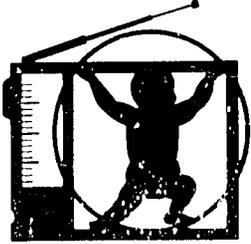


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Communication for Child Survival
HEALTHCOM

Office of Health and Office of Education • Bureau for Science & Technology • Agency for International Development

PREFEASIBILITY STUDY:

Increasing the Availability and Use

of ORS through Social Marketing

in Honduras

PHASE I

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DRAFT

PREFEASIBILITY STUDY:

INCREASING THE AVAILABILITY AND USE OF ORS

THROUGH SOCIAL MARKETING

IN HONDURAS

PHASE I

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I. OBJECTIVES

The purpose of this study is to assist the Honduran Ministry of Health in assessing alternatives to increase the availability of oral rehydration salts through the public and private sector at a national level.

The specific objectives of this study are to:

1. identify alternatives and analyze institutional capacity for the production, distribution, administration, and promotion of oral rehydration salts,
2. identify the demand at a public level for a product like oral rehydration salts, and
3. identify the role of the Ministry of Health and the social marketing program in terms of identifying audience needs, production and distribution of salts, and promotion to insure coordination between these two.

This effort consists of three phases. Phase I is the prefeasibility study to assess the possibilities of a social marketing program for oral rehydration salts and to plan the work for the following phases.

Phase I consists of the following primary tasks:

1. Review and analyze the existing literature on Honduras, social marketing, and social marketing of oral rehydration salts;
2. Analyze through interviews and observation the national capabilities to produce and distribute oral rehydration salts, to administer an ORS social marketing program, and to carry out promotional activities at the national level;
3. Present the results of these activities in a preliminary form to the Ministry of Health for a discussion prior to writing the final report.
4. Write the final report which is to include a) alternatives for the social marketing of ORS including the alternatives for production, distribution, administration, and promotion of the product/program, b) plan of work for Phases II and III, and c) terms of reference for the necessary studies for a full feasibility study.

The duration of Phase I is four weeks from April 3-30, 1986.

II. APPROACH

The approach for conducting the prefeasibility study was four-fold. 1) An extensive review of the literature was conducted. 2) A review of social marketing and the elements essential for a successful social marketing project were reviewed with the representatives from the Ministry of Health. 3) Numerous meetings were held with appropriate organizations and persons in Honduras with expertise in areas related to the prefeasibility study. 4) A series of visits were made to pharmacies to learn about the marketplace. Two representatives from the Ministry of Health participated full time in the study. Representatives from Management Sciences for Health and the Academy for Educational Development participated in select meetings and activities.

The literature review consisted of 1) Honduran studies such as those of Management Sciences for Health, Stanford University/ACT, Ministry of Public Health, ASHONPLAFA, and other institutions in the private and public sector, 2) international literature on social marketing and oral rehydration especially in Latin America, and 3) the experience of other oral rehydration salts social marketing programs throughout the world, especially in Latin America. More than fifty documents were reviewed under this project task. A list of the literature reviewed is presented in Appendix A.

Interviews and observational visits were conducted with institutions and individuals having expertise in the areas of production, distribution, advertising, research, social marketing, and child survival. Meetings were held with representatives from:

Donor Organizations: USAID, UNICEF, PAHO

Ministry of Health: National, local, and community levels

Technical Assistance Contractors: Management Sciences for Health, Academy for Educational Development, TRITON Corporation

ASHONPLAFA: Contraceptive Social Marketing Program and Community Based Distribution Program

Advertising Agencies: APCU, Multi-Media

Laboratories and Droguerías: Francelia, Andifar, Mandofer, Sandoval

Distributors: Schmid and Tentori

Other meetings were held with individuals representing several specialized areas. A comprehensive list of the organizations and persons contacted is presented as Appendix B.

A series of visits were made to pharmacies to identify products sold to customers for treatment of diarrhea and dehydration and

to learn about the role of the pharmacy and the purchasing patterns of consumers when seeking treatment for diarrhea and dehydration. These visits are not considered to be a formal survey, but only are intended to provide first hand, anecdotal information on what is happening in the marketplace. Information included the number and type of products, the price per unit, shelf stock levels, and most frequently recommended and requested treatment(s) among pharmacies in upper, middle, and low income areas in Tegucigalpa. More detailed information on the pharmacy visits is presented in Appendix C.

The Ministry of Health assigned two counterparts to work full time on this prefeasibility study. These individuals represented the Program of Diarrheal Diseases Control (CDD) in the Division of Epidemiology and the Unit for Science and Technology. They participated in the development of the workplan for the prefeasibility study, the development of the interview guides for all meetings, the interviews, and the review and analysis of the information gathered from the meetings and visits to pharmacies.

Two representatives from Management Sciences for Health participated in several of the tasks. The Head of the Operations Research Unit participated in principle meetings with senior officials of the Ministry and the Assistant Head of the Operations Research Unit participated in review meetings and pharmacy visits. The Academy for Educational Development's Honduras HEALTHCOM Field Director participated in key meetings with Ministry of Health personnel and the Senior Technical Director for the HEALTHCOM project in Honduras provided background information on the development of the Honduran CDD Program and insights on the application of social marketing to ORS.

The assignment began on April 3 with a meeting with the Director General of the Ministry of Health to review the objectives of the assignment. The meeting was attended by the Director of the Division of Epidemiology, CDD Program, and the Science and Technology Unit, Management Sciences for Health, Academy for Educational Development, and the Agency for International Development. On April 4 a meeting was held with the technical committee composed of representatives from the Program to Control Diarrheal Diseases and the Science and Technology Unit to review the terms of reference and discuss the workplan for the month. From April 7-28, the prefeasibility team carried out their interviews, observations, and analyses. On April 30 a meeting was held with the technical committee to review the activities to date, present and discuss the findings, and integrate their comments into the work. A debriefing with the Director General and with the Agency for International Development was held on May 2 to review the results of the teams efforts, present the findings, and propose the next steps.

III. BACKGROUND ON HONDURAS AND DIARRHEAL DISEASE

This section is drawn from the Ministry of Health Report, Oral Rehydration Therapy: Evaluation of the Honduras Experience. This represents a comprehensive synthesis of the studies which have been conducted in Honduras.

A. Geo-Socio-Demographic and Health Characteristics of Honduras

1. Geographic

The Republic of Honduras is located in Central America bordered by the Republics of El Salvador, Nicaragua, and Guatemala (see Exhibit III.1). Honduras is the second largest Central American country with an area of 43,277 square miles (112,088 square kilometers). There are two major mountain ranges, more than a dozen large rivers, and tropical lowland areas along both coasts. Major climatic seasons consist of a wet spring (May to October) and a dry winter/fall season (November to April). Average annual temperatures are between 70 and 82 F. Annual average precipitation is approximately 70-100 inches in the northern coastal areas, and 60-80 inches in the southwest.

2. Socio-Economic

In 1984, the GNP in Honduras was Lps. 2,099 (US\$1,049) and per capita income was US\$600. Forty percent of the population has a per capita income of less than US\$100 per year. It is estimated that 40.4% of the population over the age of ten is illiterate. Findings from one study conducted in the eastern region of Honduras show that household illiteracy was 13.2%. Thus, of each 100 families, there are 87 in which one person in the household can read and write.

3. Demographic

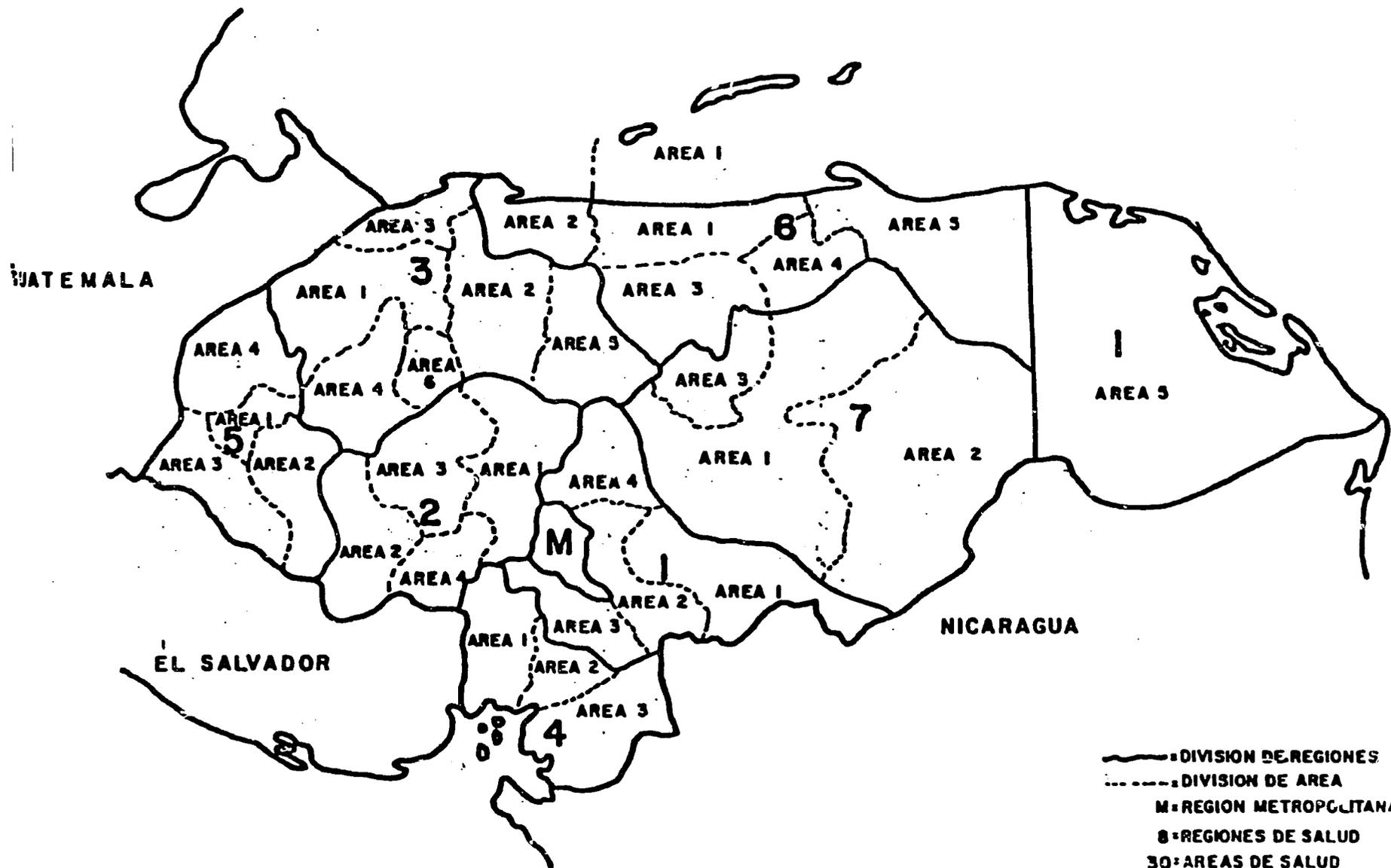
The population of Honduras for 1985 was estimated to be 4,372,487 and in 1986 to be 4,513,940. Approximately 48% of the Honduran population is under the age of 15. Those under the age of one year comprise approximately 4.6%; between one to four years of age constitute approximately 14.5%; those between 5-14 years of age comprise 28.5%. Sixty percent of the population resides in rural areas and 40% in urban areas. Marginal areas of larger urban areas are undergoing a marked increase in growth. Tegucigalpa is growing at a rate of seven percent a year. Rural populations are dispersed: it is estimated that of the more than 20,000 populated places, 40% have less than 60 houses.

Each of these conditions influences significantly the access to and coverage by the oral rehydration therapy program.

REPUBLICA DE HONDURAS

Ministerio de Salud Publica

DIVISION POLITICA DE SALUD



4. Health

Malnutrition is a major problem in Honduras. Seventy-six percent of the children under the age of five are suffering from some degree of malnutrition. Principal causes of morbidity and mortality are diarrhea, acute respiratory infections, and immunopreventable diseases. Infant mortality rate (IMR) for 1985 was estimated to be 80/1,000 from the National Demographic Survey of 1983. The IMR for 1970 was approximately 130/1000.

The population under the age of one, 4.6% of the population, accounts for almost one-third of the total deaths. Between 30% and 50% of the deaths in this group are associated with diarrheal diseases. The majority of these deaths occur in the home.

It is estimated that 70% of the population has regular access to some type of institutional health services, whether public or private. However, actual coverage depends on the program: 90% of the population has been reached with immunizations and 20% have been treated for diarrhea. The population also uses traditional medicines to treat diarrhea, including massage, the use of purgatives, lifting the "mollera," and drinking local herbs.

The health system has been structured to address the institutional and community levels. In the case of diarrhea, 75% of diarrhea cases do not seek institutionalized health services, but rather treatment occurs at home with modern, traditional, and local resources.

The MOH institutional system is organized on five levels: Rural Health Center (CESAR) with an auxiliary nurse; Health Center (CESAMO) with a physician and professional nurse; Area Hospital with specialized medicine; Regional Hospital, and National Hospital. The community system consists of a trained midwife (partera), the Guardian of Health, the Health Representative and the Malaria Volunteer. This is the basic MOH network for promotion, dissemination and use of oral rehydration therapy.

B. Status of Diarrheal Disease

1. Morbidity

Calculations based on international estimates suggested by PAHO/WHO show that there are more than 2,000,000 episodes of diarrhea annually in children under five years of age. Each child has two to five episodes, with an average of three episodes per year per child. Twenty percent of the children under the age of five were reported to have had an attack of diarrhea during the preceding three days in the Maternal Child Health Survey of 1984. For children under the age of five, the 1983 morbidity rate was estimated at 219.4/1,000 and the 1984 rate was estimated at 192.4/1,000. The rate of morbidity decreases with the increasing age of the child with the exception of a peak occurring among children of one year of age.

**PREVALENCE OF DIARRHEA IN CHILDREN
ACCORDING TO AGE AND RESIDENCE**

Residencia	Total	EDAD		
		Menor de 1 Año	1-2 Años	2-3 Años
Total	20.2 (3596)	25.2 (783)	29.2 (774)	18.7 (720)
Teg/SPS	16.2 (914)	20.0 (195)	23.7 (198)	17.3 (191)
Resto	20.2	22.4	30.7	24.6
Urbano	(872)	(192)	(189)	(167)
Rural	21.4 (1810)	27.5 (396)	30.4 (387)	17.6 (362)

FUENTE: Encuesta Nacional de Salud Materno Infantil

2. Mortality

Diarrhea is the primary cause of mortality in children under one year of age and in children between one to four years of age. It is associated with 30-50% of the deaths in this age group. Between 1981 and 1984, the rate of hospital deaths attributed to diarrhea attacks in children under the age of five decreased from 25 per 10,000 inpatients to 15. The cause for the decline is not known yet; whether it represents a process linked to the decrease in overall infant mortality or to the timely use of ORS at both the hospital and home level is unknown at this time.

3. Seasonal Variation

Diarrheal disease occurs all year long with an increase between the months of May and August. This is attributed to an increase in rainfall which produces contamination in the water sources and is associated with the lack of proper excreta disposal systems.

4. Age and Maternal Breastfeeding

Morbidity is reported to increase as age increases and is substantially associated with the weaning process, introduction of supplementary foods, and greater mobility of the child. The 1984 Maternal Child Health Survey reported that 56.2% of children under the age of three months, have had some type of food other than mother's milk. In those under the age of five months, the rate for exclusive breastfeeding with mother's milk is only 30%,

and the remaining percent are not breastfed at all. By the age of five months, 70% of children are subject to food regimes which imply a greater risk of diarrhea disease.

5. Comparison of the Behavior of Diarrhea-Caused Morbidity and Mortality

A review of the morbidity curve shows that the risk of becoming ill is greater following the first year while the risk of death is greater among children under the age of one.

C. Development of the National Program for the Control of Diarrhea Diseases

1. PROCOSI I and II

In 1978, the Academy for Educational Development was contracted by the United States Agency for International Development (USAID) to implement the Mass Media and Health Practices (MMHP) Project. The goals of the project were twofold: a) develop a systematic communications methodology which integrated mass media, print, and interpersonal communications, and b) institutionalize that methodology within host institutions in two countries. In Honduras, the MMHP project worked with the Division of Education within the Ministry of Health. The project in Honduras, which was named Proyecto de Comunicacion Masiva para la Salud Infantil (PROCOSI), was initiated in Health Region 1 to apply the methodology to oral rehydration therapy.

Stanford University was contracted to evaluate the project. The results of this project were used to develop PROCOSI II and also served as a foundation for development of the national CDD Program within the Ministry of Health. The Stanford University/ Applied Communication Technology, Inc. (ACT) evaluation with a panel of 750 mothers from 20 communities showed that the number of deaths in children under five associated with diarrhea dropped by 40% to 24.4% during the two years of the project. After two years over one-third of all episodes of diarrhea were being treated with Litrosol (the locally produced salts). Of those who said they used Litrosol at the end of two years, over 95% knew how to mix it properly and an average of over 80% reported giving the correct daily amount. A detailed examination of mixing data from an in-home observational study of 36 children established the basic safety of the ORS solutions prepared in the home.

In 1983, the project was extended from Health Region 1 to Health Regions 2, 4, and 7. Health technologies were expanded to include tuberculosis, immunizations, and malaria as well as oral rehydration therapy. Because the expansion was based on the same methodology and management systems, it was called PROCOSI II.

This project supported the new CDD Program of Diarrheal Disease Control by distributing PROCOSI I materials at the national level.

2. National Program for the Control of Diarrheal Diseases

In April 1982, the Ministry of Health created the Program for Diarrheal Disease Control (CDD). The purpose is to decrease mortality in children under the age of five years with the primary objective being to decrease dehydration as the final cause of death and morbidity. This program consists of four strategies:

- a) treatment of diarrhea episodes through the use of complete formula ORS;
- b) mass education of the public related to the prevention and treatment of diarrheal disease;
- c) promotion of maternal breastfeeding; and
- d) promotion of environmental sanitation.

The program is based on the promotion, dissemination, and use of ORS packages based on the WHO formulation which were locally produced and labeled Litrosol. The program focused on distribution and use of Litrosol through MOH establishments (hospitals and health centers) and community volunteers (Guardians). Mothers were oriented and motivated to use Litrosol.

The use of home preparation of a sugar/salt solution, the use of volunteers at the community level other than Traditional Birth Attendants, and the distribution of packets through private channels was determined to be inappropriate during the early stages of program development. At present, other volunteers--the Health Representative, and the Malaria Collaborator--are being incorporated into the program for promotion and distribution of packets.

To date, approximately 2,000 MOH employees have been trained in ORS, and a study was carried out at the national, regional, and local levels to ascertain the knowledge, attitudes, and practices of this personnel. This study revealed that 75% have received training in the formal norms, however the study indicates a tendency in health personnel to decrease the use of Litrosol with more acute cases of dehydration. This is consistent with the results of the 1984 Maternal Child Health Survey in which it is noted that there was a decrease in the use of Litrosol in more severe cases of dehydration. However, the use of Litrosol combined with other medications increased with the severity, as measured by the existence of vomiting, and mucus and blood in the stools.

3. Financing

The financing of the CDD program from 1981 to 1985 has increased substantially. In 1981, the budget was US \$17,092 and in 1985 US \$1,173,956. This reflects increased funding from the Government of Honduras and international donor agencies. Several studies

have been conducted which demonstrate that the public is paying considerable amounts in the private sector for treatment of diseases. The places where drugs are sold privately are the principal sources for obtaining medication. Co-financing alternatives between the community and the central government are being considered.

It appears that the belief that campesinos are unable to pay for any health service is not entirely true, as they are willing to pay for services which they consider important. The results of these studies also point out that up to 93% of the population spends between US \$0.50 and US \$1.50 three times per month for the application of injections. Up to a third of the population spends money on a series of daily injections for a period of two weeks, or spent time living in a place where they received the treatment for one to two months duration on an average of once a year.

According to the study of financing alternatives, the population spends US \$8.25 per illness. Private medical services are the most expensive (US \$34.45) those offered at the CESAR level are the least expensive (US \$0.72). In cases treated at home, the average expenditure per illness was US \$2.55, largely on medicines. The most frequent sources from which community members obtained their medicine is local: the pulperia (small store) (28.8%) and the pharmacy (22.5%). The second most important source was the MOH services (29.8%), including the Guardian of Health (3.4%).

Of the families interviewed, 93.5% responded that they would be willing to pay for the services provided in the MSP health centers; only 3.1% of the families interviewed stated that they could not pay due to lack of resources. Ninety-two percent said they would be willing to pay for medicine in the health centers.

In general, it is concluded that a large portion of health financing is carried out in the private sector, and that the public would be willing to pay for certain public services at a reasonable cost in accordance with their financial capacity and with the guarantee that the necessary resources would be available and the funds would revert to the benefit of the community itself. An adequate balance between official financing and that obtained at the community level may signify a notable thrust for the extension and strengthening of ORS activities given that the basic technology for ORS is relatively inexpensive and highly effective.

4. Supplies

Supply requirements as defined by WHO are calculated based on the number of cases expected and the number of children under the age of five. In the past, estimates exceeded requirements (since as many as 75% of all cases of diarrhea do not seek institutional assistance), and an abundance of ORS packets were distributed at the national, regional, and local health service levels. By 1985

the estimated need for ORS was based on 250,000 children, but by June only 21% of this population group had been reached. Product distribution is a critical aspect of an ORS program.

a. Production

The country began producing ORS in 1981. Maximum production capacity was 8,000 packets at a cost of US \$0.16 per packet. In contrast, imported packets cost US \$0.12 per unit. Due to problems with equipment at Patronato Nacional de la Infancia (PANI), production has decreased. Equipment has recently arrived which increases capacity to 3,000 packets/hour. Difficulties of importing raw materials can result in production delays. As a result, donor agencies continue to be the primary suppliers of ORS as shown on the following chart.

**SOURCES OF ORAL REHYDRATION PACKAGES
1980 - 1985**

Tegucigalpa, D.C. Honduras, C.A.

