting shaken up from the running, but we hardly heard him. |
| J. Manuel | I held onto him real tight, poor little thing... |
| Zoila | And I ran behind him, crying and running more slowly... |
| J. Manuel | When we got to the Health Center, the first thing Doctor Sabesanar did was make up a medicine with water, and while Zoila gave it to the baby, the doctor was saying... |
| Doctor | You got here in time, you got here in time. An hour later and he would have died. But don't worry, he'll get well. |
| Zoila | I hope so, doctor. |
| Doctor | Many children die in this country, and most of them die from diarrhea. For every ten children who die, eight of them die because of diarrhea. The people, especially the mothers, have to be very careful. Diarrhea is very dangerous. |

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| Control | PAUSE |
| J. Manuel | We villagers, especially the mothers, have to be careful when our children have diarrhea, that's what Doctor Benigno Sabesanar said. We'll go on telling what he said on the next program, at this same time and same station, we'll be back. |
| Control | MUSIC |

The decision to broadcast six radio spots in the highland area and six on the coast, the formats of the spots, and the information to be communicated, was made by the team based on the results of the MPH SEDRI research.

**Pretesting**

For each of the six final radio spots, two draft spots were pretested. In this way it was possible to obtain six radio spots chosen by highland mothers and six by coastal mothers.

The objectives of pretesting the graphic and radio material concerned the need to:

- o Define the degree of understanding of the material, in terms of vocabulary, concepts, regionalism, symbols, illustrations, etc.
- o Define the degree of acceptability of the material to determine what factors in the message could cause problems with acceptance or rejection.
- o Determine the message's capacity for inducing desired behaviors in the target audience.
- o Increase the certainty of use and consumption of the material.
- o Graduate from local to national production with a greater margin of confidence in the success of the material.

The pretests for the radio spots, in both the highland and coastal areas, contributed valuable information on what should and should not be used. It was also possible to determine which characters were more likely to be accepted and which dramatic situations had the widest acceptance among mothers.

Some important contributions of the pretesting should be mentioned here. The clearest lesson was the confidence and credibility felt by the mothers toward a doctor as a source of technical information. For this reason the radio character Dr. Benigno Sabesanar was created, using a common, health-related name (literally, a "kind man who can cure"). Also identified were the most widely accepted radio formats and the characters most valued by the mothers. Then the dialogues between Dr. Sabesanar and these characters were set in situations such as the doctor's office, the home of the worried mother, a community meeting of the rural mothers, the Health Center, etc. The final radio spots dramatically demonstrate the cultural identification of each

region--the differences in expressions, accent, environmental sounds, names, and characters.

## Radio Programs

The results of the radio spot pretesting determined the characters and situations which could be repeated in the eight-minute programs. Thus, it was unnecessary to pretest the radio programs; the content is basically the same as the radio spots. The difference is in the amount of information given about each theme.

## Final Production

Once pretested, the radio materials were professionally produced to meet desired technical requirements. A master tape of all of the spots and programs was produced for each region. These were then reproduced according to the number of stations contracted and the institutions which could serve to expand the use of audio material.

## Broadcast Frequency

The early research made it possible to determine which stations and programs were most listened to by the mothers and thus how to contract the stations and set the schedule for broadcasting the spots and programs. It was determined that three repetitions of each of the six spots were needed per day, broadcast in the early morning, mid-day, and in the early evening. The longer program was to be broadcast once each day by one of the stations contracted. Five stations were contracted in the highland area and two on the coast. All of them had a regional broadcast range, generally 1 KW, but they had a large audience.

## Broadcast Monitoring

The monitoring component is an essential part of the overall methodology used. Monitoring is done using a guide sheet on which the time and broadcast frequency of the spots and programs are recorded daily. Monitoring has a dual purpose: first, to insure that radio materials have an impact because they are aired at the times when they have the largest audience and, second, to protect the MPH investment as much as possible by requiring that a station reprogram any broadcasts omitted.

