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**DOMINICAN REPUBLIC**

**A Report Prepared by PRITECH Consultant:  
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**During The Period:  
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**TECHNOLOGIES FOR PRIMARY HEALTH CARE (PRITECH) PROJECT  
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## ABBREVIATIONS

AED	Academy for Educational Development
ARI	Acute Respiratory Infections
ASISA	Asesorias e Investigaciones, S.A.
CDD	Control of Diarrheal Diseases
CENISMI	Centro Nacional de Investigaciones en Salud Materno Infantil
CSP	Child Survival Project (Spanish: PSI)
EPI	Expanded Program on Immunizations
INTEC	Instituto Tecnológico de Santo Domingo
KAP	Knowledge, Attitudes, and Practices (Spanish: CAP)
NGO	Non-governmental Organization
OPS	Organización Panamericana Para la Salud
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PLANSI	Pan Nacional de Supervivencia Infantil
PRITECH	Technologies for Primary Health Care Project
PVO	Private Voluntary Organization
SCF	Save the Children Federation
SESPAS	Secretaría de Estado de Salud Pública y Asistencia Social
UASD	Universidad Autónoma de Santo Domingo
UCMM	Universidad Católica Madre y Maestra
UNIBE	Universidad Iberoamericana
UNIREMHOS	Universidad Eugenio María de Hostos
USAID	United States Agency for International Development
UTESA	Universidad Tecnológica de Santiago

## Executive Summary

Our main recommendation is: in the redesign of the CSP, resources would be channeled to improve the pre-service training of Dominican doctors -- that is, to the redesign and updating of medical-school curricula. This redesign should emphasize primary health care, especially relating to child-survival interventions. This emphasis would be reflective of the morbidity/mortality profile of the Dominican Republic.

A secondary recommendation: in-service training workshops for both public-sector and private-sector doctors. These workshops should incorporate clinical practice in oral rehydration, proper feeding practices, and talking with mothers. Until the medical-school curriculum is updated, priority should be given to the training of pasantes just prior to their year of social service.

We recommend that USAID provide resident technical assistance to work toward improved medical education. This consultant would be a doctor, experienced in medical education and primary health care, who could relate to her/his Dominican colleagues as an equal. Whether Dominican or expatriate, the presence of this consultant concentrating on the improvement of medical education would bear witness to USAID's recognition of the unique deployment of doctors in the Dominican Republic, and their key potential role on behalf of primary health care.

We recommend that USAID provide resident technical assistance to work toward improved health communication, especially in child survival. The communication consultant, Dominican or expatriate, would ensure the unity and focus of the messages reaching the public, building on the recent research sponsored by Save the Children. The consultant would also work with the medical-education consultant to ensure that doctors being trained learn how to talk with mothers and how to use instructional materials in their encounters with mothers.

The presence of full-time in-country technical assistance is recommended to provide continual impetus to program activities, to maintain linkages among collaborating agencies, and to ensure the technical quality of program inputs.

## Purpose

Earlier this year, on April 9, PRITECH was requested by USAID/Santo Domingo to assess its Child Survival Project, and to discuss possible areas of collaboration. Though the assessment was delayed from August to late September, the scope of work remained the same and was concurred in by USAID, namely:

- review the CSP, implemented by Save the Children, in terms of its stated goals;
- focus on project accomplishments in CDD and breastfeeding;
- secondary focus on nutrition and growth monitoring, ARI, and EPI, especially measles;
- review health-education materials and the process of materials development;
- review staff training and curriculum materials;
- assess ORS access, distribution, and resupply;
- review PVO CDD efforts;
- review options among private health-care providers;
- make recommendations for ongoing USAID support of child-survival activities.

In the interval between this request and the arrival of the PRITECH team, considerable change had taken place with the CSP. Although the CSP had been underway since 1987 and had received considerable technical and financial assistance, lack of sufficient progress convinced USAID to redesign the project and to channel assistance through a private U.S. firm (not a PVO) with experience in the management of health programs in developing countries.