	1980-1981	1982	1983	1984	1985/abril
PANI (Producción Nacional)	760,580	266,400	1,000.000	1,000.000	500.000
UNICEF	135,950	660.000	900.000	800.000	1,500.000
OPS	-	130.100	130.000	-	-
US/AID	-	-	800.000	1,000.000	-
GOB/ITALIA	-	-	-	-	1,000.000
TOTAL	896.530	1,056.500	2,830.000	2,800.000	3,000.000

FUENTE: Programa de Control de Enfermedades Diarreicas, MSP. Honduras, C.A.

b. Distribution

In 1984, an evaluation of the ORS supply system was conducted and revealed that deliveries to regional warehouses varied between two and six months. Fifty-three (79%) of the 67 health centers studied were at no time without ORS during the preceeding year. Although fixed facilities had supplies of ORS, the amounts were not in accordance with the norms. The rural health center had the highest degree of compliance with the supply norm. Problems were also found in the daily registry of stock receipts, deliveries, and orders.

At the community level, ten Guardians had no supplies. This is a serious problem as the majority of diarrhea cases are treated locally, and as the Guardian is the only resource with an MSP institutional link that handles ORS. This situation contributes to the loss of prestige of the Guardians and their motivation as voluntary health agents.

5. Community Infrastructure

The community is an active participant in the process of improving its welfare. The Traditional Midwife, the Guardian of Health, the Health Representative, and the Malaria Volunteer are key components of the Ministry of Health at the community level. However, there is an educational and cultural gap which results in a clash between health institutional personnel and the community volunteers. Health personnel from the CESAR to Hospitals place social and intellectual barriers between themselves and the campesinos. At times they mock their beliefs and criticize the campesinos for their lack of understanding of new advances in medicine.

Health personnel complain that campesinos do not like to wait at health centers and attribute this phenomenon to the lack of knowledge regarding the system and to their poor education. Campesinos do not like to wait because of prior negative experiences; they fear having to wait and then not being attended to. When a campesino has had a bad experience he refuses to return and relates this negative experience to his family and neighbors.

Community participation activities of nurse auxiliaries at the CESAR is minimal, as they spend their time in curative and immunization activities. Little time remains for community organization and little time, other than the monthly continuing education meetings, is spent with the community health volunteers.

The breakdown in supplies and adequate supervision seriously affects the motivation and participation of the community volunteers and users. The lack of remuneration of volunteers hinders their continued participation.

Hondurans tend to seek out modern medicine, or at least a close combination of traditional and modern measures/medicines. In a study carried out in one area of the country, it was demonstrated that 17.5% of the population has had contact with traditional healers. Thirty-two percent have had contact with health volunteers and 49.9% have had contact with health establishment centers.

A study on the role of the Traditional Midwife in Santa Barbara showed that 60% of the midwives are sought out to treat children's diseases; 90% have been consulted for cases of diarrhea and/or mollera caida. When questioned on the treatment

used in the case of diarrhea, 19% used Litrosol; 10% used purgatives; and 12% reported used other medications. A considerable number use traditional treatments: 26% use herbs; 17% massage; and 24% levanto la mollero. Only 19% refer patients to the health center.

In cases where the Guardian of Health was consulted, the use of Litrosol reached a level of 80%. However, consultation of this individual is relatively low (10%). In the study on Financing Alternatives, 3.1% consulted the Guardian for any illness.

D. ORS and the Honduran Commercial Market

A wide variety of products for treatment of diarrhea and dehydration are available in commercial retail outlets. Products range from powders to oral solutions. Only one product was available which conformed to the World Health Organization Formula. Appendix D presents the WHO recommended formula. This product is produced by Ceiba-Geigy, marketed locally by Ceiba-Geigy staff and imported and distributed by Mandofer, a large Laboratorios Y Drogueria. It sells for L 1.89 (US \$0.95) and has been in the market for about six months. Sales are reported to be low. The formulations for other products varied considerably. Appendix E presents a list of the non-standard formulations.

In order to learn about the market place, a series of visits was made to a dozen pharmacies in three different socio-economic neighborhoods. The purpose of the visits was to compare the range of products available, product per unit costs, stock levels, product preferences, and purchasing patterns. Some information was collected on awareness of Litrosol. Appendix D presents a summary of this information collected from these visits.

In summary, there are more than ten products available in pharmacies to treat diarrhea and/or dehydration. More products at higher prices are available in higher income neighborhoods; fewer and lower priced products are available in lower income neighborhoods. Prices range from L 0.53 (US \$0.21) to L 11.00 (US \$5.50). The product most frequently recommended by pharmacists is Pedialite. Appendix F presents more information on the pharmacy visits.

IV. SOCIAL MARKETING

A. Definition

Social marketing is the application of commercial marketing techniques and business practices to produce a social benefit. It is a hybrid of a public health oriented social action program grafted onto commercial marketing and distribution programs. It is the application of marketing tools - marketing research, product development, pricing, accessibility, advertising, promotion, and distribution. It encourages societally-beneficial behaviors by appealing to people's self interest.

This definition emphasizes three key ideas. First, social marketing is not essentially different from regular marketing. It uses standard marketing tools and analytical techniques. Second, social marketing is "social" because it encourages behavior change which will benefit the society as well as the individual. Finally, social marketing encourages people to change their behavior by appealing to their self-interest (greater convenience, better results, etc.) rather than through applying coercion or appealing to authority.

B. Differences between Commercial Marketing and Social Marketing

The PRITECH Workshop on Social Marketing in 1984 discussed the differences between commercial and social marketing. The following is drawn from the report on the workshop and the presentation by William Novelli, President of Needham Porter Novelli, a social marketing firm. Commercial marketing represents a powerful technology for selecting, producing, distributing, promoting, and selling goods and services to a wide variety of people in every possible political, social, and economic context. It creates products (most of which are useful); it makes the products available and affordable to particular consumer segments, and it motivates consumers to buy and to use a product by illuminating its benefits.

Social Marketing applies the principles of commercial marketing for a socially beneficial goal. This is referred to as the 4 P's: Product, Price, Place, and Promotion.

Typically, social marketing products are subsidized to ensure that the consumer cost is low enough to reach those unable to pay commercial prices, but the actual sale of the product is considered critical because it contributes to the marketing process in four ways:

1. It helps to ensure consumer motivation. If hard earned money is used to pay for a product, then the person really wants it and will use it.
2. Marketing increases internal efficiency. Sales are a simple and clear-cut measure of program success. Poor sales are a motivation to examine the program itself and change what is wrong.
3. Sale of a product stimulates the entrepreneurial

instincts of program managers; it provides an internal stimulus to succeed which makes these programs more efficient than programs whose incentives are independent of program performance.

4. Sales contribute toward cost recovery.

A number of differences exist between commercial and social marketing. These differences include:

Social products are more complex than commercial ones: It is one thing for a consumer to choose between Coca Cola and Pepsi and another for a rural woman to learn the correct instructions for mixing a packet of ORS.

Social products often are more controversial than commercial ones: It is one thing to sell a new perfume and another to motivate a young man to use modern temporary contraception when his status in the community depends upon having children.

Social products are less immediately satisfying to the customer: It is not much fun to walk several hours, wait in line several more hours to receive a vaccination and have your husband complain the next day because your child was crying all night. In contrast, you drink Coca Cola and it tastes sweet, pleasant, and quenches your thirst.

Audiences for social marketing programs have fewer resources than most consumers: The poor are rarely an explicit audience for commercial marketers. Social marketers are committed to reaching those people with the least time, status and mobility; people who are often illiterate, isolated, sick, discouraged, and not served by existing programs.

Social marketing programs require spectacular results: Ministries of Health and Donor Agencies want 30-50% reduction in infant mortality. Changes of 2-3% are not acceptable. However, commercial marketers would be pleased with a 2-3% increase in market share after six months of advertising.

Other differences include:

- o greater resistance to audience research and audience segmentation in social marketing programs;
- o governments are rarely able to maintain continuity and support long-term marketing efforts;
- o social programs have much less control over the delivery system. Government intermediaries are not motivated by sales incentives;
- o social marketers are asked to teach many things at once, not just focus on the single most important benefit of a new soap;
- o consumer research is difficult because of the very nature of social marketing products; and

- o competition often comes from colleagues in competing for scarce resources.

These factors and many others make the job of social marketing substantially more difficult than that of the traditional commercial sector.

C. Elements of Social Marketing

The eight main elements of a social marketing project which are described in detail in the Population Report "Social Marketing: Does It Work?" (1980) are:

1. establishing management and operating procedures,
2. selecting the products to be marketed,
3. defining the consumer population,
4. determining brand names and packaging,
5. establishing the product price,
6. determining the point of sales,
7. arranging and maintaining a distribution system, and
8. conducting the advertising and promotion.

Effective management and operating procedures require sufficient financial and human resources with experience in marketing, government support, an adequate balance between the responsiveness and flexibility of the private sector and the cautiousness of the government, and the authority to make the necessary marketing decisions in a timely fashion.

Product selection will depend on variables such as cost, quality, popularity, and acceptability.

The consumer population or "target audience" should be defined in terms of sex, age, residence, income, and literacy. Marketing research should be conducted to determine the purchasing habits and preferences, and to insure that the products, packaging, and promotion used are what potential customers want and will respond to.

The price of the product depends on a variety of factors: the ability of the consumer to pay and the margins necessary to satisfy distributors and retail outlet owners. A balance must be found between a price that is too high which discourages potential consumers from buying and a price too low which may convey that the product is inferior or of poor quality.

The outlets for selling the products can vary from pharmacies, to puestos de ventas de medicinas, to small consumer good stores. More outlets means more convenience for consumers, but assuring regular supplies, ample point of purchase materials, and a reasonable level of sales at each outlet is a challenge.

A strong distribution system is essential for a successful social marketing program. Commercial distributors have been more effective than government distributors and can perform many useful functions. Special efforts may be necessary to persuade

commercial, multiple product distributors to carry new, low-profit products.

Promotion and brand specific advertising is a key element in all marketing. Consumer demand responds to promotion and product advertising. With good promotion and advertising, sales of comparable products have increased.

D. Principles of the Social Marketing Process

As stated in the report A Model for Market Research prepared by Needham Porter Novelli (1983), the eight elements of social marketing previously described are integral to the process of marketing. Marketing is an established discipline in the business sector and new among social and health organizations. Social marketing programs must balance social goals with commercial entrepreneurial approaches. The basics of stimulating, maintaining, satisfying, and measuring consumer demand are marketing issues. The following is a summary of marketing and the marketing process as it relates to social marketing.

Marketing is the analysis, planning, implementation, and control of carefully formulated actions designed to bring about voluntary exchanges of values with target markets for the purpose of achieving organizational objectives. It relies heavily on designing the organizations offering in terms of the target markets' needs and desires, and in using effective pricing, communication and distribution to inform, motivate, and service the market (Kotler, 1982).

Marketing is a managerial process. It requires skilled personnel to analyze, plan, implement, and control the marketing organization and its actions. Marketing does not consist of random trials and errors. It seeks to achieve market response through carefully formulated actions. The key to marketing is the exchange between an organization and its "customer" or target audience. A distinguishing feature of marketing is its attention to target markets. It is important to segment consumers by attributes. Effective marketing designs the products in terms of the target markets needs, desires, and expectations. Marketing utilizes what is termed the "marketing mix". The set of tools in this mix are product design, pricing, promotion, and distribution.

Marketing is a process for solving problems and achieving organizational objectives. It provides a framework for moving in an orderly, disciplined, data based fashion from problem to solution. Marketing research is essential to the marketing process. Marketing strategies rely on an understanding of market place changes, customer behavior, and competitive factors.

The following process model for marketing analysis, planning, implementation, and control is circular or iterative with the last stage feeding back into the first in a continuous cycle of replanning and improvement. These six stages are: 1) analysis, 2)

planning, 3) development, testing and refining of the plan, 4) implementation, 5) assessing in-market effectiveness, and 6) feedback to stage one. This process is designed to take into account consumer wants, needs, expectations, and satisfactions/dissatisfactions; formulate program objectives; utilize an integrated marketing approach and marketing mix; and continuously track consumer and market response.

E. Lessons from Experience: What Makes a Successful Program

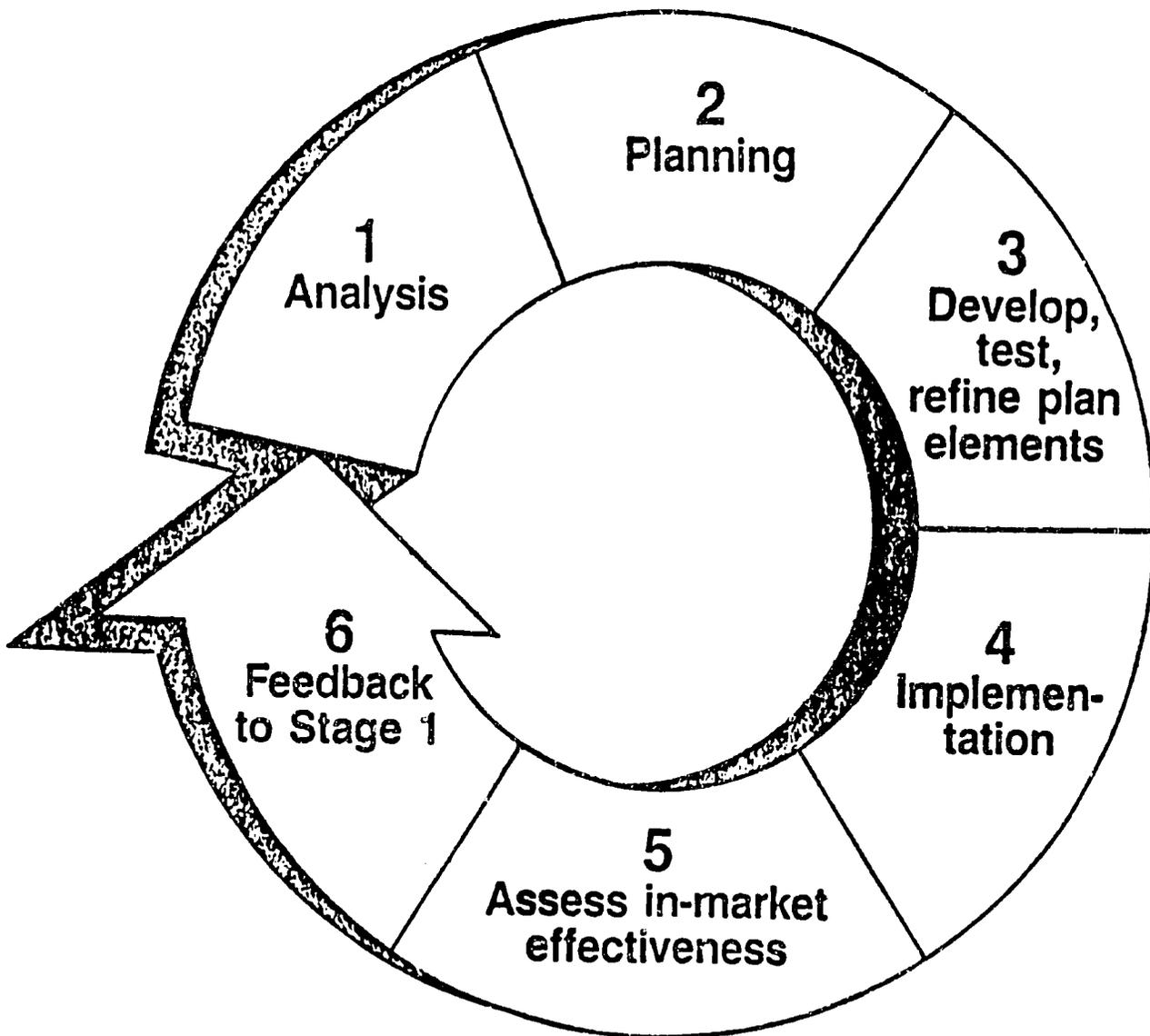
Many lessons have been learned over the past two decades on what has and has not worked in social marketing programs. These lessons described below focus on the organizational aspects of the social marketing project and is drawn from AID's Experience with Contraceptive Social Marketing: A Synthesis of Project Evaluation Findings, (1985).

The organizational aspects of social marketing projects have varied from country to country. The various projects can be grouped into three models: projects managed by government agencies, projects managed by semi-autonomous organizations, and projects managed by private sector organizations.

Projects managed by government agencies--(Country examples are Jamaica, Ghana and India): In most cases the government agency contracts out specific tasks, such as distribution, packaging, and advertising to the commercial sector, but not the overall implementation responsibility. The general wisdom is that social marketing projects tend to operate most effectively when outside the government structure. Government bureaucracies are structures of checks and balances which make quick decisions and actions difficult. Commercial sector companies have management structures that enable rapid responses to changing market conditions. Programs in government organizations have low-paying civil service salary structures which tend to make it difficult to attract individuals with top management and marketing skills. The staff incentive system in governments tends to be less directly tied to performance than is true in commercial organizations.

Projects managed by semi-autonomous agencies--(Country examples are Egypt, Nepal, and Bangladesh): The program is generally operated by an independent local organization. The project receives government support although it is not officially a part of the government. Government interests are represented through participation on an Advisory Board. These programs are managed by independent organizations, but with accountability to a Board of Directors/Advisory Board with government and non-government representation. This model enables greater communications with and support by the government without hampering everyday operational decisions.

The Marketing Process



Projects managed by private organizations--(Country examples are Mexico and Honduras): This model can be implemented through a non-profit or for-profit organization. Experience indicates that many host governments may have objections to placing the project completely in the private sector with no public sector oversight. Governments are concerned that the existing organization will be driven by its own motives.

Management characteristics have been identified as one of the most important factors affecting a social marketing projects performance. Appropriate management skills, continuity, commitment, and flexibility to make timely operational decisions are key to project success. One of the most critical aspects is the management teams' ability to control its operational activities with a reasonable degree of autonomy and flexibility. Day to day operational control is required to allow quick and informed responses to changing market conditions. Too many actors involved in daily decisions lead to delays and confusion over lines of authority.

F. Applications to Oral Rehydration Salts

The following is a section from an unpublished document by Elizabeth Mills Booth, HEALTHCOM Senior Technical Director, on the application of social marketing to child survival programs.

"Next to contraceptives, social marketing programs and concepts have been most frequently applied to ORT. This experience has provided some initial insights for success. The next few years will focus on assessing innovative public/private sector management models to increase ORT coverage, product development for better defined audience segments, a better understanding of the ORT user continuum, and maintenance of ORT usage."

"PRODUCT: ORS represents a varied product line ranging from expensively packaged tablets or premixed solutions to low-cost home solutions. Many countries will be able to develop a complex product line for various audience segments, for example, a pre-mixed solution for A and B audiences, a tablet to be distributed through physicians, and different packaged and priced packets for the D and E audiences."

"There are two primary constraints to marketing ORS. The first is the need for consumer education; consumers must know how to correctly mix and administer ORS, adopt related dietary practices, and understand when to seek professional help, not just purchase a product. The second constraint is that of product positioning. ORS is a difficult product to position because it does not stop diarrhea which is what most mothers want from a diarrhea treatment. The promotion/communications strategy must identify a strong product position for each ORS product."

"PRICE: ORS has relatively high cost in terms of time it takes to obtain a packet and the time necessary to administer it slowly over several hours. In general, mothers have demonstrated that

they are willing to pay that price, but planners should attempt to reduce these costs as much as possible in their marketing and communications strategy."

"In terms of actual sales of packets, recent programs have demonstrated that users are willing to pay for ORS packets. They are even willing to pay for the same product that is distributed free of charge through the MOH if it is distributed and priced in response to their needs."

"PLACE: One of the principle constraints in most programs is the distribution systems of ORS packets. ORS is simply not as easily available as other treatments mothers are using. Planners must attempt to provide market penetration as closely as possible to where mothers presently obtain treatment."

PROMOTION/COMMUNICATIONS: Target audiences include:

1. Physicians: Many physicians are not convinced or committed to ORT, viewing it as a second-class treatment. Even those who use ORT frequently begin using intravenous therapy if the child has moderate or severe dehydration. Inappropriate use of antibiotics and other drugs is still widespread throughout the world resulting in increased and unnecessary costs for both the public health system and the consumer. Marketing research resulting in strategies specifically for these key decision-makers will be a critical element of many ORT social marketing programs. Public sector programs can build on and utilize the private sector strength and experience at detailing to physicians.

2. Pharmacists, small store owners, traditional healers, and other current sources of diarrhea treatment which could be used to deliver ORT: Little has been done in the detailing and education of these service providers. As ORT social marketing expands, innovative marketing strategies will be needed to make these opinion leaders part of the ORT team.

3. Users: More work needs to be done on developing and understanding the user continuum for ORS. Why do users try the new product? Why do they continue to use or stop using the product? ORT social marketing also needs more well defined target audience and product lines. Key educational messages include: a) the name of the product, b) where it can be obtained, c) when it should be used, d) product promotion-why should mothers use it; what does it do in comparison with treatments mothers are presently using, e) how to mix, and how to administer, f) feeding and breastfeeding during diarrhea episodes, and g) when to seek help from professional providers."

V. IMPROVING THE AVAILABILITY AND USE OF ORS IN HONDURAS

A. Goal

In order to reduce infant mortality, the Ministry of Health is planning to increase the availability and use of ORS on a national level through the public and private sector. This will be achieved by strengthening the MOH activities at the community level (Component 1) and by developing a social marketing program for ORS (Component 2).