## Evaluation

An essential phase of the overall methodology is a formative evaluation of the impact of the educational program. This is especially important due to the use of mass media and the frequency of messages broadcast and the coverage provided by radio. This phase will be carried out at the end of the first and second programmed phases (six months each). It will evaluate the impact on knowledge and practice of information delivered by the radio spots and educational programs. Other indicators of use are the data on the increase in demand for service and the use of ORS. The evaluation will be used to modify procedures and reformulate objectives and messages.

## 3. TRAINING

Training responds to one of the basic principles of the integrated rural development methodology and CDD Program, to insure that the community actively participates in the educational process. In the case of diarrheal disease control, it is clear that the behavior of the mother based on her limited knowledge does not guarantee adequate treatment of this medical problem. Thus, in order to reduce morbidity and mortality from diarrheal disease, it is necessary to strengthen knowledge and attitudes to achieve positive behavior in the rural community.

To achieve this objective, it was considered necessary to carry out a simultaneous training program for the following persons:

- Doctors, nurses, and health educators
- Nursing aides and health inspectors
- Educators and community representatives

### Doctors, Nurses, and Health Educators

This group consisted of provincial directors and other provincial officials, health officers for the IRD projects, epidemiologists, hospital directors, doctors, nurses, and health educators at the province and district levels.

Training for this group was aimed at updating knowledge of the program, with emphasis on the educational component. The idea was to create a favorable climate and further institutional and technical support for the CDD Program. The development of this training was handled by medical professionals of national and international reputation. Training was done in working groups to achieve active participation. The strategy was to gain participants' ideas and commitment to achieve full coverage.

### Nursing Aides and Health Inspectors

The training at this level was directed at rural nurses, teachers' aides, health inspectors, health workers, and literacy educators working in communities in the IRD project areas. The working sessions with these groups were directed toward updating participants' knowledge of oral rehydration, including preparation and administration of Suero-Oral, feeding practices for children with diarrhea, encouragement of breastfeeding during diarrheal episodes, knowledge of the use of each of the educational elements in the media package, practice in group management in the educational process, and determining guidelines for supervision and control of community personnel in charge of the CDD in places where there are no health personnel.

The teachers for this group were basically the participants of the first training. They were asked to collaborate in order to give them more responsibility and to reinforce their own training.

Since these nursing aides and health inspectors were the program executors, the ones responsible for the results of the CDD's actions, and the ones who were in most contact with the prospective users, it was essential to approach the subject simply, clearly, precisely, and in a critical and participative manner. This was achieved by analysis and interpretation of material prepared for this purpose, as well as practical exercises in the form of sociodramas. The dynamics followed in the development of this training ensured that there was acceptable program supervision by the community representatives.

**Educators and Community Representatives**

Persons participating at this level were representatives chosen by their communities who generally were not formal members of the health sector. Among them were provincial literacy educators, sectoral advocates, community educators, and community leaders. These were basically fathers and mothers who want to serve their communities.

The training methodology which they received was based on the dynamics of learning by doing. Participants learned new information, such as signs of dehydration, rehydration therapy, proper preparation and administering of Suero-Oral, and the feeding regimen for the child with diarrhea. They were trained through individual and group exercises, using sociodrama and discussions of the experiences, beliefs, and behaviors in the communities. The goal was for the participants to have control over their own learning process. In this way, they were also trained to use the educational materials, so that they had the necessary preparation for teaching, using the media to make their work easier.

The objective of this training was to introduce to the community, working within its own behavioral guidelines, the elements of the Program for the Control and Prevention of Diarrheal Diseases which constitute culturally suitable responses to community health problems. Through this dynamic process, the communities took important initiatives in the production of audiovisual materials and made adaptations of the existing material.

## 4. CONCLUSION

The educational materials production process described in the preceding pages leads to the conclusion that this is a valuable pilot experiment, whose further exploration will permit the development of a working methodology which uses community participation as a point of reference at all stages in the process. This experience has shown that it is both possible and effective to have inter-institutional collaboration which, through the vitality of each institution, contributes to a shared goal--in this case, the improvement of the health of program users.