While a full evaluation of the CSP experience so far has not been done, the recent Health Sector Assessment (Patterson and Powell, 1990) states:

"Anecdotal evidence and spot surveys indicate that immunization coverage is declining, knowledge and use of ORT declining, increasing cessation of breastfeeding, and the unmet need for contraceptives still unacceptably high. Obviously, these have been affected by the severe economic situation, but project design and implementation problems have contributed. Important factors are:

- continuing decline in utilization of SESPAS facilities because of lack of resources, mismanagement, and wholesale turnover of personnel;
- inappropriateness of a U.S. PVO as program coordinator (this role must be filled by some Dominican institution);
- continued excessive reliance on promoters with inadequate attention to support and

referral system using existing facilities;  
-- incomplete understanding of participating  
NGOs of how their particular activities relate  
to regional targets and lack of a uniform  
information system to monitor progress."

Management problems with the CSP led to the recent resignations of the project director, its training coordinator, and its financial administrator.

For all these reasons, the original scope of work was no longer feasible. In its initial meeting with USAID, the team was given the following charge:

1. Produce an outline of a training module on CDD/ORT;
2. Produce a trip report in draft, with observations and advice.

These became the team's purpose.

## I. THE TRAINING MODULE

We were told that this module, which was designed for the community-based health promoters (for a full description of the Dominican health system, cf. Patterson and Powell), was already being developed by SCF; our role would be to review the module in its current state, from a technical medical and communications point of view. This module would be used by the other PVOs within the SCF-administered CSP, not by SCF staff.

It turned out that the partially completed module was in the handbag of SCF's field coordinator from Barahona which was stolen from her on the streets of Santo Domingo two days before our arrival. So there was no module, in any stage of development.

We worked with SCF's coordinator of education and social communication and with SCF's newly arrived assistant administrator on a list of basic items for modules on CDD and breastfeeding. This straightforward task results in new outlines for the modules, which will be transformed into booklets for the promoters' training and flipcharts with which the promoters can train mothers at the village level. These outlines are attached. (Attachment I)

## II. OBSERVATIONS AND ADVICE

At the urging of consultants from the centrally funded Nutrition Communication Project, SCF had contracted for two research groups to carry out KAP studies in the project areas (Santo Domingo, Barahona, and San Juan de la Maguana)). These

studies have been the only concrete products shown to us by SCF (with the exception of some posters), and contain very usable information.

The principal impression we get from this considerable font of data relates to doctors. The Dominican Republic has a widespread network of rural health clinics, almost all of which are staffed by doctors during their mandatory year of social services. (The country has an over-supply of doctors with at least 1,000 doctors who cannot find enough work.) With all these clinics and all these doctors dispersed widely, even in rural areas, mothers have unusually high access to doctors. The OMSA studies say, in fact, that 89% of under-5 diarrhea cases see a doctor in the first three days. Doctors enjoy high esteem among mothers and promoters. Promoters, who often know little more than mothers, are not relied upon to any significant degree. Doctors represent the key health-care cadre in the Dominican Republic.

In most countries, doctors are much farther from the front lines of primary health care. But Dominican doctors are right on those front lines, and they enjoy high credibility (89% versus 12% for nurses and promoters) and play a central role in the child-survival practices of Dominican mothers. What these mothers do, therefore, is a strong measure of what doctors recommend that mothers do. In fact, what these mothers do is cause for alarm:

- while most believe in breastfeeding for at least a year, virtually none believe in exclusive breastfeeding. More than 60% given water to newborns by the third day, 68% give water in a bottle by one month;
- 95% use feeding bottles;
- 30% don't give colostrum; those who do not understand its value;
- almost half would stop breastfeeding if ill, almost a third if pregnant;
- many believe in "bad milk", that is, that some mothers have milk that is harmful;
- very few understand the contraceptive role of breastfeeding;
- the main cause of breastfeeding, they believe, is poorly prepared food; some is caused by witches, must be cured by traditional healers;
- dehydration, loss of liquids, and its danger are poorly understood;
- diarrhea's impact on nutrition is poorly understood;
- they get prescriptions for drugs when they go to doctors for a case of child diarrhea;
- they feed their children poorly during diarrhea.

This list could be made much longer. The OMSA and ASISA data, a summary of which is found in Attachment 2, show plainly that mothers, who trust in and consult with doctors so regularly, are not being guided well on basic childcare and child-survival behaviors.

During our visit to the Oral Rehydration Unit at the Hospital Infantil Robert Reid Cabral, the doctors there insisted on talking about extraordinary cases, but showed little mastery of some basic primary health care. When the doctors were asked about breastfeeding and care of newborns, their level of understanding about these quite ordinary matters (that is, they pertain to every child) was very low.