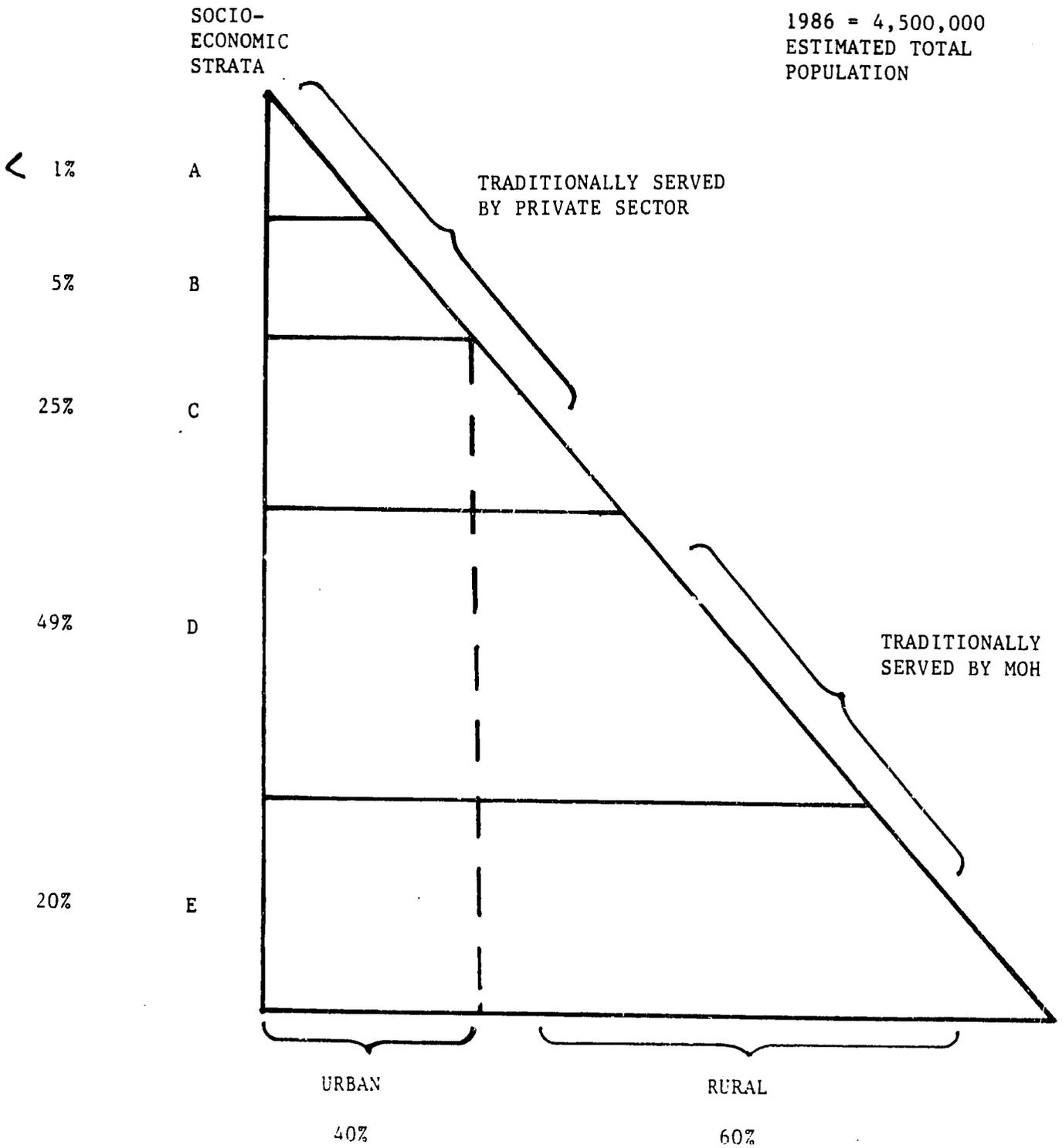
B. Defining the Need

Defining the need for program services and delineating the target audience is a primary component of a prefeasibility study. Although each of these components has the same primary goal--reducing infant mortality through increasing the availability and use of ORS--the means by which this goal be achieved will varies with each component. Each component will be developed to focus on institutional strengths. The target audiences will be segmented in order to maximize program resources and impact. To define the target audience for the MOH/Community Level and the ORS Social Marketing Program (ORS/SMP), it is important to examine various segments of the Honduran population, their characteristics, and how they traditionally receive health care and ORT treatment. This section provides a conceptual framework for defining the target audience and will serve as a corner stone for developing the marketing research to be conducted in Phase II.

Exhibit V.1 presents a graphic segmentation of the Honduran Population's General Characteristics.

GRAPHIC SEGMENTATION
OF HONDURAN POPULATION

GENERAL CHARACTERISTICS

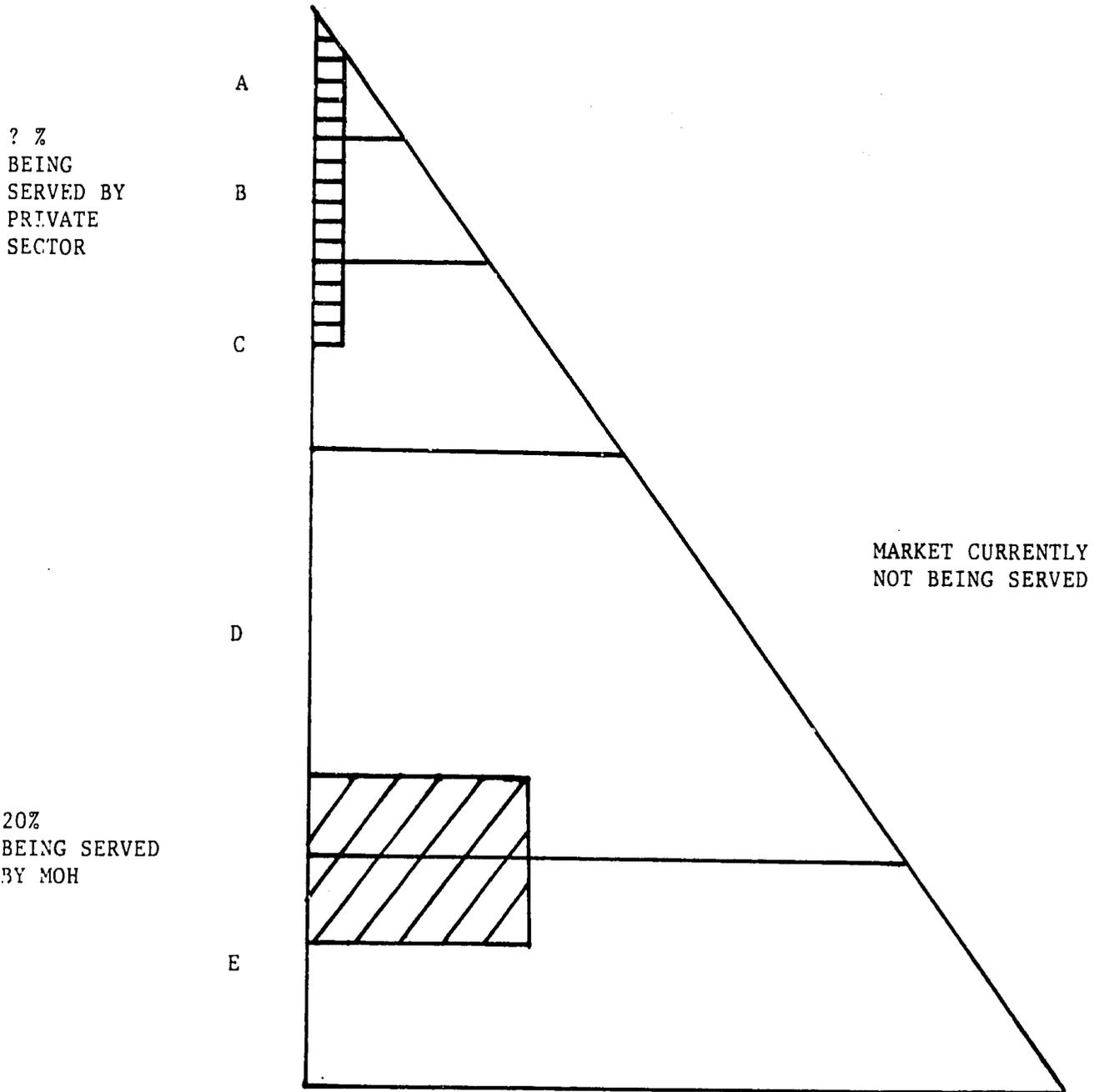


It is estimated that in 1986 the Honduran population will reach 4,500,000 with 40% of the population residing in urban areas (one third of the total population is in Tegucigalpa and San Pedro Sula) and 60% in rural areas. The Honduran population can be stratified into five socio-economic groups. As shown in the exhibit, it is estimated that the A group (highest income earning group) is approximately 1% of the population, B is 5%, C is 25%, D is 49%, and E is 20%. An unknown percentage of the E class group is outside of the cash economy. Traditionally, the private sector serves the A, B, and a significant portion of the C group since these people have the ability to pay for private medical care. Health services provided through the infrastructure of the MOH traditionally are used principally by the D and E groups and some by the C group. However, since a large percentage of D and E groups reside in rural areas, access to health facilities is limited in some instances. According to the 1980 Health Sector Assessment, only 31% of the population had reasonable access to MOH facilities and 31% had limited access. (Reasonable access is defined as living within 45 minutes walking time or 3 Km of a CESAR or CESAMO. Limited access is between 45 and 90 minutes.) It is likely that this has improved the past several years with the increase in number of rural health facilities.

It is reported that approximately nine percent of the population receives treatment from the private sector. Since health status is better in A and B groups, the problems of diarrhea, dehydration, and infant death due to dehydration from diarrhea is not as severe as in the C, D, and E socio-economic groups. As shown in Exhibit V.2, a small percentage of treatment for diarrhea and dehydration is provided by the private sector. It is reported in Oral Rehydration Therapy: Evaluation of the Honduran Experience that the Ministry of Health is providing approximately 20% of the ORT treatment.

GRAPHIC OVERVIEW:

HONDURAS POPULATION RECEIVING ORT
FROM THE PUBLIC AND PRIVATE SECTORS



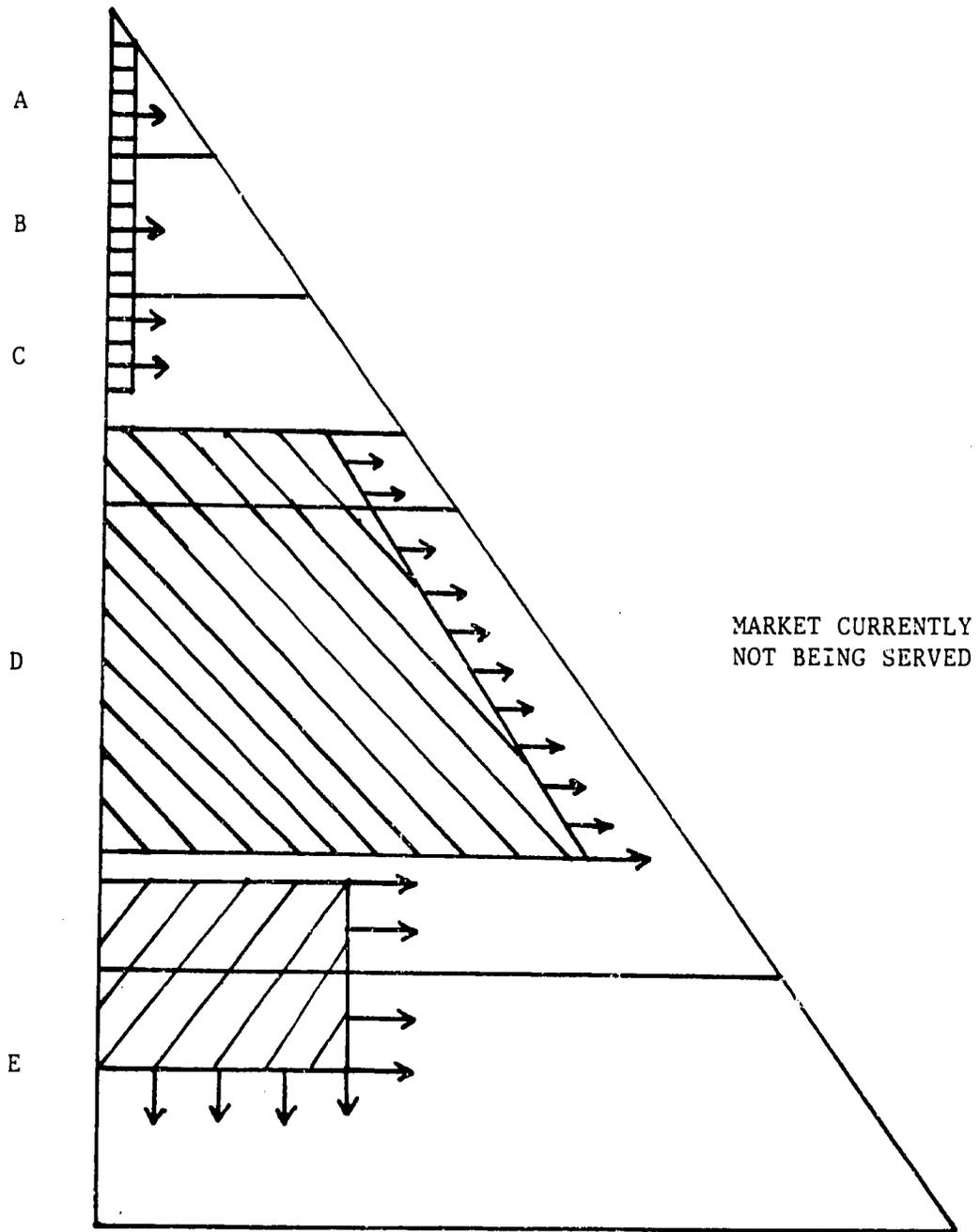
As is evident by viewing this exhibit, a large percentage of the population is not being served currently for ORT. Reasons may include the inability to pay for products available through the private sector channels, and/or inaccessibility of or choice not to use MOH health facilities. Thus, the primary need is in the C, D, and E groups.

Component 1-MOH/Community Level will focus on expanding ORS product availability through the Community Health workers and Component 2-ORS/Social Marketing Project (ORS/SMP) will focus on increasing availability and use of ORS in the private sector through commercial distribution channels and marketing of a specially designed brand specific demand creation program. SMP is meant to complement the services of the existing private sector and those provided by the government. Exhibit V.3 presents a graphic view showing the conceptualization of how the unmet need would be met by each of these two program components.

GRAPHIC PRESENTATION:

ORS/SOCIAL MARKETING MEETS UNMET NEED
(COMPLEMENTING MOH AND PRIVATE SECTOR SERVICES)

? %
BEING
SERVED BY
PRIVATE
SECTOR



MARKET CURRENTLY
NOT BEING SERVED

20%
BEING SERVED
BY MOH

C. User Continuum

With the initiation of PROCOMSI and the expansion nationally through the MOH's CDD Program, there is a high degree of brand awareness of Litrosol (the MOH ORS product), a high percentage of knowledge on how to mix the product and use it properly. Most of what is known about ORS user profiles is from PROCOMSI, which is discussed below briefly. New data on user characteristics will be available in the near future which will be drawn from the 1984 ENSMIH study.

The Stanford University/Applied Communication Technology (ACT) Summative Evaluation provides some insights into characteristics of Litrosol users in Region I between 1980 and 1983.

Characteristics of users were examined for all mothers and for mothers split by county seat and non county seat as place of residence and split by level of health care available in place of residence. Of the 60 variables examined, 19 were found to be significantly related to use in at least one of the comparisons in the Exhibit 4. The main finding was that of users were more likely to live in a rural area and in areas with a low level of institutional health care. Among rural (non cabecera) mothers, users read better than nonusers. Among mothers living in cabeceras, there is some indication that users are less wealthy than non-users.

If you examine the column of the table labeled "All Moms" you can see that the characteristics that distinguish users from non users are essentially characteristics you would expect to find among rural women. This supports the finding that users are predominately rural. In the two subsequent pairs of columns, mothers are split into rural and urban groups. One split divides mothers according to whether they live in county seats or villages; the other divides them according to whether they have a fixed-health-care-facility in their community or not - a characteristic strongly linked to community size. When the groups are divided in this way, the differences between users and non-users disappear, confirming that there is more use in rural areas, but that otherwise there is no difference between users and non-users.

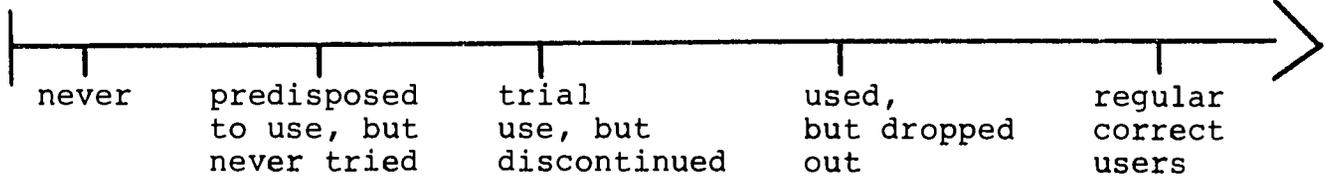
CHARACTERISTICS OF LITROSOL USERS

Variables	All Moms	Split by type of Community		Split by level of Health care	
		Cabecera Residence	Non Cabecera Residence	CESAR CESAMO Hospital	Guardia Only
1. Max yrs. of school	users less	ns	ns	ns	ns
2. Distance to H ₂	users closer	ns	users closer	ns	user closer
3. Yrs. living in house	ns	ns	users less	ns	user less
4. Floor	users have earth floors	ns	ns	ns	ns
5. Distance from neighbor	users live	ns	ns	ns	ns
6. Bedrooms	less likely separate bdrm.	ns	ns	users less likely to have sep bedroom	ns
7. Latrine	users use field	ns	ns	users have poor facility	ns
8. Own/fowl	users have more fowl	users have more	ns	ns	ns
9. Own pigs	users have more	ns	ns	ns	ns
10. Corn consumption	significant but unclear patterns	users consume less	sign but unclear patterns	ns	users consume less

11.	Rice consumption	users less	users less	ns	users less	ns
12.	Sugar consumption	users less	ns	ns	ns	ns
13.	Meat consumption.	users less	users less	ns	users less	ns
14.	Family Expenditure	spend less	ns	ns	ns	ns
15.	Cabecera vs. non Cabecera	rural more likely to use				
16.	Print material	users less likely to have	ns	ns	users less likely to have	ns
17.	Material literacy	ns	ns	users more literate	ns	users more lit.
18.	Location				grt. proportion of users in location of CESAR.	ns
19.	Bean consumption				user consumes less	ns

One of the areas where more information on ORS and users is needed is the understanding of how and when users enter the market place for a trial use of the product, what makes them regular and correct users, and why users drop out of the market place. Information is needed to determine what elements must be in place to make someone "predisposed" to trying the product, to know how users ask for treatments for diarrhea and dehydration, to know what stimulates them to seek treatments, to know what the sequence of treatment pattern referrals are, to know why mothers stop using the product and to know why other mothers continue to use the product, and to identify ways of encouraging dropouts to reenter the market place and become regular and consistent users.

USER CONTINUUM



VI. DESCRIPTION OF THE INFRASTRUCTURE

This section is a description and assessment of the opportunities for improving and utilizing the public and private infrastructure related to increasing the availability and use of ORS in Honduras.

A. Ministry of Health

The primary function of the Ministry of Health is to establish health policy and to provide health services to the Honduran population.

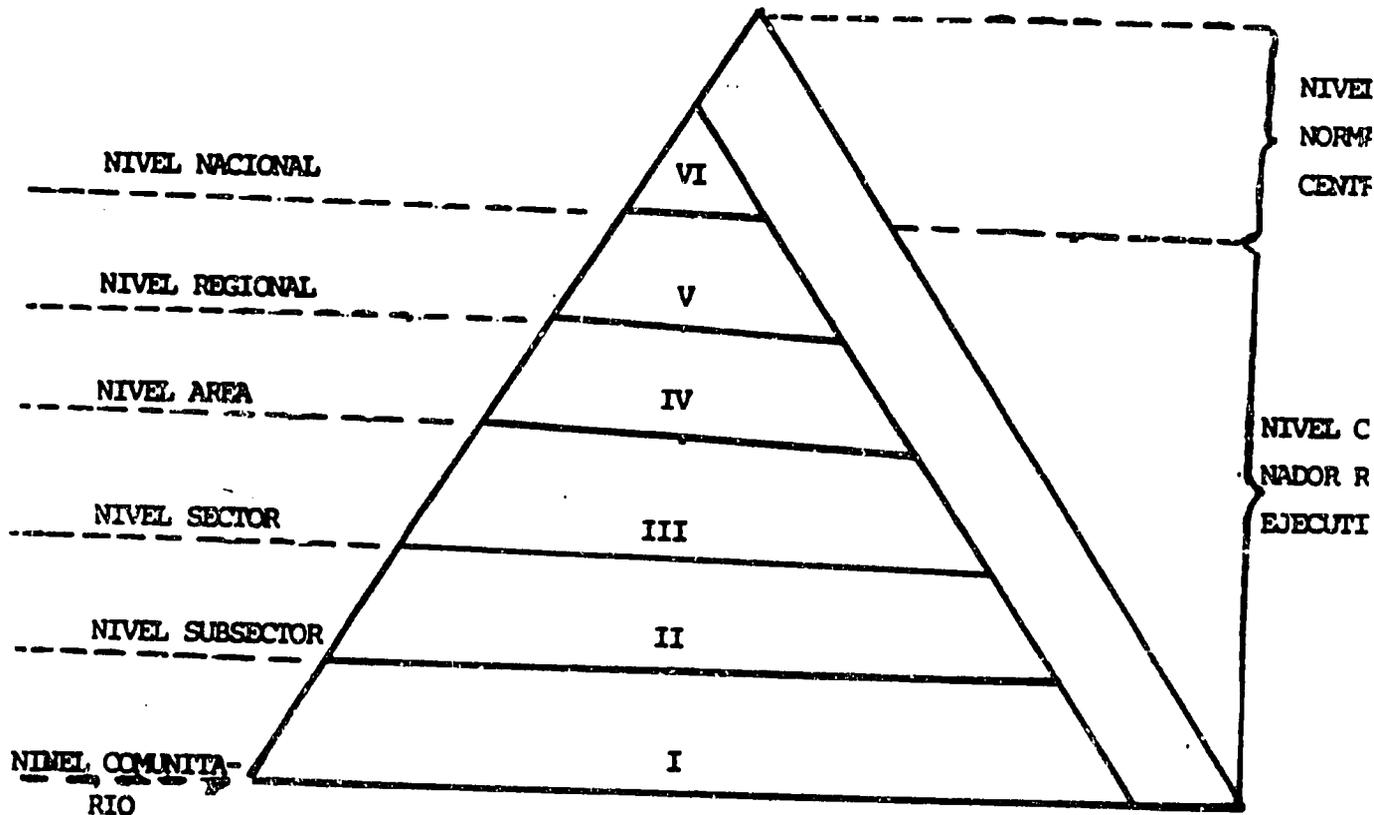
1. Structure

The Ministry of Health is organized to design and implement programs through central, regional, and sub-regional entities. The central Ministry is primarily responsible for policy making, and normative and administrative support functions. It also provides technical supervision and support of health activities at the regional levels. The regions and their sub-units function as the executors of centrally-designed health programs.

