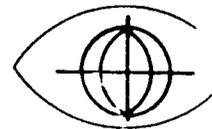


PD-ARF-918



82394

"A MULTIPLE INTERVENTION STRATEGY
TO IMPROVE VITAMIN A NUTRITION
IN PERI-URBAN COMMUNITIES,
TEGUCIGALPA, HONDURAS"

Submitted by: The International Eye Foundation

Project Start Date: October 1, 1990

Project End Date: September 30, 1993

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1. Map
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SECTION A. DIP COUNTRY PROJECT SUMMARY TABLE
(See Format A., preceding 3 pages).

SECTION B. LOCATION AND FORMAL AGREEMENTS

B.1 The Vitamin A Intervention Project will be carried out in a peri-urban settlement area (Las Crucitas) in the northwest quadrant of metropolitan Tegucigalpa, the capital city of Honduras. SEE APPENDIX 1, Map of Project Area. These peripheral, marginal settlements, scattered side by side over the hills make up the Las Crucitas area which has a very high population density. Of the 118 "colonias" or communities found in the Las Crucitas area, the Ministry of Health has selected 25 as their highest priority for the implementation of a comprehensive set of child survival interventions over the next two years. Therefore, the IEF Vitamin A interventions will be integrated into the child survival delivery system being developed for these priority areas.

The metropolitan area of Tegucigalpa has been divided into three geographic areas by the Ministry of Health. Las Crucitas is found in Area 3. Administrative and service delivery responsibilities are delegated by an Area Health Officer to the level of Health Center (CESAMOS) physician directors. The Las Crucitas area has four health centers. The one designated at Las Crucitas is the largest center and serves as a primary referral service site for the other three health centers. The chart below depicts the four health centers, the number of priority communities defined for each center and the total population and number of households covered by each center. SEE APPENDIX 2, List of Communities.

CESAMOS	# COLONIAS	POPULATION	# HOUSEHOLDS
Las Crucitas	8	6872	1839
3 de Mayo	5	18650	3612
Alemania	3	10374	1562
San Francisco	9	25758	4293
TOTAL	25	61654	11306

B.2 The general project area of Las Crucitas was selected after discussions with the Central level officials of the Ministry of Health. The criteria used for selection of the project area was that many communities in this area were significantly under-served by the Ministry of Health and that there was a need to introduce child survival interventions based at the community level. The specific target communities were defined as those most under-served by the Area Health Officer and the CESAMOS physician directors. These individuals are:

Area Health Officer	- Dr. Carlos Villalobos
Las Crucitas	- Dr. Teresa Reyes
3 de Mayo	- Dr. Marcos Zelaya
San Francisco	- Dr. Georgina Diaz
Alemania	- Dr. Gustavo Ramirez

Data specific to the Las Crucitas area on vitamin A deficiency is not available. However, data from the National Survey of Food Consumption, conducted in 1987 by the MOH, indicates children ages 18-59 months consume less than the recommended daily allowances of vitamin A from foods (more than half of the children do not receive 50% of the RDA). The survey recommended that national vitamin A policy include other strategies in addition to capsule distribution and sugar fortification.

Although not necessarily unique to this project location, the following constraints may apply:

- cultural constraints related to food consumption patterns and habits and a potential resistance to the introduction and to increasing the consumption of vitamin A rich foods;
- a significant proportion of the women are illiterate, or with limited primary school education, thus placing a constraint on the types of educational materials which can be most effectively developed and utilized;
- the time available to the community volunteer worker, and to mothers to participate in project activities, may be limited due to the necessity of household and other income generating activities. (These constraints will be addressed through the volunteer selection process and by being sensitive to women's time.);
- the terrain is hilly and with many non-paved roads which are difficult (although not impossible) to use during the rainy season. (The target area is densely populated, thereby making access on foot to large numbers of individuals less difficult.)

B.3 The International Eye Foundation has been active in the Republic of Honduras since 1972. An umbrella agreement was signed with the Ministry of Health in 1980. On October 20, 1989 the official Gazette of the Republic of Honduras published the resolution of the Ministry of Government and Justice making the IEF a fully incorporated Honduran private voluntary organization. A specific amendment to the umbrella agreement with the Ministry of Health is presently being negotiated to accommodate the current project. The IEF does not at this time have any other existing or pending formal agreements with the Honduran Government.

DIP SECTION A: COUNTRY PROJECT SUMMARY TABLE

Organization: International Eye Foundation Country: Honduras

A. PLANNED INTERVENTIONS AND SIZE OF THE BENEFICIARY POPULATION

Intervention	Number of Beneficiaries					Total Beneficiary Population ¹
	0-11 Months	12-23 Months	24-59 Months	0-60 Months Vitamin A Only	Women 15-44 Years	
ORT						
Immunization						
Nutrition					5800 (80%)	7,200
Vitamin A				9200 (80%)		11,500
High Risk Births						
Malaria Control						
Other ^{Eye} Examinations				9200 (80%)		11,500

¹Total number of women and children who are eligible to receive project direct services

Specify Data Source (circle one):