But the ORU staff is seeking to improve their education of mothers, looking for a place and for personnel to handle this.

Dr. Josefina García-Coen, who accompanied us on this ORU visit and who is prominent in the Pediatric Society, proposed a plan to offer training every two months to future pasantes and to carry this on for three years. During these three years, she proposed that the medical curriculum be changed to make this extra training unnecessary; the curriculum should be altered to focus more on primary health care, and incorporate up-to-date technology such as ORT and the role of breastfeeding. Dr. Coen suggested that three training units be set up to do this, at Robert Reid Cabral in Santo Domingo, in Santiago, and in Cibao.

Our main recommendation, therefore, is: in the redesign of the CSP, resources would be channeled to improve the pre-service training of Dominican doctors -- that is, to the redesign and update the medical-school curricula.

A strong participant in this improvement of medical-school training can be the Pediatric Society, the local OPS office, and the OPS/CDD office in Washington. Lic. Riaño and Dr. Pagés are already supplying up-to-date CDD material, from the WHO program-managers' course, including slides, to local medical schools.

We took part in a day-long workshop on the pediatric curriculum in Dominican medical schools, which happily coincided with our visit. The pediatric curriculum is given only six weeks now, and the workshop was seeking to define how that time could best be used, in terms of breadth and priority of pediatric coverage. The list of participants is attached, with key players being Dr. Mendoza, Dr. Coen, and Lic. Riaño. While none of the professors at this meeting spoke against ORT for diarrhea case management or against exclusive breastfeeding, it is clear that medical students are not receiving the training they need to introduce new practices in a population that has used other therapies and fed babies in other ways for generations.

Doctors also need to learn how to teach mothers, to talk and listen. OPS has a Spanish-language module called "Talking with Mothers", which addresses this little-emphasized aspect the doctor's role.

It is worth noting that in addition to the Program Managers' Course, the Supervisory Skills Course, and the "Talking with Mothers" module, OPS will soon have, in Spanish, the revised medical-school curriculum for CDD, which was developed by WHO/CDD/Geneva and PRITECH. These materials could be incorporated into the pediatrics curriculum by some of the professors, and might be introduced at workshops featuring respected national and international CDD experts. USAID could be a major supporter of these workshops.

A secondary recommendation: in-service training workshops for both public-sector and private-sector doctors. These workshops should incorporate clinical practice in oral rehydration, proper feeding practices, and talking with mothers.

We do not recommend against continuing formation for promoters. This should continue, and be improved with stronger education materials both for the promoters' learning and teaching. Their roles can be reinforced if the preparation of doctors is improved, so that both doctors and promoters are guiding mothers in similar fashion. Our main recommendations focus on doctors' training, however, because with doctors' prestige and wide availability, the impact of well-trained promoters will be diluted to the vanishing point by poorly trained doctors. However, if doctors are trained correctly, the presence of well-trained promoters will complement the treatment and education that doctors give to their patients, ultimately leading to the increased prestige and more effective role of promoters.

We recommend that USAID provide resident technical assistance to work toward improved medical education. This consultant would be a doctor, experienced in medical education and primary health care, who could relate to her/his Dominican colleagues as an equal.

Medical education can be improved at the pre-service level and at the in-service level. A key group to upgrade is the pasantes, those doctors in their year of social service, because of their influence in rural areas. These are newly graduated doctors; their training needs to be supplemented so that they are prepared for the rural area's population and health problems. The Dominican Republic's ten medical schools produce 1200 pasantes every year. Whether for pre-service training or in-service training, USAID can collaborate with the Pediatric Society and OPS, to catalyze strong support for the improved training of doctors.

Our second area of recommendations relate to communication. We see a need for resident technical assistance in communication to work with the SCF coordinator for education and social communication. Research is a basic first step for developing appropriate communication messages. On the basis of the OMSA and ASISA research, new directions and opportunities are becoming evident. These findings call for followup.

We recommend that USAID provide resident technical assistance to work toward improved health communication, especially in child survival. The communication consultant would ensure the unity and focus of the messages reaching the public. The consultant would also work with the medical-education consultant to ensure that doctors being trained learn how to talk with mothers and how to use instructional materials in their encounters with mothers.