Health services are grouped administratively into seven geographical districts and one metropolitan area (Tegucigalpa). The central offices of the MOH provide administrative services and do technical planning in order to support and direct the regions. Each regional administrative office directs several areas where numerous decentralized health services are provided. The decentralization of health facilities and services was designed to make the regional and local service units more effective in the delivery of health care.

There are six levels of health services (see Exhibit VI.A). Level VI is represented by three national hospitals and the central MOH offices; Level V is represented by the eight health regions and six regional hospitals; Level IV is represented by area officials and seven area hospitals called Emergency Hospitals or CHE's; Level III is represented by the 107 health centers with a Physician (CESAMO); Level II, the sub-sector, is presented by 487 rural health centers (CESAR) staffed with an auxiliary nurse; and Level I, the community level, represented by community volunteers. As shown in Exhibit VI.B, in 1984 there were eight health regions, 31 Areas, 107 Centros de Salud con Medicos (CESMO), 487 Centro de Salud Rural (CESAR), and more than 15,000 volunteers at the community level.

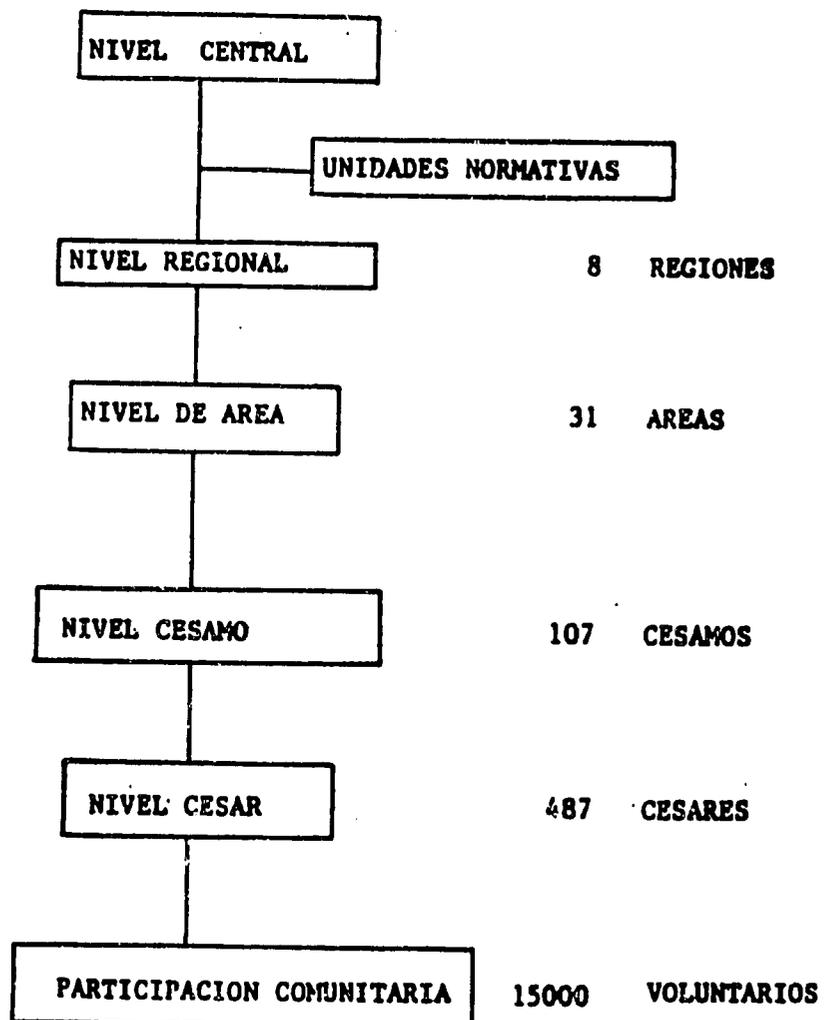
The higher the level, the wider the variety and complexity of services provided. The regionalization scheme of the MOH services requires referral, administrative, and supervisory networks between the six levels. Exhibit VI.C presents a description of the personnel, the population served, and the functions and programs at each level of the health infrastructure. Organizational charts for the national level is shown in Exhibit VI.D, and the regional levels in Exhibit VI.E and VI.F.

NIVELES DE ATENCION EN SALUD

EL NIVEL NACIONAL ESTA REPRESENTADO POR LA REGION ESPECIAL METROPOLITANA EN LA CAPITAL DE LA REPUBLICA.

- NIVEL I SE UBICA EN LAS ALDEAS Y EN EL CUAL LAS ACCIONES DE ATENCION PRIMARIA SON EJECUTADAS POR LA COMUNIDAD MISMA A TRAVES DE AGENTES SELECCIONADOS POR SUS MIEMBROS.
- NIVEL II: EL SUB SECTOR QUE COMPRENDE LOS LUGARES DE INFLUENCIA DE LOS CENTROS DE SALUD LOCAL (CESAR).
- NIVEL III EL SECTOR SALUD CON UN CENTRO DE SALUD CON MEDICO (CESAMO)
- NIVEL IV EL NIVEL DE AREA DONDE EXISTEN HOSPITALES DE EMERGENCIA.
- NIVEL V EL NIVEL REGIONAL, CON RADIO DE ACCION EN SU DEMARCACION GEOGRAFICA.
- NIVEL VI EL NIVEL NACIONAL EN EL QUE SE UBICAN LOS HOSPITALES NACIONALES.

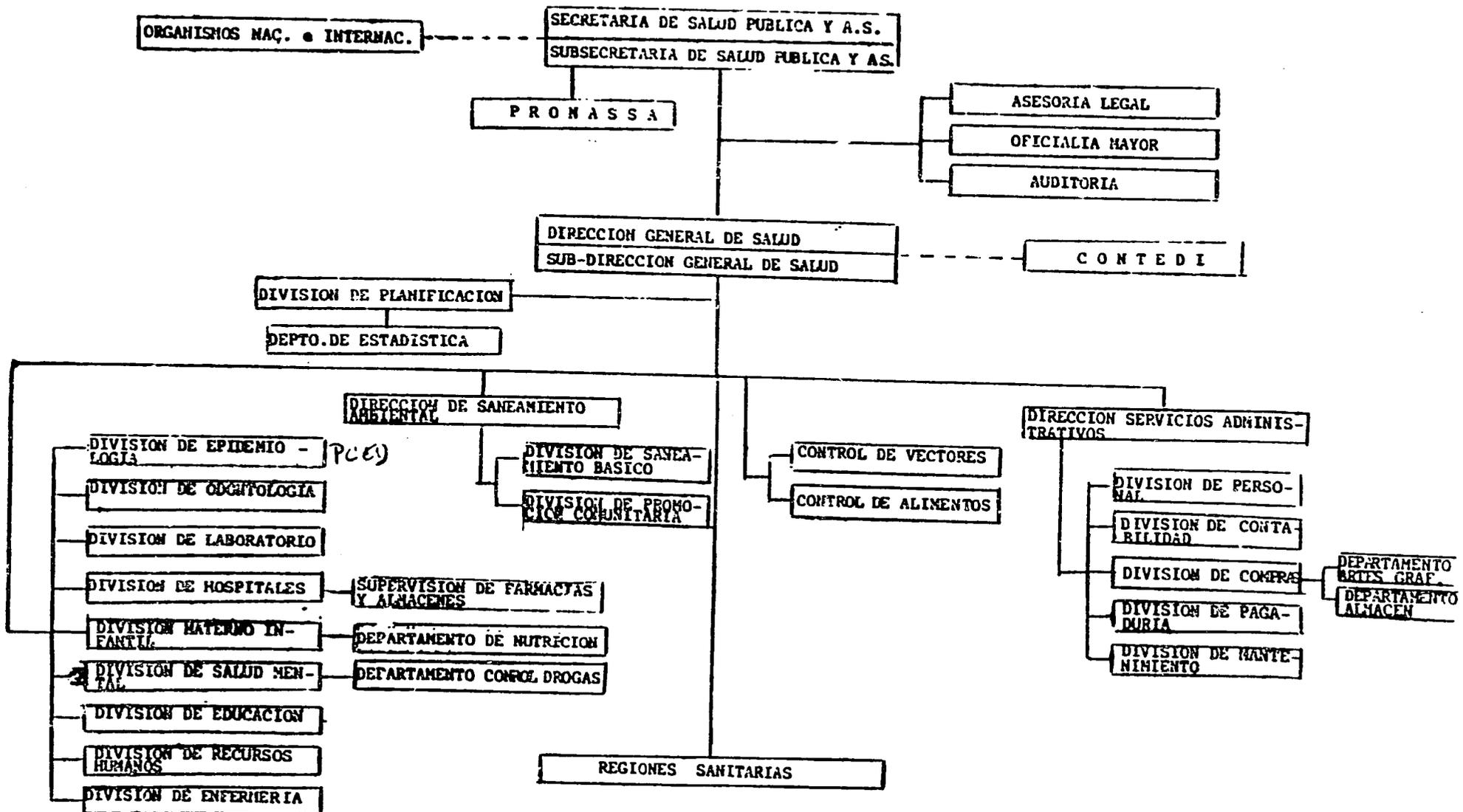
ESTRUCTURA ORGANIZACIONAL (SIMPLIFICADA) DEL MINISTERIO DE SALUD DE
HONDURAS, 1984



NIVELES DE SERVICIOS
TIPO DE EFECTORES, POBLACION ASIGNADA, FUNCIONES Y PROGRAMAS
TIPO Y No. DE PERSONAL SEGUN NORMAS NACIONALES

Nombre y Tipo de Unidad de Atención (Establecimiento o Efecto)	Niveles de atención que brinda	Personal	Población a la que sirve Características Generales	Funciones y Programas que realiza	Esquema de referencia y articulación entre Efectores	Población a Servir
COMUNIDAD AGENTES VOLUNTARIOS	I	Guardián de Salud Part. Esp. Mías Repres. Salud Rociador Volunt. Volunt. de Malaria.	Rural Dispersa Urbana Marginada	Educación Sanitaria, Atención Directa a Pacientes, Cont. Embarazada, Parto, Puerperio y R.M. Referencia, Organización Comunitaria, Saneamiento Básico, Rociam. Vivienda contra Malaria. Toma muestras sanguíneas a pacientes febriles	Refiere a: Centro de Salud Rural (CESAR) Centro de Salud con Médico (CESAMO)	200 - 400 Habitantes
CENTRO DE SALUD RURAL (CESAR)	II	Auxiliar de Salud. Aux. de Control de Vectores (ACV). Promotor I	Rural Dispersa Urbana Marginada	Atención a las personas: preventiva, control, curativa Programas: Materno Infantil, adultos, Epidemiología Organización y Control Comunitario Apoyo técnico a voluntarios de malaria o de rociadores volunt. Apoyo técnico, a prog.de Saneamiento Básico (agua etc.)	Refiere a: Centro de Salud con Méd. (CESAMO) Hosp. de Area Recibe de Comunidad	400 a 3.000 habitantes.
CENTRO DE SALUD CON MEDICO (CESAMO)	III	Medico Enfermera Aux. Enfermería Laboratorista Promotor I o II Técnico de Rx Odontólogo	Rural Urbana	Atención integral a las personas (ambulatoria y al Medio Ambiente. Responsable del área de salud donde aún no existe Hospital de Area.	Refiere a: Hosp. de Area Hosp. Regional Recibe de C. de Salud R. Comunidad	3.000 a 5.000 Habitantes
HOSPITAL DE AREA	IV	Jefe de Area Médico Enfermeras Aux. Enfermería Promotor II Otros	Rural Urbana	Atención Integral a las personas (con hospitalización) de cuadros clínicos básicos y al medio ambiente, responsable de la conducción de un área de salud.	Refiere a: Hosp. Regional Hosp. Nacional Recibe de CESAR CESAMO y Comunidad	5.000 a 10.000 Habitantes
HOSPITAL REGIONAL	V	Jefe Regional Equipo Region. Médicos Enfermeras Promotor III Otros	Rural Urbana	Atención Integral a las personas (con hospitalización) de cuadro clínico básico y 4 subespecialidades, y atención al medio ambiente. Responsable de una Región de Salud y de su área de influencia.	Refiere a: Hosp. Nacional Recibe de Hosp. de Area, CESAMO, CESAR y Comunidad	10.000 a 99.000 Habitantes
HOSPITAL NACIONAL	VI	Jefe Reg. Metrop. Médicos Enfermeras Aux. Enfermería Promotor III Otros	Rural Urbana	Atención Integral a las personas (con hospitalización de alta complejidad) y de actividades de atención al Medio Ambiente. Responsable de la Región Metropolitana.	Recibe de: Hosp. Regional Hosp. de Area CESAMO, Instituto Hond. de S.Soc. IHSS	200.000 y más Habitantes

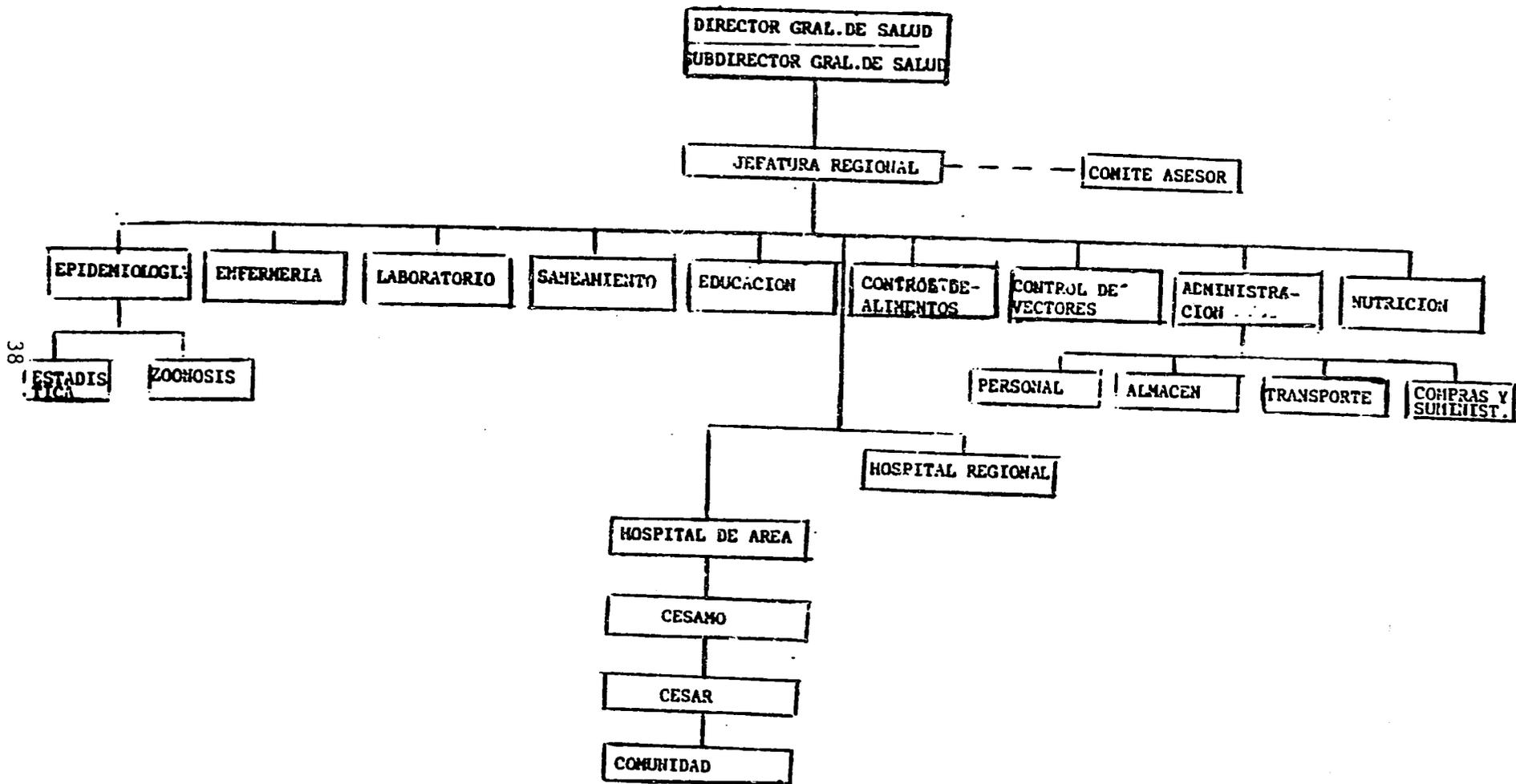
ORGANIGRAMA DEL MINISTERIO DE SALUD PUBLICA Y ASISTENCIA SOCIAL



37

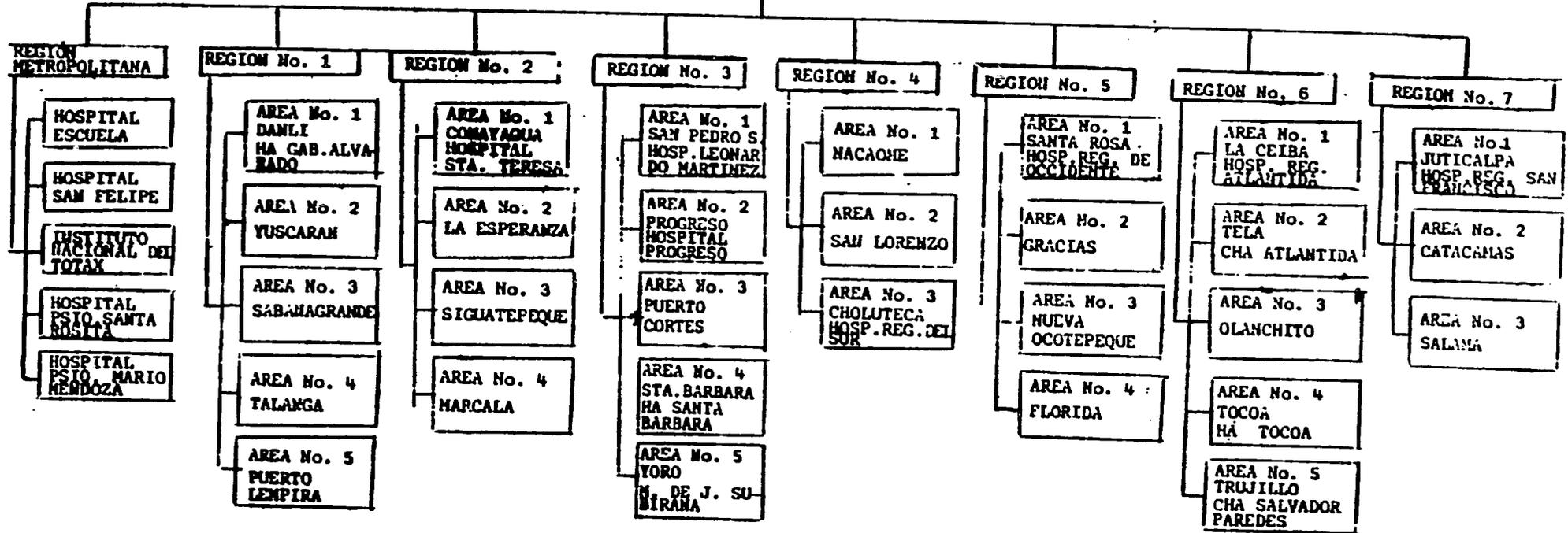
EXHIBIT VI.D

ESTRUCTURA ORGANIZATIVA DE LAS REGIONES SANITARIAS N.S.P. AÑO 1981



ESTRUCTURA ORGANIZATIVA DE LOS NIVELES OPERATIVOS POR AREAS Y REGIONES SANITARIAS

DIRECCION GENERAL DE SALUD
SUBDIRECCION GENERAL DE SALUD



2. Programs

The basic programs carried out by the Ministry in order of priority are: Diarrheal Diseases, Immunizations, Maternal Child Health, Control of Tuberculosis, Control of Malaria, Basic Sanitation, Nutrition, Control of Sexually Transmitted Diseases, Control of Rabies, Control of Leprosy, and Prevention and Control of Cancer.

The Program of Diarrheal Disease Control is in the Division of Epidemiology. As was described in Section III. C., the educational component of the program began in 1979 with the PROCOMSI I project in Health Region I. The results of this effort were used as the foundation for developing the Program of Diarrheal Disease Control which was institutionalized on a national level in 1982. The purpose of the program is to reduce morbidity and mortality for children under the age of 5. Four basic strategies have been developed: 1) the use of ORS to treat diarrhea cases, 2) basic sanitation, 3) prevention and breast-feeding, and 4) health education.

The Science and Technology Unit began in 1983 to provide consultation and coordination for research projects being conducted by various programs in the Ministry and the University. The emphasis is on analyzing and evaluating the on-going health programs so that problems can be identified and alternatives suggested. The Unit has participated in a number of studies related to ORS.

Other programs which have activities related to diarrheal diseases and their control are: a) Maternal Child Health which sponsors the Child Survival Program focusing on all children under the age of five. The prevention and treatment of diarrhea is one of its major components (focus is on pregnant and lactating mothers and children under the age of five in rural and urban areas); b) Basic Sanitation which constructs water systems, promotes the use of and construction of latrines, and teaches environmental sanitation (focus is on rural and urban areas, emphasis placed on rural areas), and c) Nutrition which conducts education programs for mothers.

3. Opportunities

There are two primary areas of targeted opportunity for improving the availability and use of ORS through the Ministry of Health: a) personnel at the CESAR Level, community level, and with physicians at all levels, and b) the distribution of products at all levels.

CESARs are intended to provide health care to communities of less than 3,000 persons. They are staffed by an auxiliary nurse who is responsible for providing both clinical and preventative services and for overseeing and supplying the volunteers working in surrounding villages. Community work involves supervising with the health promoter, the health representative, the guardian, the midwife, and the auxiliary for vector control.

In principle, the health promoter is the key person in initiating community participation in the delivery of health services. This person is an employee of the MOH assigned to a CESAR who seeks out community leaders and organizes the community health personnel which are volunteers. A volunteer health representative is selected and trained by the health promoter and auxiliary nurse. The representative works closely in promotion of environmental sanitation, community gardens and home improvements, and works with the community to elect the other volunteers.

The Guardians are unpaid volunteers who provide services directly to individuals. Their training enables them to treat simple diarrhea, colds, and parasites, and to provide first aid. They also provide health and nutrition education. For complicated cases, they are trained to refer patients to the auxiliary nurse. The Partera (Traditional Birth Attendant) is probably the most active in the informal health system. Eighty percent of the parteras have been trained by the MOH. Formal training is followed by monthly meetings with the auxiliary nurse at the CESAR.

Monthly meetings are held for all community volunteers at the CESAR. Generally the meetings are held toward the later part of the month so that the community activities can be reported in the monthly CESAR report. Topics of general interest are discussed with the entire group. Then Guardians and midwives meet with the auxiliary nurse and the representatives meet with the health promoter. Ideally, all volunteers are supplied with the necessary materials for their work during these meetings.

The CESARs are the medical service institutions most readily accessible to the campesino and are designed to be responsive to the community. Often, however, these centers are viewed with suspicion and mistrust. Some of the problems have been discussed briefly in other sections of this report. Others difficulties include limited operating time, staff continuity, supplies, supervision, salaries, and incentives.

a. CESARs are frequently closed. The primary reason is that the auxiliary nurse is absent for a variety of professional reasons which include visits to higher headquarters, supervisory visits to volunteer workers, immunizations in the community, and so forth. As a result, there tends to be a rigid schedule for clinical services. Those patients arriving during absences are not attended to. Due to limited supervision, the auxiliaries are not always available at the prescribed times; thus, scheduling tends to be responsive to the auxiliary nurse and not to the community.

b. Staff turnover is a difficulty in the CESAR and for the community volunteers, most specifically for the guardian. Nurse supervisors working in rural areas normally do one year of required civil service. Auxiliary nurses tend to remain in place

longer but frequently request transfers after they have served two to three years. Reasons for Guardian dropouts include lack of motivation, conflict with other job, inability to attend monthly meetings, and lack of supplies for first aid treatment. Overall low status in the community and with the CESAR also contribute to high dropout rates. This is due in part to their lack of tradition and experience in their communities, unlike the parteras who have a history of generations of working within their communities.

c. There is frequently a shortage of supplies at the health center. CESAR's are commonly provided with medicines which are not appropriate to the problems they have to address. Also, the system for ordering and shipping of medicines, including Litrosols, affects service delivery.

d. Salaries are low for health personnel and non-existent for community volunteers. The exception is the partera who receives a small fee for service from the mother.

As discussed in the "Oral Rehydration Therapy: Evaluation of the Honduras Experience," it appears that medical personnel may be reluctant to use ORT in severely acute cases for which the norms recommend a combined treatment. Eighty six percent of the hospital personnel sample complied with the norm for light cases of dehydration; 63% with moderate dehydration and 15% with severe dehydration. There also appears to be a strong tendency to use antibiotics, antiparasitics and antidiarrhetics. Thus, a need exists to broaden medical personnel's view and use of ORS as a viable treatment.

The distribution logistics system is critical to the success of the MOH ORS program. If providers do not have the product, it cannot be given to the patient. Creating a demand for a product, and not being able to supply it, creates a frustrated consumer who will tend to seek alternative forms and sources of treatment. A brief description of the MOH distribution system is presented below.

The key component of the supply system is at the central level with the Directorate of Administration Services. The central warehouse is controlled by the Division of Procurement and Supply. This division is responsible for the information gathering, forecasting, and annual procurement order. The central warehouse is responsible for the storage and distribution of supplies. Internal control is maintained through a continuous inventory using the kardex system.

At each regional level, there is a pharmacy or storeroom for supplies. A warehouse for the supplies for the remaining facilities within the region is maintained separately. Typically regions have a three-ton truck and one or more pick up trucks. When sub-regional facilities order supplies they are to indicate the quantities which have been consumed and those that remain on hand. Regional warehouse personnel are to consolidate this infor-

mation for the entire region when they request supplies from the central warehouse.

CESAMO's and CESAR's storage facilities are shelves and cabinets. Distribution usually consists of providing medicines directly to patients and the community volunteer workers.

Constraints affecting the distribution logistics system include warehousing space, transportation, personnel, and information systems. Warehousing space is often unorganized which makes the control of supplies, reliable inventory, and effective loading difficult. Vehicles are frequently in need of repair and have irregular routes and schedules. Personnel operating the system at each level require training in the management and operations of the system. This results in various gaps in basic information on the commodities affecting ordering, receiving, and shipping.

In the Evaluation of the Distribution System of Oral Rehydration Salts in Honduras, the findings indicated that there are irregular delivery schedules for ORS nationally. Reports of supply at a sample of each level in the system was insufficient according to the established norms. At the community level, the average supply from the sample had less than 50% of the norm for this level. The study indicated that the most active guardians receive a supply of ORS at least once every two months; many said they were generally lacking ORS. Twenty six out of 47 community personnel said they prescribed a total of only one to ten packets during the last month. This indicates a low demand at this level of care, and the low supply received by guardians. It appears that this, plus the fact that the demand for the guardians service is low, contributes to the fact that health centers are hesitant to increase their supply.

Additionally, this study reports administrative problems were observed with the recording of incoming and outgoing medications by warehouses and health centers. Records are not always kept up to date, and ORS supplies are not always treated like other medications.

B. Supply of Oral Rehydration Salts

Several alternatives exist for ORS supplies: local production by public or private sector sources or import of a finished product provided as a donation from an international development agency or procured as part of an international bid.

1. Local Production

Two sources for local production of ORS exist in Honduras: PANI—the National Foundation for Infants, a semi-autonomous institution, and privately owned manufacturing laboratories.

a. Public Sector Production

PANI was created to benefit the physical, mental, and social well being of mothers and small children. PANI is supported by the proceeds of a national lottery system and has a series of programs designed to meet its objectives. These include programs in health, education, nutrition, employment generation, community assistance, and social improvement. PANI also administers a Pharmaceutical Production Laboratory which produces about 50 different pharmaceutical items including pills, capsules, and syrups. The Laboratory was established by the GOH and PANI in an effort to reduce costs of certain pharmaceuticals to the general public. Most (about 90%) of PANI's products go to the Ministry of Health with the remainder being sold to the Social Security or distributed through PANI's own health programs.

PANI's organization is designed along the lines of its programs: an Executive Council chaired by the Minister of Health; an Executive Directorship with assorted staff offices, including planning, auditing, and legal advisor; and six divisions or departments, one for each personnel, the national lottery, finance, project development, implementation, and the Pharmaceutical Division.

A study is currently under way to assess the feasibility for the design and construction of a new pharmaceutical production facility for PANI. In 1984, PANI produced 169,999,852 packets of ORS at a per unit cost of L 0.34. ORS is one of the products recommended be produced by PANI. R. Burton projects in his feasibility study that 1989 production by PANI for ORS would be 2.1 million packets; 1991-2,490,000; and by 1993 - 3,010,000.

b. Private Sector Production

Honduras has a number of privately owned companies currently manufacturing a wide variety of medicines. These companies are located in and around Tegucigalpa and San Pedro Sula. Many have been in business for a number of years (ten or more).

Recently, representatives from the Program for Appropriate Technology in Health (PATH), located in Seattle, Washington, visited four private manufacturers. These companies are: ANDIFAR and Laboratorio Francelia in Tegucigalpa and Laboratorio Finley and Laboratorio Quimifar in San Pedro Sula. A report on their visit is forthcoming.

The MOH/AED team made visits to the two laboratories in Tegucigalpa which the PATH team met with. Plans to visit the two laboratories in San Pedro Sula were cancelled due to time limitations. Both laboratories expressed interest in producing ORS. ANDIFAR preferred production only; Laboratorio Francelia, which is currently a producer of DEXTROLITO, expressed interest in producing and distributing the product.

2. Importation

The ORS could be imported as a finished product. This product could be donated by an international development agency/agencies, or the implementing organization for the ORS social marketing project could seek bids from international manufacturers. To date, products have been donated by USAID, UNICEF, and the Italian Government. The possibility of obtaining a donated product which has packaging specially designed for the Honduras ORS social marketing project should be explored. Also, donation of the raw materials should be explored.

Local production provides several benefits not offered by donated products: there is more control over the quantity of the product when there is local production; local production generates employment and saves on foreign exchange (obtaining foreign exchange is an increasingly difficult problem for most companies); purchasing raw materials is less costly than importing a finished product; local production may stimulate production of other products, and local production allows for packaging to be designed to meet the needs of the target audience (pictorial and/or in Spanish).

An advantage of donated or imported goods is that they are generally procured in very large volumes so that their per unit cost is very low. Per unit costs and shipping costs may still be less costly than local production.

C. Distribution

There are three basic types of distribution systems in Honduras. For the purposes of this study, distribution systems are being classified by type of product carried: 1) Medical Products (ethical and over the counter); 2) Consumer Good Products (cooking oil, matches, cigarettes, and soft drinks); and 3) Family Planning Products (oral contraceptives and condoms). Each system is described in general terms. Variations are likely to exist among firms.

1. Medical Product Distribution Systems

Medical products are distributed by three types of companies: Laboratorios or Droguerias or Laboratorios y Droguerias. Typically, Laboratorios produce and distribute their own products. Droguerias represent non-Honduran manufacturers of medical products. Representation is through a formal arrangement. Services include registration of product formulation, packaging, price and name brand with appropriate authorities; distribution, and marketing/promotion. Laboratorios y Droguerias produce some of their own products and/or those of the non-Honduran manufacturer, represent non-Honduran manufacturers, and distribute and market products. Products can be produced under license or imported as a finished product by a Honduran firm. The marketing management process (positioning, promotional message content and materials, bonus and incentive plans or special

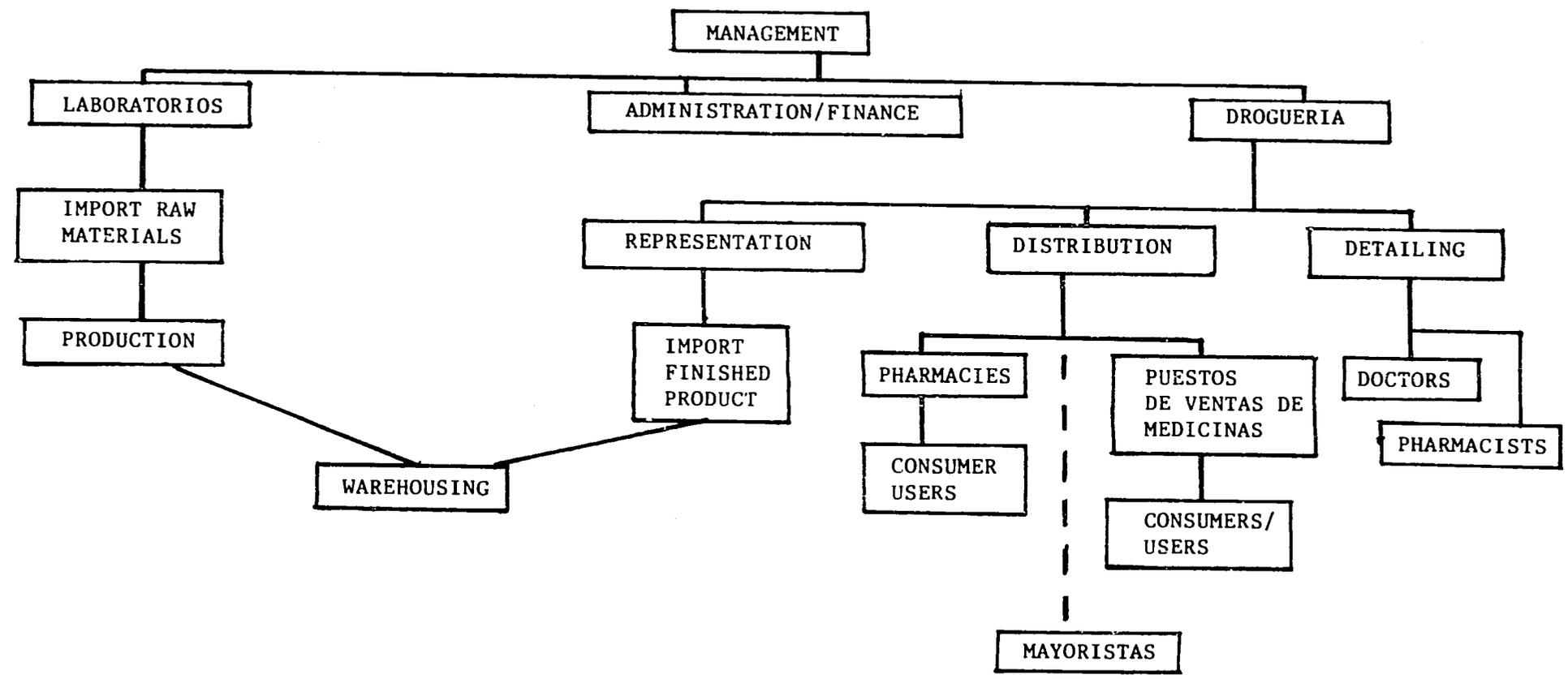
offerings) varies by type of product and the manufacturer. These activities may be supervised by the local or regional representative and carried out by a local firm or the manufacturer may have marketing staff working inside the distribution company controlling and supervising all aspects of the product. Exhibit VI.G presents a functional organizational chart of a Laboratorios y Droguerías.

Resources available within each organization vary according to size of business (number and type of products), years in business, and so forth. In general, these organizations have warehousing facilities, a fleet of trucks, and personnel (drivers, distributors, salesmen, other requisite staff).

Laboratorios y Droguerías primarily take orders and deliver products to pharmacies and puesto de ventas de medicinas. In some instances, deliveries are made to large wholesalers called mayoristas. In Honduras, pharmacies and puesto de ventas de medicinas are outlets licensed to sell ethical products. It is estimated that there are approximately 200 pharmacies and 250 puestos de ventas de medicinas. Pharmacies are concentrated in Tegucigalpa and San Pedro Sula, and puestos are in larger towns. Exhibit VI.H presents a map of Honduras showing cities served with at least one pharmacy. (Honduras Contraceptive Social Marketing Program Marketing Plan, 1983)

FUNCTIONAL ORGANIZATIONAL CHART

LABORATORIOS Y DROGUERIA



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Cities served by at least one pharmacy.

Each company has its own framework for planning, selling, and distributing products. Generally, the country is divided into territories. Rounds are made by the salesforce to each outlet in the territory where shop inventories are reviewed, orders taken, and as appropriate, products promoted. Credit policies and terms vary from company to company. Some companies only have cash and carry. Distributors follow up at a later date filling the order. The time between orders and deliveries varies among companies. Salesmen and delivery rounds are planned so that most outlets are reached at least once per quarter.

Sales targets (volume and value) are set and monitored monthly. Salesmen are typically paid a base salary and a percentage based on achievement of the sales target. Companies offer bonus goods or incentives to retailers making large purchases (e.g. buy one case, get one carton free). So, in addition to the wholesale margin, retailers have the opportunity to make additional money by selling the free bonus goods at the retail price.

These companies also have a detailing force specially trained to promote the product line to physicians and pharmacists. In addition to face to face promotion, sample products and other "gifts" are provided to remind them of the product(s).

Administration, management, monitoring and control systems are well established.

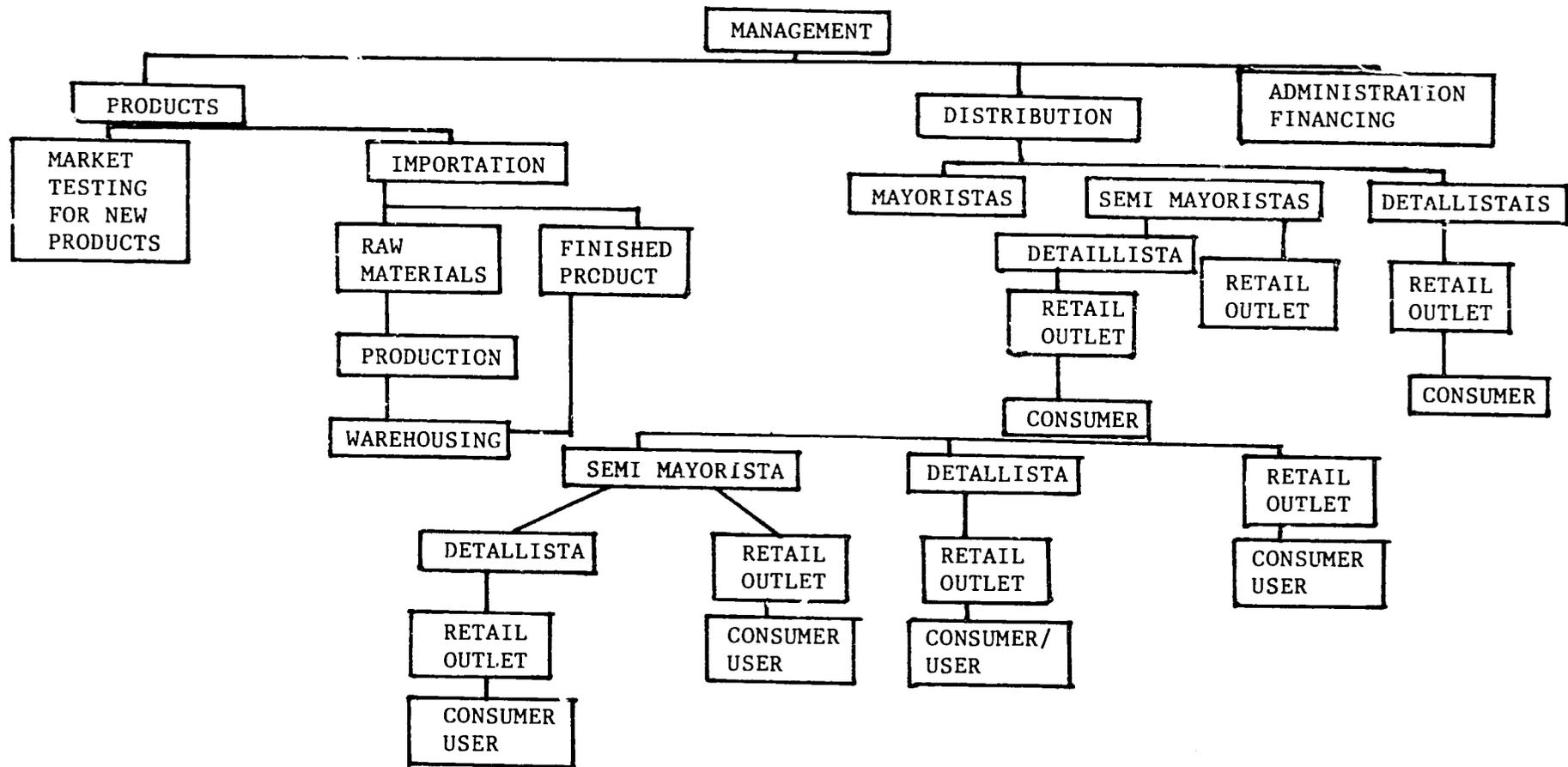
Laboratorios Francelia, Laboratorios y Drogueria Mandofer, Laboratorios Sandoval are examples of companies described above. They range in size from large to small in terms of number of products carried and size of staff.

2. Consumer Goods Distribution Systems

Consumer goods distribution companies handle a wide variety of products. Product lines include household goods such as soaps, cleaners, food products, light bulbs, cigarettes, and liquors: Like Laboratorios Y Droguerias, they may produce some of their own products, produce under a license for a non-Honduran company and/or import a finished product and serve as a manufacturer's representative. Representation services are under a formal arrangement and include product import, registration of formulation, packaging, name and pricing, distribution, and marketing/promotion. Marketing management varies by type of product and manufacturer. As in the case of Laboratorios y Droguerias, this can be contracted to the local representative or carried out by the manufacturers local representative or supervised by the regional representative. A functional organizational chart for a Consumer Goods Distribution Company is presented in Exhibit VI.I.

FUNCTIONAL ORGANIZATIONAL CHART

CONSUMER GOODS COMPANY



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These companies have resources comparable to those of the Laboratorios Y Droguerías: warehousing, fleet of trucks, and personnel. Consumer good companies sell and distribute products to wholesalers. In Honduras there are three types of wholesalers: mayoristas, semi-mayoristas, and detallistas. They sell and deliver products to a variety of outlets: pulperías, bodegas, supermercados, etc. There are 30,000 to 50,000 outlets reached through this system. Wholesalers tend to be organized according to areas they serve: rural and urban. Urban semi-mayoristas and detallistas serve small supermercados and big pulperías. Rural mayoristas and detallistas serve small pulperías with a van. In some instances, retail shop owners travel to buy direct from the main office or branch of a company or a mayorista.

The country is divided into territories, and rounds of visits to retail outlets are planned taking into consideration volume of products, estimated sales, size of transport, and estimated size of sales. Since wholesalers buy in very large quantities, they receive a lot of bonus goods. Credit policies and terms vary from company to company.

Salesmen typically promote products, provide point of purchase materials and take orders. Deliveries are filled later by the distributor. The exception is the rural detallista who has a small van. He stocks products so he can take orders and deliver and collect payment at each stop. This is a cost effective means of serving small, distant retail outlets. Sales targets are established for each product and monitored through monthly sales reports. Salesmen are paid a base salary and receive a percentage of the sales.

These companies have well established systems for management, administration, monitoring, and control over product movement and staff.

Companies such as Schmid y Mentori, DIAPA, Compañía Distribuidora, and Cadensa de Mayorista are example of consumer goods distribution companies.

3. Family Planning Products/ASHONPLAFA

a. Contraceptive Social Marketing

The Contraceptive Social Marketing (CSM) Program is one of several programs carried out by ASHONPLAFA, the Honduran Family Planning Association. ASHONPLAFA is a private, non-profit organization dedicated to promoting the concept of family planning and the use of modern contraceptive methods in Honduras. The CSM program's objective is to increase the availability and use of modern contraceptives by selling a product at a subsidized price through commercial channels to reach people who cannot afford to pay high prices and who do not choose to use services provided by the MOH.

The CSM program began in 1981. The CSM organization has a staff responsible for marketing management and a small sales force. Services for distribution, overpackaging products, advertising, and printing are contracted to local suppliers. Exhibit VI. J presents a functional organizational chart of the CSM program. Laboratorios Sandoval provides overpackaging of the oral contraceptive and distribution to pharmacies and puestos de ventas de medicinas. Advertising production and placement is provided by Zeus. Previously these services were provided by Multi-Media. Printing services are provided by Lithopress. Administration and financial management is provided through ASHONPLAFA. Marketing research was conducted at the outset of the program. Marketing research is not used presently.