The presence of full-time in-country technical assistance is recommended to provide continual impetus to program activities, to maintain linkages among collaborating agencies, and to ensure the technical quality of program inputs. AID has central projects which can provide this assistance, through buy-in or directly.

We see the Dominican Republic as a place where there is an impressive number of health workers, especially doctors, to whom mothers have access. Mothers' access to so many doctors makes this country very different from most developing nations, and argues for a strong effort to ensure that these doctors offer sound primary health care. Our recommendations aim at training Dominican health workers, especially the doctors, according to the norms established by the World Health Organization and in many cases with materials published by the World Health Organization. We also see the need to provide the health workers with appropriate health-education materials for their own learning and to use in training mothers directly on basic childcare at home, for children both sick and well. Direct communication to mothers, through broadcast and print media, will also be part of this strategy to improve the culture of childcare in the Dominican Republic.

## ATTACHMENT I

### OUTLINE FOR MODULES ON DIARRHEA AND BREASTFEEDING

#### Diarrhea

- emphasis on the danger of loss of liquids;
- signs of dehydration;
- when to seek medical assistance;
- proper nutrition during diarrhea, including breastfeeding (even during diarrhea, 70% of food is absorbed);
- fasting destroys the intestine's ability to absorb food;
- extra nutrition after diarrhea;
- the role of ORS, mixing and administration;
- the dangers of antidiarrheals, the limited role of antibiotics;
- prevention, especially exclusive breastfeeding and rejection of feeding bottles; the benefits of breastfeeding and colostrum: immunization, hygiene, nutrition, prevention of pregnancy, cost;
- prevention through correct weaning;
- prevention through measles immunization;
- prevention through handwashing.

#### Breastfeeding

- In addition to the relation to diarrhea cited above:
- relief for engorged breasts is to nurse more frequently;
  - great need for appreciation of colostrum and breastmilk, and the values of exclusive breastfeeding;
  - dangers of early introduction of water and salt;
  - dangers of bottlefeeding at every stage;
  - excessive cost of bottle feeds;
  - inadequate nutrition from bottle feeds;
  - dangers of early weaning.

## ATTACHMENT II

### SUMMARY OF RECENT RESEARCH

Earlier in 1990, Save the Children sponsored studies on the knowledge, attitudes, and practices (KAP) relating to several basic childcare subjects. The research was done in the two provinces where the USAID Child Survival Project (CSP) was working, Barahona and San Juan de la Maguana. Researchers questioned mothers, health promoters, nurses, and doctors (those doing their mandatory one-year rural service) about breastfeeding, diarrheal disease, dehydration and rehydration. In another research round, interviews studied the topics of growth and development, malnutrition, and low birth-weight, and for this study analyzed mothers according to age groups: 14-20 years, 21-35, and 36-49. This summary will review the findings by subject area.

#### Breastfeeding

Most mothers believe in breastfeeding, but the way they are guided to breastfeed has serious errors and is probably a major contributor to malnourished children. Mothers say that breastfeeding is more practical, saves time, and results in a healthier baby. They breastfeed on demand and especially when the mother has some quiet time. The more the baby nurses, the greater the production of milk, they say. Breastfeeding makes the mother feel even closer to the child, and at the same time the child develops better.

During pregnancy, it is possible for the mother's milk to turn bad. If this happens (they do not say how they know if this happens), the milk is harmful to the baby and breastfeeding should be halted.

Mothers believe that mother's milk is the main nourishment for a nursing baby, but that the baby's feeding should be supplemented with vegetables and fruit juices. They don't mention meat or eggs. The mother's nourishment should be a base of animal protein, and liquids like chocolate, fruit juices, soups, and vegetables. But, based on what foods are actually available, what mothers end up with are noodles, grains, and some animal protein occasionally.

Mothers breastfeed because other mothers do, not out of conviction or understanding. Mothers believe that they should not nurse following a caesarean delivery or when their milk is salty.

The promoters think that the people who promote breastfeeding the most are grandmothers and doctors. The mothers who breastfeed least these days are the young mothers, who

believe that breastfeeding deforms the breasts and that it takes too much effort to breastfeed.

Promoters recommend to nursing mothers that they wash their breasts with soap and water, and dry them with a towel.