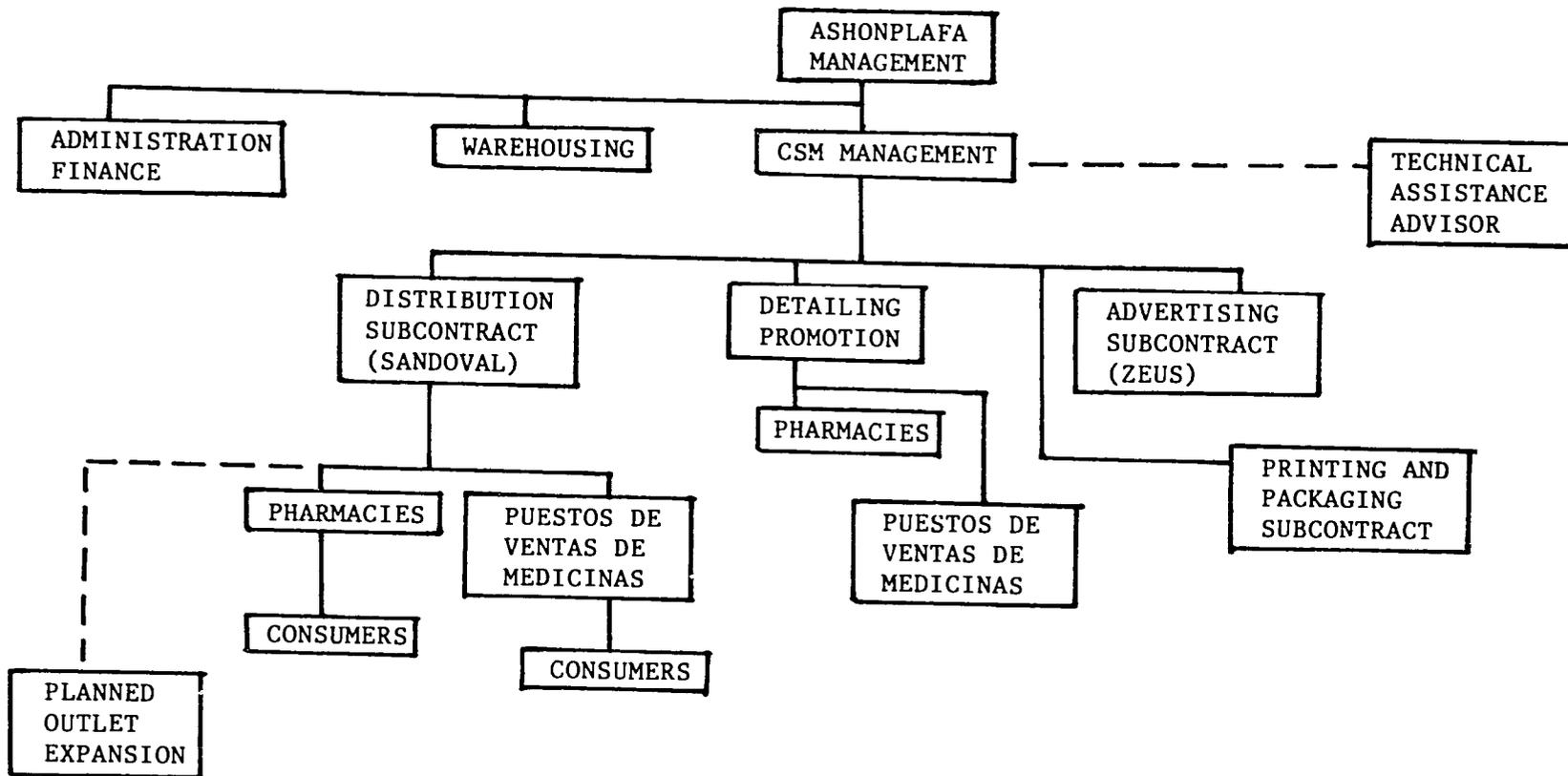
Two products are offered by the CSM: an oral contraceptive with the brand name of Perla and a condom with the brand name of Guardian. One cycle of the oral contraceptive sells at retail outlets for L1.50 and one box (three units) of condoms sells for L1.25. Each product is overpackaged and presented in a dispenser which hangs on the wall of the retail outlet. Perla is classified as an ethical product and therefore must be sold only to pharmacies and puestos de ventas de medicinas. There are no restrictions on where Guardian can be sold. Plans are underway to introduce a new low dose oral contraceptive early this summer. At the present, there are more than 15 different oral contraceptives available in licensed outlets in Honduras. All of these products are sold at a substantially higher price.

The CSM program targets B,C, and D socio-economic classes and specifically women in union from 15-44 years of age. It is estimated that Perla is used by 15,000 couples and Guardian by 4,000. From the 1984 ENSMIH study it appears that the CSM serves approximately 6.5% of the family planning market in Honduras.

Products are promoted directly to retail outlets by the CSM sales force and with point of purchase materials and special offerings such as a small sewing kit for consumers. The CSM sales force receives a base salary and a commission of the sales. Bonus goods are provided to retailers to incentivise the system. Advertising is carried out with a combination of media: television spots, radio, and print. Messages tend not to be pretested in a systematic fashion.

Future plans for ASHONPLAFA include expansion of their overall services. They are seeking approval to have their own pharmacy and drogueria so that they may represent manufacturers and distribute products directly.

FUNCTIONAL ORGANIZATIONAL CHART
 FAMILY PLANNING DISTRIBUTION
 ASHONPLAFA
 CONTRACEPTIVE SOCIAL MARKETING



b. Community Based Distribution System

The Community Based Distribution (CBD) program began in 1975 in Tegucigalpa and San Pedro Sula and over the years has expanded to other communities. The program is managed by a Director. Staff include three supervisors, 26 Promoters and more than 1,000 Distributors. Exhibit VI.K presents a functional organizational chart of the CBD Program. Promoters have a high-school degree and are provided with special training. They are grouped into three categories depending on the type of location they serve: urban, areas, or units. The unit promoters have a vehicle so that they can cover the long distances in rural areas. Distributors are selected from the community. They receive an incentive based on their volume of sales. All other staff are salaried.

Distributors stock products in their homes or pulperias and sell their products from these points. They are supervised by promoters who visit them at least once every three months. Promoters replenish product supplies and collect records and revenue from product sales. The supervisors oversee the activities of the promoters.

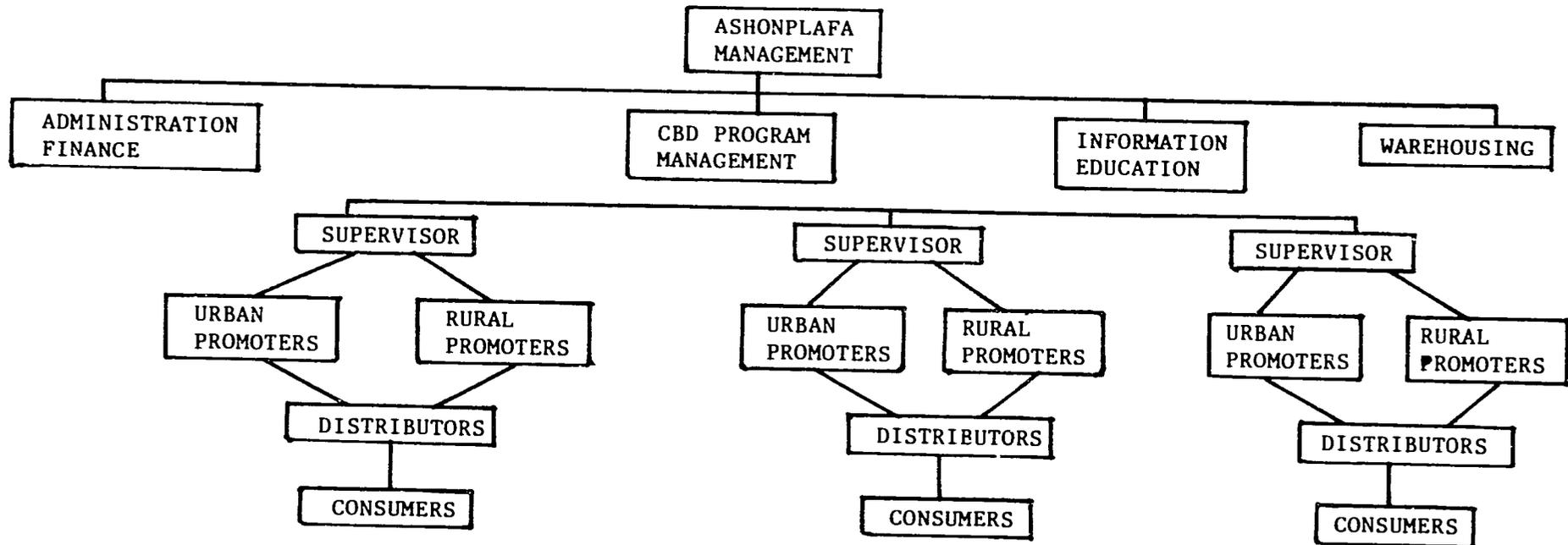
The CBD program targets (in the D and E socio economic classes) women in union from 15-44 years of age. The program focuses 70% of its efforts on rural Honduras and 30% on urban areas. According to the 1984 ENSMIH study, approximately 46% of oral contraceptive users are served by the CBD program. CBD reports that in 1985 they were providing services to 44,000 couples. Annual goals are established and targets set for a nine percent annual increase.

The Distributors sell four oral contraceptives: Noriday, Norminest, Ovral, and Feminal at L0.50 per cycle. They also sell two spermicides: EMKO and Conceptrol at L1.00 per unit and one type of condom at L0.10 per unit. Unlike the CSM program, no product has a specially designed overpackage.

The CBD program promotion activities are primarily carried out through interpersonal efforts and complemented by some print and occasionally radio messages.

The programs performance is monitored through a specially designed tracking system.

FUNCTIONAL ORGANIZATIONAL CHART
 FAMILY PLANNING DISTRIBUTION
 ASHONPLAFA
 COMMUNITY BASED DISTRIBUTION



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Each of these distribution channels has its strengths and weaknesses. During Phase III of the ORS Social Marketing Feasibility Study a comprehensive analysis of the type of distribution system and specific organizations will be completed. This analysis will integrate the results of the marketing research to be conducted during Phase II. This initial assessment is intended to provide an overview of the various viable options as they pertain to the development of an ORS/SMP. In summary, the Laboratorios Y Drogueria system is primarily geared to the distribution and promotion of medical products and principally reaches pharmacies and puestos de ventas de medicinas. It also details products directly to pharmacists and physicians. Consumer goods companies reach the most diverse and highest number of retail outlets and penetrates the rural areas with its distribution system. Its carries popular household and consumable products. The family planning distribution system operates through two channels. The CSM is similar to the medical product distribution system reaching primarily pharmacies and puestos de ventas de medicinas. The CBD reaches deep into the community level and focuses on rural areas.

D. Advertising and Promotion

There are several advertising agencies in Honduras. Most are located in Tegucigalpa. One major one, the McCann Erickson affiliate, is located in San Pedro Sula. Several have affiliations with large international advertising agencies.

Advertising agencies provide a range of services, from communication strategy development and creative approach, to production and placement in the media. They are contract by manufacturers for all or a portion of the services listed above. Each company has its speciality area. Recently, several of the advertising agencies conducted a media survey on the demographics, listenership patterns, and preferences.

In Honduras, it is estimated that 90% of the population has access to radio and 80% of those living in urban areas have access to television. There are two national radio stations and more than 120 regional or local stations. There are two television channels. Daily newspapers include El Heraldó, El Tiempo, La Prensa, and La Tribuna. There are also a series of periodicals available weekly and monthly throughout Honduras.

There are sufficient advertising agency resources in Honduras to draw upon for the ORS/SMP. Several advertising agencies have had some contact with social marketing through the Contraceptive Social Marketing Program.

E. Research

Generally, firms seeking marketing research services contract specifically from other Central American countries, principally Guatemala. In the early 1980's, Honduras had no marketing research companies. There are two which recently began

operations here. Mercadeo Integral is the only marketing research agency which could be located. It appears that there is an understanding of the program objectives, but limited actual experience in conducting the specific research techniques necessary for the development of the ORS/SMP.

VII. RECOMMENDATION AND MODELS

This section presents a series of recommendations for strengthening the MOH at the community level (Component 1) and models for implementing the ORS social marketing project (ORS/SMP) (Component 2). The recommendations and models are developed specifically to respond to the Honduran context as discussed in the previous sections of this document.

A. **Strengthening the Ministry of Health at the Community Level (Component 1)**

Recommendations for strengthening the MOH Community Level focus on increasing product availability through the community health workers and through this increase the number of points and hours that Litrosol is made available to the user, and on improving the status of the Guardian within the health community. Other recommendations include strengthening the distribution system for ORS from the national to the community level.

These recommendations include:

1. Posting signs of actual service hours on a weekly or monthly basis. Although the norms state that the CESAMO and CESAR are to be open 40 hours per week, they are often closed during this time while the doctors/auxiliary nurse carry out other functions required under their jobs. Letting patients know actual working hours will mean that they can plan accordingly and may reduce the number of attempts made to seek assistance when the clinic is closed.
2. Point of distribution signs. Small metal signs with the program logo should be provided to each community health worker who distributes Litrosol to post outside their residence. This will allow community members to identify the places where the product is available and will be especially beneficial when the clinic is closed. Radio can be used to teach users to seek ORS at these sites.
3. Improving the Status of the Health Guardian. A small study should be conducted to explore how the community perceives the Guardian and the guardians role in the community. Expectations, satisfactions, and dissatisfactions with their role should be explored and a MOH strategy to improve this role should be defined.
4. Selling of Litrosol by one or more of the community health workers. The impact of one or more community health workers should be examined. Funds from the sale, even with a low priced product, could compensate for the fact that they receive no incentives and no travel funds for attending monthly meetings at the health center. This could stimulate increased attendance because travel funds could come from this activity and the desire to replenish depleted inventory would be stimulated.

5. Post referral system to community health workers. A sign, which can be updated, should be posted at each CESAR and CESAMO. It should contain the name of the town and the community health representative in areas served by the clinic. This would inform community members in neighboring areas of health resources available which are nearer than the clinic and which provide services when clinics are closed. This, in turn, may save many hours of travel and frustration.

6. Relabeling donated products. Since the MOH ORS supplies have been provided through several international sources, the donated product does not have pictorial mixing/user instructions. Stickers duplicating the Litrosol package information should be produced and attached to the current and future inventory of the donated product. Even though the hoja paquete has been prepared with the relevant information, it frequently is not distributed beyond regional warehouses to the CESARs and CESAMOs.

7. Review of Product Expiration Dates. A review of the product supply currently warehoused by the MOH at various levels should be reviewed to ensure that the date of expiration has not passed. It would be a problem to plan a large communication campaign on ORS and have a poor quality product distributed. This would have a serious negative impact on the program.

B. Models for an ORS/SMP

Five models for the implementation of the ORS/SMP have been developed. These models are based on the need to increase availability and use of ORS in the Honduran context. The models focus on the infrastructure available within Honduras and take into consideration the lessons of experience in social marketing over the past decade.

These models draw upon the strengths of the MOH and those of the Private sector. These strengths are very different and are presented below.

The **strengths of the MOH** which relate to the ORS/PMS include: 1) policy support and direction, 2) commitment to reducing infant mortality through a variety of mechanisms and programs, 3) support for the private sectors potential role in assisting in increasing the availability of ORS, 4) assistance in legal aspects such as product, name, and package registration, 5) accesses to the community level through the community health workers who are volunteers, and 6) commitment to resolving public health issues and problems.

The **strengths of the private sector** relating to the ORS/SMP include: 1) existing equipment for production and distribution, 2) experienced personnel in marketing and distribution, 3) a system which focuses on performance and is incentive based, 4)

ability to reach any segment of the population it is programed to reach, and 5) efficient operation.

In addition to considering the basic strengths of the infrastructure, the roles and functions of key program components were delineated. These elements are considered to be important for a successful ORS/SMP: an Advisory Board, an Implementing Organization, and a Marketing Management Group for the product. Each of their roles is noted below.

The **Advisory Board** will provide advice and policy direction, political support, access to leading experts necessary to support key program components, and general oversight. The composition of the board (to be determined later) would have representatives from the MOH and private sector.

The **Implementing Organization** would be responsible for the overall management of the program, and the marketing management group would reside within facilities of the implementing organization. This organization would have the ability to hire and fire staff, contract for outside services, receive funds and product/supply for international agencies, and an existing infrastructure for administration and management which the ORS/SMP could draw upon.

The **Marketing Management Group** would coordinate all aspects of the ORS marketing process including the marketing plan, advertising strategy, and research protocol. They would monitor distribution, sales, advertising/promotion, and supplier services and would coordinate with the relevant division of the MOH.

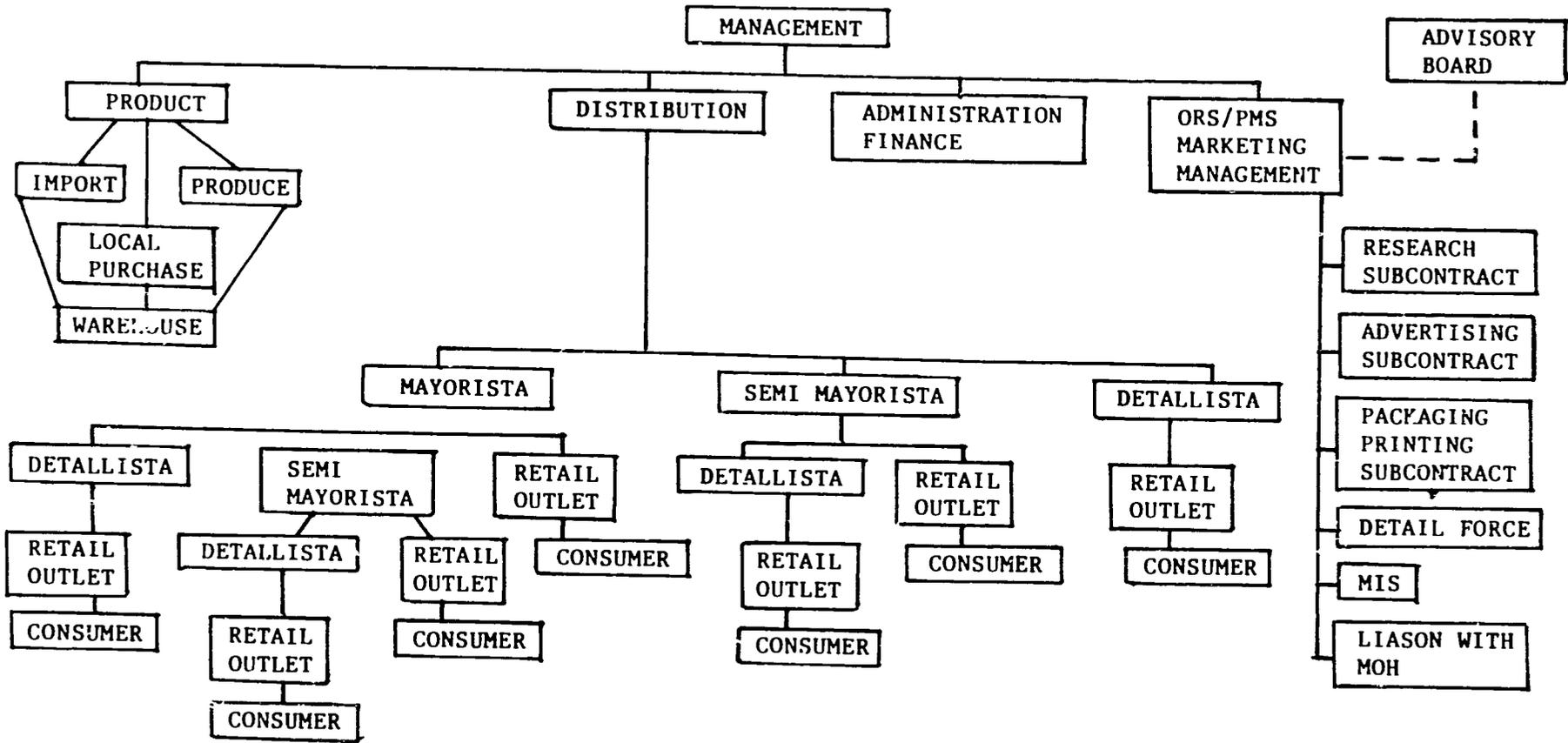
The **Ministry of Health** would have representation on the Advisory Board. In addition, the MOH would: 1) provide political support for the project, 2) continue its efforts to educate and motivate use of Litrosol and, 3) initiate the SMP.

Each Model is described below and an organizational chart is presented.

Model 1-Consumer Goods Distribution

In the first model the ORS/SMP would be housed in the facilities of a consumer goods distribution company. The marketing management functions would be carried out by project staff. The project would distribute the SMP ORS product through the distribution system--mayoristas, semi-mayoristas, and detallistas to retail outlets such as pulperias. Outside suppliers for marketing research, advertising, and printing would be contracted with for services. A detail force would be trained to promote the product to physicians and pharmacists. The product could be manufactured by the company, procured from another local producer, or a product could be donated. Exhibit VII. A displays this model.