According to the promoters, exclusive breastfeeding should last two months. They believe that if other foods are not given then the child will resist eating other foods entirely. What is more, they say that breastfeeding takes up a lot of the mother's time, while a complementary diet makes for firmer stools and less urine. Furthermore, promoters recommend that the baby be given water right from birth, believing that mother's milk makes the baby thirsty.

The benefit of breastfeeding is that it provides comfort and joy to the mother, but the disadvantage is that at times breastfeeding can be very discouraging for the mother. Mothers should not breastfeed when sick or pregnant, when the child has diarrhea, when the milk is salty, and when the mother does not eat well herself. Promoters also think that milk production goes down if the mother does not nurse or eat well, when the mother takes birth-control pills or antibiotics, and when the delivery was a caesarean birth.

They (and their supervisors) believe that breastfed babies have fewer illnesses and better growth. They advise mothers to wash their breasts before nursing. The promoters and supervisors think that colostrum contains vitamins and acts as a laxative. Supervisors think that children should be breastfed on a schedule, not on demand. Both groups believe that sucking promotes milk production, and that breastfeeding avoids pregnancy.

Supplementary feeding should start at 2-3 months, with juices, noodles, and bananas. Promoters add meat and eggs to this list.

Nurses are well informed about breastfeeding. They urge mothers to breastfeed for six to eight months, and that they wash their breasts with soap and water. Nurses also recommend weaning with supplementary foods begin at three months, because they believe that mother's milk is not enough for the baby after three months. They say that antibiotics reduce milk production.

Doctors too are quite knowledgeable about the advantages of breastfeeding. (Nevertheless in the hospital they give dextrose solution to newborns.) They recommend weaning at four months, with fruits, potatoes, beans, and eggs. They urge mothers to nurse, explaining that mother's milk is more nutritious, cheaper, promotes better growth and healthier children. They advise mothers to wash their breasts before nursing, and are the only

health workers who mention that they urge mothers to wash their hands as well. Doctors urge mothers to get in a comfortable position, and to nurse from both breasts each time.

The complaints about breastfeeding that doctors hear most relate to pain and blockages in the flow of milk and sore nipples. They say that painful breasts, poor nutrition, pregnancy, and chronic disease in the mother are reasons to suspend breastfeeding.

### Diarrheal Disease

Mothers define diarrhea as an increase in the frequency and the fluidity of stools, and they define dehydration as dry mouth and weakness. There are three kinds of diarrhea: one is caused by fright, is usually mild, and self-limiting; the second is infectious diarrhea, which is serious and calls for the attention of a doctor; and the third is teething diarrhea, similar to diarrhea caused by fright. Diarrhea is also caused by lack of hygiene and drinking unboiled water.

To treat diarrhea, mothers give liquids only since solid foods increase diarrhea; doctors have urged them to have the child fast. The liquids that they give are carbonated drinks and citrus juices. Some keep breastfeeding, others do not. When the diarrhea lets up, they give flour. If the diarrhea goes on for two or three days, they seek out a doctor. If the child does not improve, then they go to a traditional healer, to a health promoter, to a pharmacist, or to a nurse.

They identify dehydration when they see the child with sunken eyes, dry mouth, and weakness. The treatment is to give liquids.

For their part, promoters classify diarrheal disease as infectious, from the evil eye, or from teething. Doctors are the only ones who can cure infectious diarrhea. Promoters say diarrhea is either moderate, acute, or bloody. Supervisors add another type -- diarrhea caused by hunger. And they recommend fasting, because they say that doctors recommend fasting. Furthermore, they have to be alert for signs of dehydration, and recommend giving ORS for dehydration. If the diarrhea lasts more than seven days, they recommend intravenous fluids and antibiotics. As causes of diarrhea, in addition to those cited earlier, they add breastmilk when the mother is pregnant and the wind.

Nurses give these causes for diarrhea: infections; foods like meat, beans, and coconut milk; and teething. Treatment for diarrhea: fasting, then more liquids, including carbonated beverages.

Nurses complain that they do not have they don't have enough teaching materials for use with mothers, and they urge that when such materials are produced that mothers be involved in their development.

What doctors say about diarrheal disease is that infectious diarrhea is caused by bacteria, is accompanied by fever, and is the most dangerous. Viral diarrhea is not considered infectious. Infectious diarrhea is treated with antibiotics. Vomiting calls for antiemetics, and any milk given should be lactose-free. Doctors say that the introduction of oral rehydration therapy has improved the condition of patients coming to hospital; they are in a better state of hydration. The doctors do not prescribe antidiarrheals, but they complain that doctors in private practice do because this gives the private doctors greater prestige. The result is that mothers keep giving these medicines to their children when there is a new diarrhea episode. Difenoxilate is sold freely.

In contrast to what mothers, promoters, and nurses say, doctors are sure that mothers take their children to traditional healers first, and if that fails they bring the children to the doctor. Because of this, one of the doctors suggested that the healers be trained and supplied with ORS packets.

For educating mothers, the doctors are against written materials, since most mothers can't read. Use audiovisuals, they say.

### Growth and Development, Malnutrition

The young mothers (14-20) are not clear about growth and development in their children. To them, this topic is a part of nutrition, and they say weaning should be early. Urban mothers think they should give the child less food than the child asks for, and they attribute malnutrition to giving bad food, to disease, and to the mother's lack of tenderness. Rural mothers say lack of tenderness is a cause, and there are spiritist causes -- they say that witches and birds eat the children.

The middle group (21-35) agree with these views, but add that malnutrition can be prevented with breastfeeding, supplementary feeding, and tenderness.

The mothers between 36 and 49 add that hygiene is important in preventing malnutrition. They also believe that beef and eggs are harmful.

All these mothers believe that the Growth and Development Card is only for recording vaccinations.

According to the promoters, growth and development is wholly

dependent on feeding. They recommend exclusive breastfeeding up to two months (but this does not exclude water), then introduce fruit, lemon and tomato juices, mashed potato, cereals, and tea. They begin to alternate mother's milk and cow's milk.

To prevent malnutrition, the promoters in Barahona recommend, in addition to good food, love for the child and exercise.

As for the Growth and Development Card, the San Juan promoters do use it for both growth monitoring and vaccination, while those in Barahona only use it for vaccinations because the Ministry removed their scales two years ago. The San Juan promoters attribute malnutrition in children to the fact that mothers give the best food to the men, while in Barahona they say that the men spend what little money they have on alcohol.

The promoters say these foods are harmful: peanuts, papaya, guava, pomegranate, mango, ripe bananas, and goat meat. Also, they believe that birds, witches, and vampires are responsible for malnutrition. Diarrhea, they say, comes from children swallowing their saliva. And causes of low birth weight are: poor maternal nutrition, diseases in the mothers, her eating too much citrus, smoking, drinking alcohol or coffee, taking birth-control pills or antibiotics, and being too young (under 15) or too old (over 50).

The nurses in Barahona define malnutrition better. The best feeding program, they say, is exclusive breastfeeding for two months (again, they don't count water, so in fact this is not exclusive). Between two months and six months, introduce cereal, fruit juice, bean soup and other soups. After six months, alternate breast milk with cow's milk, and then the baby can share the household diet: egg yolks, chicken, liver, rice with bean soup, and yucca.

These nurses confuse dehydration with malnutrition. The malnutrition most commonly seen is Kwashiorkor. Treatment for diarrhea is to give food with tenderness and to stimulate the child.

They only use the Growth Card for vaccinations, and say that the monitoring of healthy babies is not of interest to doctors. The nurses note that mothers don't suspect that their children are malnourished, that it is the nurses who diagnose malnutrition when the mothers bring the children in with some illness. But the nurses don't tell the mothers how to prevent malnutrition; this, they say, is the doctor's job.

Harmful foods, according to the nurses of Barahona: ripe bananas, pineapples, papayas, avocados, melons, guavas, mangos, and lemons.

The doctors of San Juan do not define growth and development well. They recommend, they say, exclusive breastfeeding for two months, but in fact give these babies water and salt. Both the doctors in San Juan and the doctors in Barahona think that after two months should be fed with cow's milk and other foods, because the mother's milk is no longer nutritious. Though they seem better informed on the causes of malnutrition, they say that the Growth Card should be handled by the promoter or nurse rather than by the doctor. Nor are they familiar with the techniques for early stimulation of children.