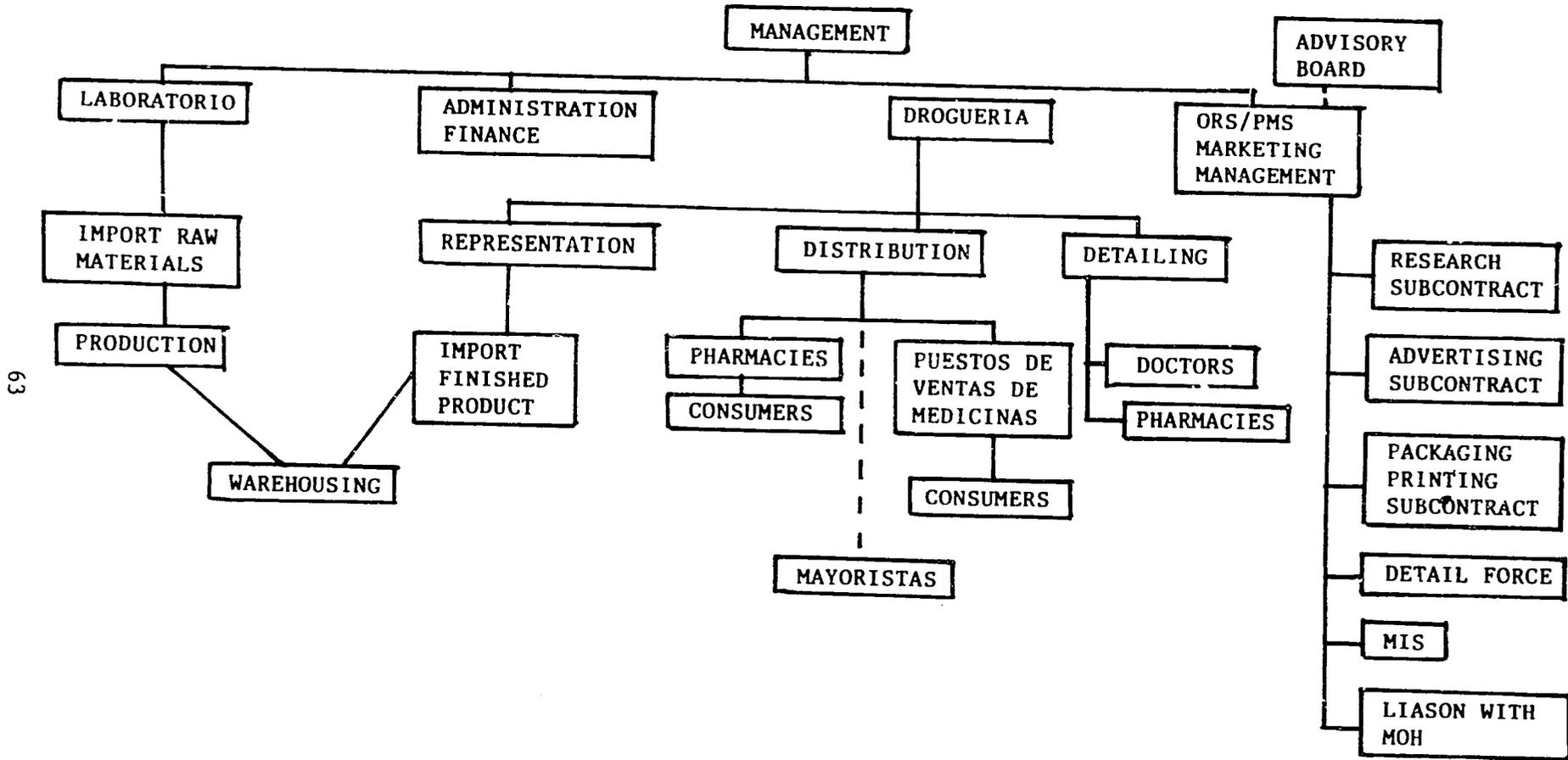
CONSUMER GOODS
DISTRIBUTION COMPANY



Model 2-Laboratorios Y Droguerias

This model is similar to Model 1 in that the ORS/SMP is located in the facilities of the Laboratorios Y Drogueria. A staff would carry out the marketing management functions and services such as research and advertising. Printing would be subcontracted to local suppliers. Products would be distributed to pharmacies and puestos de ventas de medicinas through the Drogueria. The product could be produced by this company, procured from another local supplier, or donated. Exhibit VII.B displays this model.

LABORATORIOS Y DROGUERIA

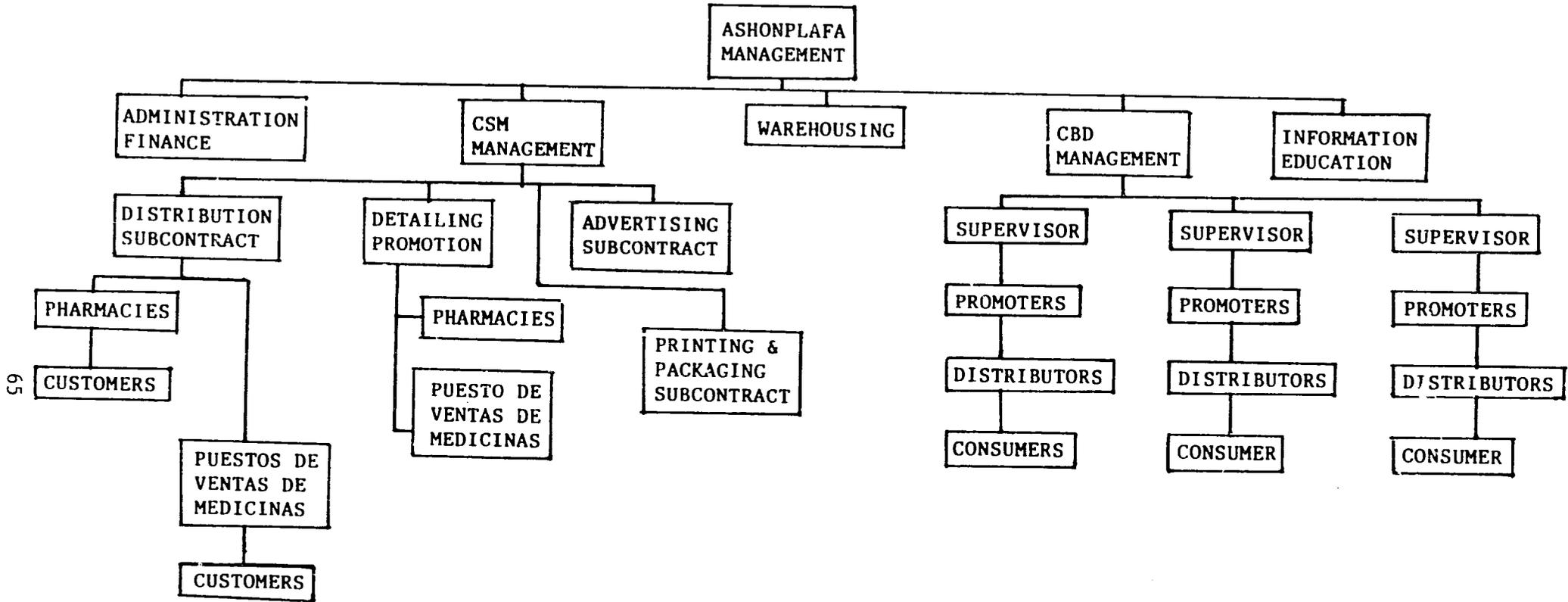


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Model 3-ASHONPLAFA

Model 3 in Exhibit VII.C is very different from the previous two models. In this model, the product would be added to the product line of the Community Based Distribution program and the Contraceptive Social Marketing Program. ASHONPLAFA would have the responsibility for marketing the product and contracting for services they did not provide directly through their in-house staff.

MODEL III
ASHONPLAFA

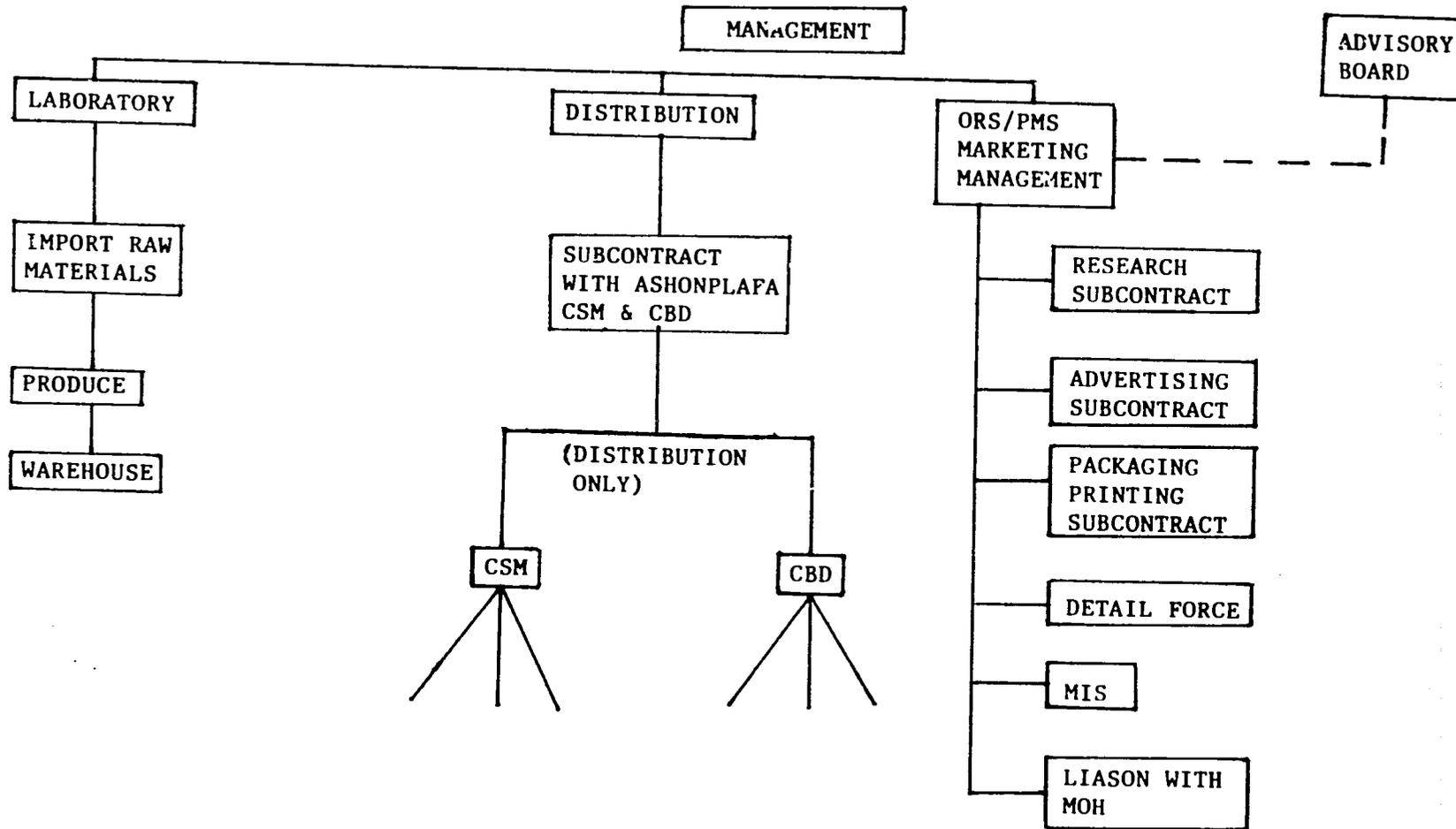


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Model 4-Local Production Company

In this model, the project implementing organization would be a local production company which would produce the product. A staff would manage the marketing management functions as described above. Outside service would be required for distribution and this would be contracted to ASHONPLAFA for product distribution through the community based distribution system and the contraceptive social marketing program. This model is presented in Exhibit VII.D.

MODEL IV
LOCAL PRODUCTION COMPANY

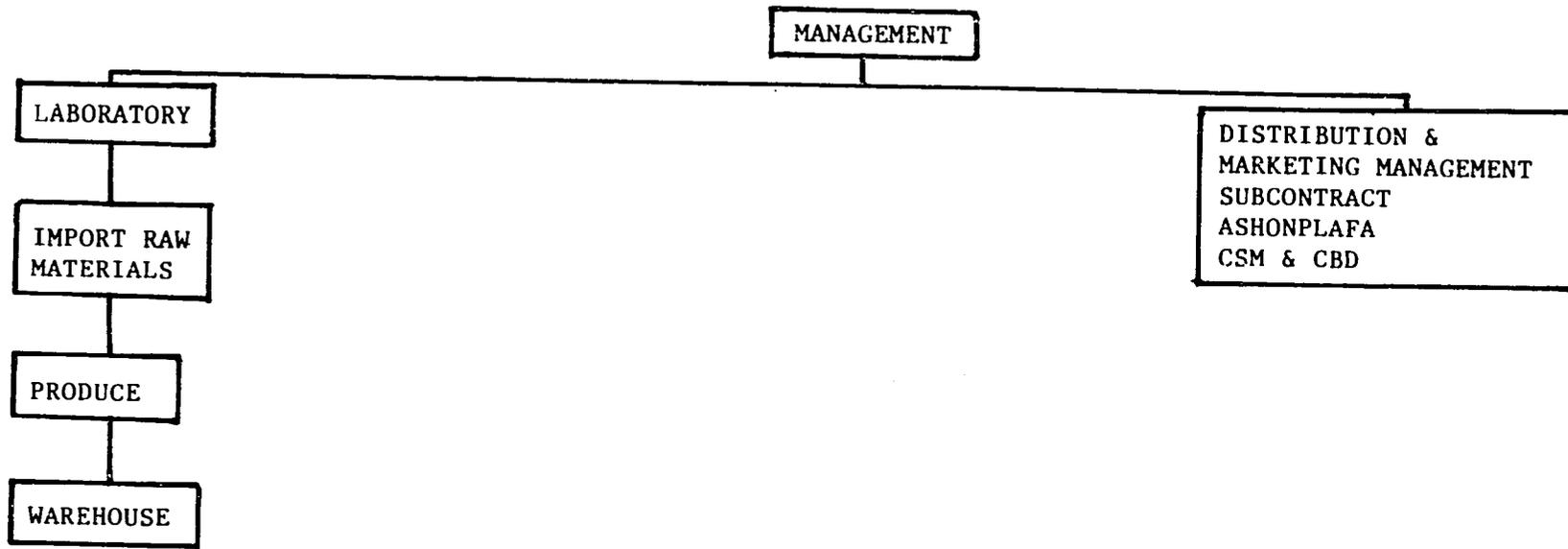


Model 5-Local Production Company

As shown in Exhibit VII. E, Model 5 is similar to Model 4. The primary difference is that the marketing and distribution functions are subcontracted to ASHONPLAFA.

MODEL V

LOCAL PRODUCTION COMPANY



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Each model has its strengths and weaknesses. Decision making regarding the institutional structure will depend on the information gleaned from the marketing research to be conducted during Phase II and the indepth analysis during Phase III which will integrate the findings from Phase II.

VIII. MARKETING RESEARCH

One of the outputs of the prefeasibility study is the identification of the marketing research studies which need to be conducted in order to obtain information essential to the design of the ORS/SMP. Marketing Research efforts will be Phase II. The primary research topics are described below.

1. Physician Study

A knowledge, attitudes, and practice study of private sector physicians on treatment of diarrhea and dehydration;

2. Pharmacist Study

A knowledge, attitudes, and practices study of pharmacists on treatment of diarrhea and dehydration;

3. Trade Overview

A trade overview of pharmacies, puesto de ventas de medicinas, and pulperias and other outlets to examine distribution structures in order to develop product distribution strategy.

4. Consumer Studies

A minimum of two studies to obtain a profile of potential and previous users to learn about product expectations, satisfactions, and dissatisfactions, and actual use over an extended period of time.

5. Assessment of Overlap between MOH and CBD

A study to review the overlap at the community level between the MOH/Community Health Workers and ASONPLAFA's Community Based Distribution Program;

6. MOH Warehouse Audit

A product inventory count and review of product expiration dates at all levels;

IX. NEXT STEPS

The pre-feasibility study concludes with this effort. In summary, Phase II is the marketing research effort and Phase III is feasibility study. The next steps for Phase II and III are a brief description of the primary activity and timing are presented below.

PHASE II Marketing Research

- May: Finalize Procedures for Contracting (USAID, MOH, AED)
Finalize Research Protocol (AED)
- June: Develop Selection Criteria (AED, MOH)
Let Bid (AED)
- August: Select Firm (panel to be selected)
Initiate Research (Guatemalan Company)
- August-
November: Conduct Research (Guatemalan Company)
Monitor Research (AED)
- November: Finalize Research
Submit Report

PHASE III Feasibility Study

- December: Finalize Scope of Work and Team
- January: Conduct Feasibility Study

APPENDIX A
REFERENCES

- Academy for Educational Development. (1985) Proposal: HEALTHCOM-Communication for Child Survival. Washington, D.C.
- Altman, D. (1980, January) Social Marketing: Does It Work? Population Reports. Series J. Number 21. Johns Hopkins University. Baltimore, Maryland.
- Andreasen, A.R. (1983) A Marketing Audit Model for Contraceptive Social Marketing Programs. International Contraceptive Social Marketing Project. The Futures Group. Washington, D.C.
- Binnendyk, A. (1985, January) AID's Experience with Contraceptive Social Marketing: A Synthesis of Project Evaluation Findings. Agency for International Development. Washington, D.C.
- Bonanno, M.R. (1985, December) Plan Operativo Anual Programa Control de Enfermedades Diarreicas Ano 1986. Ministerio de Salud Publica. Tegucigalpa, Honduras.
- Boone, M.S. and Derr, B.B. (1982) Measuring and Predicting the Success of Contraceptive Social Marketing Programs: A Preliminary Formulation. International Contraceptive Social Marketing Project. The Futures Group. Washington, D.C.
- Burton, R. (1986, January) Report on a Feasibility Study for the Design and Construction of a New Pharmaceutical Production Facility for Laboratorios PANI. PharMed Quality Systems for Management Sciences for Health. East Windsor, New Jersey.
- Cash, R. (1983, June) Bringing Oral Rehydration Therapy to the Community Level. Harvard School of Public Health. Boston, Massachusetts.
- Clift, E. (1986, February) Diffusion and Development: Women, Media and Primary Health Care in the Third World. Academy for Educational Development. Washington, D.C.
- Cole-King, S. (1983, June) Oral Rehydration Therapy and Its Linkages with Health and Other Programs. UNICEF. New York, New York.
- Development Communication Report No 51. (1985) Clearinghouse on Development Communication. Academy for Educational Development. Washington, D.C.
- Foote, D.R., et al. (1985, June) The Mass Media and Health Practices Evaluation in Honduras: A Report of Major Findings. Stanford University and ACT. Menlo Park, California.

- Fox, K.F.A. (1986) Factors in the Success of Social Marketing: Oral Rehydration Therapy and Contraceptive Social Marketing in Egypt. Santa Clara University, California.
- Fox, K.F.A. and French, C.E. (no date) The Contribution of Marketing to AID Overseas Development Efforts. (mimeo)
- HEALTHCOM. (1984) After 12 Months of Broadcasting A Status Report on the Project in Honduras and The Gambia. The Academy for Educational Development. Washington, D.C.
- HEALTHCOM. (1985) Field Notes. Academy for Educational Development. Washington, D.C.
- HEALTHCOM. (1985) Lessons From Five Countries. Academy for Educational Development. Washington, D.C.
- HEALTHCOM. (1980) Mass Media and Health Practices Project, The Academy for Educational Development. Washington, D.C. Documents 11, 14 and 15.
- International Contraceptive Social Marketing Project. (1983) Contraceptive Social Marketing Strategy Workshop. The Futures Group. Washington, D.C.
- International Contraceptive Social Marketing Project. (no date) Determining Pricing Policies in Contraceptive Social Marketing. The Futures Group. Washington, D.C.
- International Contraceptive Social Marketing Project. (1981) Summary Proceedings of the Contraceptive Social Marketing Asia Regional Conference. Dacca, Bangladesh. June 1981. The Futures Group. Washington, D.C.
- Management Sciences for Health. (1986, February) Documento de Observaciones que Creemos Importantes Para Las Nuevas Autoridades del Ministerio de Salud Publica. Tegucigalpa, Honduras.
- Ministry of Health. (1985) Acute Diarrheas: Their Management and Prevention. With the Philippine Pediatric Society and the Kabalikat ng Pamilyang Pilipino Foundation, Inc. Manila, Philippines.
- Ministerio de Salud Publica. (1983, August) Alternativas de Financiamiento de los servicios de Salud. Publicacion Cientifica No. 0001-08-83. Tegucigalpa, Honduras.
- Ministerio de Salud Publica. (1983) Encuesta Deomografica Nacional de Honduras. Tegucigalpa, Honduras.
- Ministerio de Salud Publica. (1984) Encuesta Nacional Salud Materno Infantil with Management Sciences for Health. Tegucigalpa, Honduras.

- Ministerio de Salud Publica. (1984, Noviembre) Estudio en el Personal de Salud Sobre Sus Conocimientos, Actitudes Y Prcticas en Relacion a Las Normas de La Terapia de Rehidratacion Oral. Tegucigalpa, Honduras.
- Ministerio de Salud Publica. (1984, August) Evaluacion del Systema de Suministro de las Sales de Rehidratacion Oral en Honduras. Tegucigalpa, Honduras.
- Ministerio de Salud Publica. (1983) Manual de Normas Para La Prevencion Y Control de la Dheshidracion por Enfermedades Diarreicas. Primera Edicion. Tegucigalpa, Honduras.
- Ministerio de Salud Publica. (1985, Junio). Proyecto de Mecadeo Social de Sales de Rehidratacion Oral. Tegucigalpa, Honduras.
- PRITECH. (1985) Manual for Assessment and Planning of National ORT Programs. Management Sciences for Health. Arlington, Virginia.
- PRITECH. (1985) Oral Rehydration Therapy in Africa: Report of a Workshop. Lilongwe, Malawi. March 29-30, 1985. Management Sciences for Health. Arlington, Virginia.
- PRITECH. (1985) Oral Rehydration Therapy in Asia: Report of a Workshop. Dhaka, Bangladesh. March 17-21, 1985. Management Sciences for Health. Arlington, Virginia.
- PRITECH. (1985) Social Marketing Oral Rehydration Therapy/ Solution: A Workshop. November 1984. Management Sciences for Health. Arlington, Virginia.
- Porter Novelli Associates. (1983) A Model for Market Research in Contraceptive Social Marketing. International Contraceptive Social Marketing Project. The Futures Group. Washington, D.C.
- Ravenholt, B.B. (1982) Contraceptive Social Marketing: Guidelines for Project Development. International Contraceptive Social Marketing Project. The Futures Group, Washington, D.C.
- Rhode, J. (1983, June) Management of Acute Diarrheal Disease in the Home and the Community: Practical Considerations. Management Sciences for Health. Washington, D.C.
- Salvador, L.U., et al. (1984) Communication and Community Participation in the Control of Diarrheal Diseases in Ecuador. Academy for Educational Development. Washington, D.C.
- Smith, W.A., et al. (1984) Health Communications for ORT in Honduras. Assignment Children. UNICEF. Geneva, Switzerland.
- Smith, W.A., and Furst, B. (1986, March) Partnership for Survival: The Role of Communications in Reducing Infant Mortality. Academy for Educational Development. Washington, D.C.

SOMARC. (1986) Proceedings of the SOMARC Conference on CSM in Latin America. January 20-23, 1986. The Futures Group. Washington, D.C.

SOMARC. (1984) Report of SOMARC Meeting with Advisory Council and Working Groups on Marketing Management, Market Research and Marketing Communications. December 18, 1984. The Futures Group. Washington, D.C.

Thomas, M. (1982, July) Marketing Plan for the Honduras Contraceptive Social Marketing Project. Triton Corporation. Tegucigalpa, Honduras.

U.S. Agency for International Development. (1985, December) Child Survival: A Report to Congress on the AID Program. Washington, D.C.

U.S. Agency for International Development/Tegucigalpa. (1980, June) Assessment of Public Health Sector 1975-1985. Tegucigalpa, Honduras.

U.S. Agency for International Development/Tegucigalpa. (1986) Health Action Plan. Tegucigalpa, Honduras.

World Health Organization. (1983) The Management of Diarrhea and Use of Oral Rehydration Therapy. Geneva, Switzerland.

World Health Organization. (1981) Manual for the Planning and Evaluation of National Diarrheal Diseases Control Programmes. Geneva, Switzerland.

World Health Organization and UNICEF. (1980) Guidelines for the Production of Oral Rehydration Salts. Geneva, Switzerland.

World Health Organization and UNICEF. (1985) Oral Rehydration Salts: Planning, Establishment and Operation of Production Facilities. Geneva, Switzerland.

Zelaya, J.E., et al. (1985) La Terapia de Rehidracion Oral, Evaluacion de la Experiencia en Honduras. Ministerio de Salud Publica y Management Sciences for Health. Tegucigalpa, Honduras.

Zeldin, L. (1985, May) Honduras Evaluation Report of the Breastfeeding Support Project PROALMA. International Nutrition Communication Service Consultant Report Series. Contract AID/DSAN-C-0209. Education Development Center. Newton, Massachusetts.

APPENDIX B

CONTACTS

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Laboratorio Andifar
Dr. Abraham Andonie

Laboratorio y Drogueria Mandofer
Sr. Jose Adrian Pineada, Sales Manager
Dr. Julio Colinres, Gerente de Produccion, Infarma

Laboratorio y Drogueria Sandoval
Dr. Marco Sandoval

DISTRIBUDOR DE PRODUCTOS

Schmid & Tentori
Sr. Fernando Tentori, Gerente de Distribution

ADVERTISING AGENCIES

APCU

Lic. Jose Carias, Sub-Gerente
Lic. Rigoberto Silva, Ejecutive de Cuentas

Multimedia

Lic. Marco Cuello, President

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Dr. Guillermo Gosset, Pan American Health Organization
 Representative for Epdemiology
Dr. Antonio Casas, UNICEF Reprecentative
Ms. Leslie Zeldin, PROALMA

APPENDIX C

PLAN DE TRABAJO
PRIMERA FASE DEL ESTUDIO DE MERCADEO SOCIAL
DE LAS SALES DE REHIDRATACION ORAL

PROGRAMA: CONTROL DE ENFERMEDADES DIARREICAS

FECHA HORA	ACTIVIDADES	RESPONSABLES	OBSERVACIONES
<p><u>3 - ABRIL - 86</u> 9:00 A.M.</p>	<p>-Reunión con la Dirección General de Salud para: -Presentación de la asesora Susan Sanders. -Actividades a realizar en la primera fase del estudio.</p>	<p>-Jefe Div. de Epidemiología -Programa C.E.D. -Unidad de Ciencia y Tecnología.</p>	
<p><u>4 - ABRIL - 86</u> 2:00 P.M.</p>	<p>-Reunión para discusión técnica sobre las actividades a ejecutar en la primera fase del proyecto.</p>	<p>-Dra. Rita O. de Orellana -Lic. María R. Bonanno de García.</p>	
<p><u>7 - ABRIL - 86</u> 8:30 A.M.</p>	<p>-Elaboración del plan de trabajo para la primera fase del proyecto.</p>	<p>-Dr. Gustavo Euceda -Lic. María R. Bonanno de García. -Lic. Susan Sanders.</p>	
<p>11:00 AM 1:30 A.M.</p>	<p>-Reunión con los directivos de ASHONPLAFA. -Elaboración del instrumento de preguntas para la entrevista con la ASHONPLAFA.</p>	<p>" " " " " "</p>	
<p><u>8 - ABRIL - 86</u> 8:00 A.M. -12:00 M.</p>	<p>-Continuación de la reunión con ASHONPLAFA, para tratar sobre: -Mercadeo social de los anticonceptivos.</p>	<p>" " " " " "</p>	

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FECHA HORA	ACTIVIDADES	RESPONSABLES	OBSERVACIONES
1:30 P.M. -4:00 P.M. 9 - ABRIL - 86	-Reunión con funcionarios de la OPS/OMS.	-Dr. Gustavo Euceda -Lic. María R. Bonanno de García. -Lic. Susan Sanders.	
8:00 A.M.-12:00 M.	-Reunión con la Jefe del Departamento de la distribución comunitaria de anticonceptivos de ASHONPLAFA.	" " "	
1:30 P.M.-4:00 P.M.	-Elaboración de los instrumentos de preguntas para las entrevistas con: -Droguerías -Agencias de Publicidad -Diferentes de Atención en Salud.	" " "	
10 - ABRIL - 86 7:30 - 8:30 A.M.	-Presentación sobre el sistema de salud del país.	-Dr. Carlos Fiallos	
8:30 - 1:00 P.M.	-Visita al Servicio de Rehidratación Oral del Hospital Escuela; CESAMO El Chile y CESAR de Río Hondo.	-Dr. Gustavo Euceda -Lic. María R. Bonanno de García -Lic. Susan Sanders.	
2:00 - 4:00 P.M.	-Entrevista con los ejecutivos de la Droguería Francella.	" " "	
4:00 - 5:30 P.M.	-Entrevista con las farmacias.	" " "	
11 - ABRIL -86 8:00 A.M. -11:30 A.M.	-Entrevistas con el personal comunitario del área de influencia del CESAR de Río Hondo.	" " "	
1:15 P.M. -3:30 P.M.	-Entrevista con el Gerente de la Agencia de Publicidad APCU.	" " "	

FECHA HORA	ACTIVIDADES	RESPONSABLES	OBSERVACIONES
<u>14 - ABRIL - 86</u> 8:00 A.M. - 3:30 P.M.	-Inicio de la elaboración del borrador del informe de la primera fase del proyecto.	-Dr. Gustavo Euceda -Lic. Marfa R. Bonanno de Garcia. -Lic. Susan Sanders.	
<u>15 - ABRIL - 86</u> 8:00 A.M. - 11:00 A.M.	-Revisión y discusión del proyecto.	" " "	
11:30 A.M. - 12:00 M.	-Entrevista con Dr. Juan A. Casas.	" " "	
2:00 P.M. - 4:00 P.M.	-Entrevista con el Gerente de la Droguerfa Andifar.	" " "	
<u>16 - ABRIL - 86</u> 8:00 A.M. - 11:30 A.M.	-Revisión de informe y de lo acontecido 8 al 11 - IV -86.	" " "	
12:00 M. - 1:30 P.M.	-Reunión con Dres. Wilfredo Alvarado y Dr. Patricio Barriga. (El Jacal).	" " "	
2:00 P.M. - 4:00 P.M.	-Entrevista con multimedias (Colonia Humuya)	" " "	
<u>17 - ABRIL - 86</u> 8:30 A.M.	-Entrevista con Droguerfa Mandofer	" " "	
11:00 A.M.	- " " Laboratorio Sandoval	" " "	
1:00 P.M. - 5:00 P.M.	-Revisión del plan de análisis institucional.	" " "	
<u>18 - ABRIL - 86</u> 8:00 A.M.	-Entrevista con la Distribuidora Schmitd y Tentori.	" " "	
10:00 A.M. a 4:00 P.M.	-Análisis institucional de la información recabada.	" " "	

FECHA HORA	ACTIVIDADES	RESPONSABLES	OBSERVACIONES
<u>21 - ABRIL - 86</u> 8:00 A.M.	-Entrevistas con personal de las farmacias.	Dr. Gustavo Euceda Lic. María R. Bonanno de García. Lic. Susan Sanders.	
10:30 a 4:00 P.M.	-Continuación del análisis institucional.	" " "	
<u>22 - ABRIL - 86</u> 8:00 A.M. - 4:00 P.M.	-Revisión de la información recabada.		
<u>23 - ABRIL - 86</u> 8:00 A.M. - 12:30 M. 1:00 P.M.	-Discusión sobre los diferentes modelos de mercadeo social. -Reunión con el Dr. Juan de Dios Paredes.	" " "	
<u>24 - ABRIL - 86</u> 8:00 A.M. - 12:30 M. 1:30 P.M. - 4:00 P.M.	-Revisión de los modelos de mercadeo social. -Revisión de la información recabada de las farmacias.	" " "	
<u>25 - ABRIL - 86</u> 8:00 A.M. - 9:30 A.M. 10:00 A.M. - 1:30 P.M.	-Elaboración del plan de investigación. -Reunión con el Lic. Marcial Cerrato. Redacción del Informe.	" " "	
<u>28 - ABRIL - 86</u> 8:00 A.M. - 4:00 P.M.	-Preparación del informe y presentación del mismo a los niveles respectivos.	" " "	
<u>29 - ABRIL - 86</u> 8:00 A.M. - 4:00 P.M.	Continuación de la preparación del informe.	" " "	

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FECHA HORA	ACTIVIDADES	RESPONSABLES	OBSERVACIONES
<p><u>30 - ABRIL - 86</u> 1:30 P.M.</p>	<p>-Presentación del informe a él Nivel Técnico-Normativo.</p>	<p>Dr. Gustavo Euceda Lic. María R. Bonanno de García. Lic. Susan Sanders.</p>	
<p><u>2 - MAYO - 86</u> 8:00 A.M.</p>	<p>-Presentación del informe a la Dirección General de Salud, M.S.H. y al A.I.D.</p>	<p>" " "</p>	



DIARRHOEAL DISEASES CONTROL PROGRAMME

WHO/CDD/SER/84.7

ORIGINAL: ENGLISH

ORAL REHYDRATION SALTS (ORS) FORMULATION CONTAINING TRISODIUM CITRATE

1. In 1982-1983 the WHO Diarrhoeal Diseases Control (CDD) Programme supported laboratory studies to identify a more stable ORS composition, particularly for use in tropical countries, where ORS has to be packed and stored under climatic conditions of high humidity and temperature. The results of these studies demonstrated that ORS containing 2.9 grams of trisodium citrate dihydrate in place of 2.5 grams of sodium bicarbonate (sodium hydrogen carbonate) was the best of the formulations evaluated.¹ The formulae of the standard ORS (ORS-bicarbonate) and ORS containing trisodium citrate dihydrate (ORS-citrate) are shown below:

<u>ORS-bicarbonate</u>	<u>grams/litre</u>	<u>ORS-citrate</u>	<u>grams/litre</u>
Sodium chloride	3.5	Sodium chloride	3.5
Sodium bicarbonate (sodium hydrogen carbonate)	2.5	Trisodium citrate dihydrate	2.9
Potassium chloride	1.5	Potassium chloride	1.5
Glucose anhydrous	20.0	Glucose anhydrous	20.0

2. Following these stability studies, 7 clinical trials were undertaken with the support of the CDD Programme, in which the efficacy of ORS-citrate and ORS-bicarbonate was compared. All but one of these trials had a double-blind study design.

Four of the 7 studies were undertaken in children below 2 years of age with moderate to severe non-cholera diarrhoea. The ORS-citrate was received by 128 children and found to be uniformly as effective as ORS-bicarbonate in correcting acidosis. In 3 of the 4 studies from which preliminary data are available, there was a trend towards a reduction (8-14%) of diarrhoea stool output in children receiving the ORS-citrate.

The remaining 3 studies were undertaken in adults and older children with cholera who presented with dehydration and acidosis. In the 112 patients receiving ORS-citrate (68 adults, 44 children), the acidosis was corrected at a rate equal to that in patients receiving ORS-bicarbonate. In addition, preliminary data from all 3 studies indicate that the diarrhoea stool output was considerably less (reduced by 26-46%) in those treated with ORS-citrate.

¹ Siewert, M. & Gnekow, H. Über die Stabilität von Glucose-Elektrolyt-Mischungen (Oral Rehydration Salts; ORS) zur Therapie von Durchfallerkrankungen. Pharmazeutische Zeitung, 128 (22): 1169-1174 (1983)

It appears from these results that, in comparison with ORS-bicarbonate, ORS-citrate corrects acidosis at an equal rate and its use results in less stool output, especially in high-output diarrhoea (e.g., cholera). The latter observation is most probably due to a direct effect of trisodium citrate in increasing intestinal absorption of sodium and water.

3. Countries should have no hesitation in continuing to use ORS-bicarbonate, which is highly effective in the treatment of dehydration. However, because of its better stability and apparently greater efficacy, WHO and UNICEF now recommend that countries use and produce ORS-citrate where feasible. As in the case of any new drug, countries electing to use ORS-citrate should monitor carefully its performance during the first months of its routine use.

Where ORS-bicarbonate is at present being produced, the production of ORS-citrate should not require any changes in equipment or new investment. Where ORS-bicarbonate is being packed in aluminium laminate, on automatic equipment, the same type of packaging material can be used for ORS-citrate. Where climatic conditions allow, a laminated compound containing less or even no aluminium may be acceptable.

In countries where ORS-citrate is to be produced with semi-automatic equipment and use is to be made of a relatively cheap, locally available packaging material, such as polyethylene, there may be a saving of up to 50% in the cost of packaging material, and 10-20% in the final packet cost.

To avoid confusion in the field, the packets supplied globally by UNICEF (ex UNIPAC) will continue to be of the same appearance as in the past. The price of a packet containing ORS-citrate will probably remain the same if the slightly higher cost of trisodium citrate can be offset by a less costly packaging material.

4. WHO will be issuing, in late 1984, a revision of its "Guidelines for the Production of Oral Rehydration Salts" (document WHO/CDD/SER/80.3), which will provide detailed information about the production of ORS-citrate. Any questions about ORS-citrate should be directed to the Director, Diarrhoeal Diseases Control Programme, World Health Organization, 1211 Geneva 27, Switzerland.

APPENDIX E
NON STANDARD FORMULAS FOR TREATMENT OF DIARRHEAL
FOR PRODUCTS AVAILABLE IN HONDURAN PHARMACIES

1. Dextrolito

Manufactured by Laboratorios Francelia
Distributed by Laboratorios Francelia

Cloruro de sodio	3.5grs.
Cloruro de potasio	1.5grs.
Bicarbonato de sodio	2.5grs.
Glucosa	50.0grs.

to be diluted in 1 liter of water
doses not specified

Promotion direct to Pharmacy Owner in the form of bonus good
and to the sales person in the form of coupons

2. Entero-Sediv

Manufactured by Grunenthl GMBH (Germany)
Distributed by unknown

Didrothenal	0.10grs.
Di-iodo-hydroxyguinoline	0.25grs.
Sulphaguanidine	0.50grs.
Kaolin	0.80grs.
Pectin	0.10grs.
Sodium citrate	0.10grs.

mixing instructions not specified
dosage specified by age

3. Dextrovita

Manufactured by Laboratorios Sandoval
Distributed by Laboratorios Sandoval

Glucosa	25.00grs.
Tiamins	0.0015grs.
Rivoflavina	0.0017grs.
Vitamin B	0.0020grs.
Niacinamida	0.020grs.
Lantotanato de Cal	0.010grs.

Disolve in 1/2 ltr of water

Advertises over the radio

4. Suerolito

Manufactured by Laboratorios Sandoval
Distributed by Laboratorios Sandoval

Dextrosa	42.5grs.
Cloruro de sodio puro	3.5grs.
Bicarbonato de Sodio	2.5grs.
Cloruro de Potasio	1.5grs.

Disolve in 1 liter of water

5. Sulfabismuto

Manufactured by Laboratorios Sandoval
Distributed by Laboratorios Sandoval

Carbonto de calcio	1.00grs.
Sulfaguanidina	0.50grs.
Subnitrate de Bismuto	0.15grs.
Acido Tanico	0.50grs.

not specified

6. Bismocal

Manufactured by unknown (Salvador)
Distributed by Drogueria Univeral

Sulfaquidina	0.50grs.
Kaolin	0.50grs.
Carbonato de Calcue	0.50grs.
Subcarbonato de Bismuto	0.50grs.

no mixing instructions

7. Suero Oral Vitaminado

Manufactured by Anclero
Distributed by Unknow

Glucosa pura	480 mg
Cloruro de Sodio	480 mg
Cloruro de Potasio	180 mg
Cluconato de Calcio	96 mg
Tiamina Clor	6 mg
Riboflavina	0.6 mg
Nicotinamida	15 mg
Pitidoxina	6 mg
Acido Ascobico	12 mg
Sacarosa C.S.P.	6 mg

Mix in 1 glass of boiled water

8. Hidrafix

Manufactured by Rorer

Distributed by Hammer

25 ml. plastic envelope has:

Dimenhidrinat	0.109
Cloruro de Sodio	1.409
Cloruro de Potasio	0.979
Citrato de Magnesio	0.609
Citrato de Sodio	1.369
Acido Citrico	0.359
Fosfato Disodico	0.709
Lactato de Calais	0.609
Dextrosa	25.99
Levulosa	25.09

APPENDIX F

INFORMACION SOBRE LAS FARMACIAS ENTREVISTADAS

ABRIL - 1986

1. Propósitos

Entidades privadas encaminadas a la venta de productos farmacéuticos y cosméticos.

2. Lista de productos disponibles para tratar la diarrea y/o deshidratación:

- Pedialite
- Oralectril
- Sueroito
- Dextrovita
- Sobre de Sales de Rehidratación Oral
- Hidrofix
- Bismocal
- Sulfahismuto
- Suero vitaminado
- Entero - Sediv
- Kaolín - pectivo

3. Consumidor

De acuerdo al nivel económico de la población, éste compra en las farmacias un determinado producto.

A nivel del estrato A, B y C el consumidor confía un producto específico para tratar la deshidratación (Pedialite, Oralectril y Sales de Rehidratación Oral de la Ciba, Geigy), recomendándole al farmacéutico casi los mismos productos; mientras que en los niveles D y E las personas van a preguntar acerca de qué productos pueden utilizar.

4. Tratamiento recomendado por el farmacéutico depende del precio que puede pagar el consumidor y el estado actual del niño. Cuando la madre llega a la farmacia le hacen un interrogatorio referente a las condiciones del niño, en base a esto el vendedor indica un tratamiento encaminado a tratar la causa de la diarrea y solamente si el niño manifiesta deshidratación se le indica cualquier producto para combatir la deshidratación.

Es bastante frecuente a este nivel el uso de antidiarreicos (Kaolín pectina, etc.).

5. Incentivos que recibe el JEFE de la farmacia y el distribuidor:

A. Bonificaciones por escalas de compras,

B. Para el vendedor el sistema de los tickets.

6. Información Sobre El Litrosol:

A todos los niveles de las farmacias se conoce el "Litrosol" a través de la radio. Es importante destacar que la población indistintamente de su nivel solicita en las farmacias el "Litrosol".

Al preguntar a los vendedores acerca de la preparación del Litrosol nos encontramos que de 9 farmacias entrevistadas 6 conocían la preparación adecuada del Litrosol.

PRODUCTO - CARACTERISTICAS

Nombre del Producto	Presentación	Precio	Vía de Admon.	Estratos				
				A	B	C	D	E
-Fedralite	botella	L.4.00	oral	X	X	X	X	
-Cralectril	botella de 500 y 1000cc	L.3.00 y 4.00	oral	X	X	X	X	
-Dextrovita	sobre	.53	oral			X	X	X
-Suerolito	sobre	.53	oral			X	X	X
-Sales de Rehidratación Oral	sobre	L.1.89	oral	X	X	X		
-Dextrosa al 10%	botella de 500	L.4.65	IV	X	X	X		
-Dextrose al 5%	1000 cc	L.6.15	IV	X	X	X		
-Suero Fisiológico	500 cc	L.3.75	IV	X	X	X		
-Solución Ringer	500 cc	L.4.50	IV	X	X	X		
-Lactato Ringer	1000 c	L.6.90	IV	X	X	X		

NOMBRE DEL PRODUCTO

- Bismocal	sobre	--	oral				X	X
- Sulfabismuto	"	--	oral				X	X
- Kaoicín	frasco suspensión	L.11.00	oral	X	X	X	X	X
- Kaopectate	frasco suspensión	L.5.75	oral	X	X	X	X	X
- Kaoín	frasco suspensión	L.4.10	oral			X	X	X
- Kaoín Pectina	frasco suspensión	L.3.00	oral				X	X

ORS TREATMENTS SUPPLIED AT PHARMACIES
CATEGORIZED BY SOCIO ECONOMIC STATUS OF NEIGHBORHOOD

Tegucigalpa, Honduras

April 1986

Classification
of Pharmacy: _____

ORT Brand Name	Pkt. Size	Stock Level (in units)	Cost/Pkt Limperas	Sales/Week (est.)	Most Often Recommended
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1. Who buys the product?
Quien compra el producto?
2. Does the customer ask for a specific product to treat
diarrhea?
Pide el cliente un producto especifico para el tratamiento
de diarrea?
3. What is the most frequently requested treatment? Why?
Cual es el medicamento/tratamiento mas solicitado? Porque?
4. What is the most frequently recommended treatment? Why?
Cual es el medicamento/tratamiento mas recomendado? Porque?
5. What incentives are offered to the pharmacist by the
distributor? Cuales incentivos da el distribuidor?

-to the sales person behind the counter? al vendedor?
6. Have you heard of Litrosol? Yes No
Hay oido acerca de Litrosol?
7. How?
Como?
8. How do you prepare Litrosol?
Me puede explicar como se prepara el Litrosol?