### Low Birth-weight

Although low birth-weight is common in these two regions (43% in Barahona, 32% in San Juan), both mothers and promoters say that they rarely see low birth-weight babies. Mothers say low birth-weight is also caused by witches, but mention as well poor nutrition, illness, traumas, smoking, and advanced age of the mother. Some mothers say low birth-weight babies grow faster than normal babies.

No orientation is given to mothers to prevent low birth-weight. There is very little pre-natal care.

As for the promoters, they have little idea of what a low birth-weight baby is. They simply believe that these children are ill, abnormal, and needing more food. They do no special followup for them.

The nurses of Barahona have a better idea about low birth-weight and its causes: smoking, drinking, preeclampsia, anemia, little weight gain, and elevated uterus. They define low birth-weight as less than 2000 grams, while the San Juan nurses say 2700 g. Incidence is not known, there is no registry. While the San Juan nurses say that these babies develop well and are accepted by their mothers, the Barahona nurses say just the opposite. Many believe in a myth that "Indians" take over the mother's body, or that low birth-weight babies have special protection and develop well.

Nurses lack educational material. Many say that dealing with low birth-weight children is not their job, but in Barahona they say that they can orient mothers while they are waiting to see the doctor and that they want a program of Growth Monitoring set up.

Doctors don't know much about the causes of low birth-weight, but they do exams well and identify these babies during pregnancy. But they don't do any work on prevention or education of mothers, and don't know the incidence of low birth-weight. They leave mothers to manage these children as best they can. One

doctor mentions a recommended diet of 50% carbohydrates, 35% protein, and 15% fat -- a formula quite unlikely to be understood or implemented by mothers.

### Summary

Although breastfeeding is high, the giving of water in a bottle right from birth interferes with breastfeeding and introduces disease immediately. There are frequent complaints from the mothers about engorged breasts and sore nipples, at the very time that mothers are saying it is necessary to give other foods after two months because there is not enough breast milk to provide the baby's nutrition.

The strong element of magic present to explain illness and any abnormality makes prevention and treatment difficult. Many foods are considered harmful, and both promoters and nurses think as mothers do about these foods.

Consultation with traditional healers is about 50% because of these magical beliefs. Doctors are not thought capable of dealing with illnesses that arise from magic. The other 50% come to doctors, because neither promoters nor nurses felt able to deal with many health problems, and the mothers much prefer doctors. The doctor has the last word on these non-magical illnesses, enjoying almost unanimous credibility. But the doctor promotes the same feeding plan that the mothers do, and treats diarrhea with drugs, without giving emphasis to oral rehydration therapy.

### Conclusions

#### I. Knowledge

##### A. Growth and Development

Mothers: don't know what it is.

Promoters: a bit clearer.

Nurses: confused about it.

Doctors: confused about it.

##### B. Malnutrition

Mothers: recognize its signs better in children other than their own.

Promoters: like the mothers.

Nurses: better than the promoters.

Doctors: well understood.

##### C. The Growth Card

Mothers: believe it is for vaccinations only.

Promoters: used well in San Juan, but no scales in Barahona.

Nurses: some say the Growth Card should be handled by doctors.

Doctors: don't use it.

## II. Behavior

**Mothers:** For babies under two months, they given breastfeeding plus water, then they add other foods. Focus is more on filling the child than on feeding the child. They withhold many foods from their children, considering them harmful. They believe that witches and vampires cause malnutrition, so doctors cannot deal with it.

**Promoters:** They recommend the feeding scheme cited by mothers, and they believe what the mothers believe about witches and vampires causing malnutrition. Barahona promoters are discouraged by the removal of their scales.

**Nurses:** They believe as the promoters do about fruits, but not about witches and vampires; they don't use the Growth Card, say it is for doctors.

**Doctors:** They don't believe what mothers believe about fruits, witches, and vampires; they don't use the Growth Card, say it is for nurses.

All these groups show a willingness to learn, but there are obstacles. For example, mothers believe that their milk is not enough after two months. They see a healthy child should be fat, and that a normal-weight child is malnourished, and they have deeply held animist beliefs. Promoters share these beliefs. Nurses don't know about early childhood stimulation, and disdain the Growth Card. Doctors also doubt the nutritive properties of mother's milk, and have no interest in growth monitoring. SESPAS does not have a well-baby program.

ATTACHMENT III

LIST OF PARTICIPANTS, WORKSHOP ON REFORM  
OF PEDIATRICS CURRICULUM

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