DC PVO Data Collection System; BG Best Guess; DK Don't Know; Other (specify) MOH

Calculation of A.I.D.\$ per Potential Beneficiary per Year

Number of women 15-44 years	<u>5,800</u>
Number of children 0-59 months	<u>9,200</u>
Estimated number of live births	
year 2	<u>1,700</u>
year 3	<u>1,750</u>
Total Potential Beneficiaries	<u>18,450</u>

* Divide total A.I.D. Funding for the project by the total number of potential beneficiaries: $\frac{315,000}{\text{A.I.D. \$}} + \frac{18,450}{\text{Poten Ben}} = \frac{17.07}{\text{Sub Total}}$

Then divide by 3 (length of project): $\frac{17.07}{\text{Sub total}} / \frac{3}{\text{L.O.P.}} = \frac{5.69}{\text{\$/Potential Beneficiary/Year}}$

* Total field costs

Mc

DIP SECTION A: COUNTRY PROJECT SUMMARY TABLE (cont'd)

Organization International Eye Foundation

Country Honduras-----

B. ACTIVITIES: Circle all activity codes that apply for each intervention

1. ORT

- 01 • Distribute ORS packets
- 02 • ORT training
- 03 • Promote ORT home-mix
- 04 • Promote ORT home-base mix
- 05 • Dietary management of diarrhea
- 06 • Hygiene education
- 35 • Other -----
(Specify)

6. Malaria Control

- 27 • Training
- 28 • Health education
- 29 • Treatment
- 30 • Environment actions
- 31 • Residual Insecticides
- 32 • Larvaciding
- 33 • Provision of bednets
- 34 • Provision of commodities
- 35 • Other -----
(Specify)

2. Immunization

- 07 • Distribute vaccines
- 08 • Immunize mother/children
- 09 • Promote immunization
- 10 • Training in immunization
- 35 • Other -----
(Specify)

7. Other

Specify

3. Nutrition

- 11 • Distribute or provide food
- 12 • Distribute or provide iron & folic acid
- 13 • Distribute or provide scales & growth charts
- 14 • Counsel mother on breastfeeding and weaning practices
- 15 • Promote growth monitoring
- 16 • Training in breastfeeding & weaning practices
- 17 • Training in growth monitoring
- 18 • Sponsor mother-to-mother breastfeeding/ support groups
- 35 • Other -----
(Specify)

4. Vitamin A

- 18 • Vitamin A nutritional education
- 19 • Vitamin A food production
- 20 • Vitamin A supplementation
- 21 • Vitamin A deficiency treatment
- 22 • Vitamin A fortification
- 35 • Other Ocular screening/Gardening
(Specify)

5. High Risk Births

- 23 • Distribute contraceptives
- 24 • Sponsor training sessions on high-risk births
- 25 • Promote exclusive breastfeeding to delay conception
- 26 • Promote child spacing or family planning or space births
- 35 • Other -----
(Specify)

146

October 1 1990

DIP Summary March

October 1 1991 12 mos

August 11 mos

27 mos
- 5
= 22 mos

DIP SECTION A: COUNTRY PROJECT SUMMARY TABLE (con't)

Organization International Eye Foundation

Country Honduras

PROJECT DURATION

1. Start Date October 1, 1990
MM DD YY

2. Completion Date September 30, 1993
MM DD YY

CHILD SURVIVAL BUDGET

I. By Year (In thousands of dollars)	A.I.D. Contribution	PVO Contribution	Other Funds (Identify)	Total
Year 1	74,950	39,809		114,759
Year 2	111,836	24,380		136,216
Year 3	128,214	18,895		147,109
Subtotal-Field Costs	315,000	83,084		398,084
Subtotal-HQ/HO Costs	58,000	43,114		101,114
TOTAL	373,000	126,198		499,198

PERCENT OF TOTAL A.I.D. CHILD SURVIVAL FUNDS BY INTERVENTION (Sum to 100%)

- 1.ORT..... %
- 2.Immunization..... %
- 3.Nutrition..... 80 %
 - Breastfeeding..... 10 %
 - Weaning Practices.... 10 %
 - Maternal Nutrition... 10 %
 - Vitamin A..... 70 %
- 4.High Risk Births..... %
- 5.Malaria..... %
- 6.Other (specify).Gardening 20 %

Total 100%

1/c

SECTION C. PROJECT DESIGN

C.1 The project consists of four key CS/vitamin A interventions:

- 1) Distribution of vitamin A capsules every 6 months to infants and children between the ages of 6-60 months.
- 2) Provision of appropriate nutrition education to mothers of children 0-60 months.
- 3) Promotion of vitamin A food production through home-gardening.
- 4) Development of primary eye care services including screening, referral and treatment activities.

The possibility of introducing a fifth intervention consisting of the distribution of a vitamin A-enriched, post-convalescence, pre-packaged food (NutriAtol) to households with pre-school children will be assessed at the time of the mid-term evaluation.

The community-based project is fully integrated into the comprehensive set of child survival interventions provided by the Ministry of Health. It depends upon both daily home visits by a core of community-selected health volunteers, as well as periodic bi-monthly mini-campaigns at which time immunization, vitamin A capsule distribution, nutrition education, and primary eye care screening and referral will take place. In this way, household members who do not attend the frequent campaigns are targeted for a home visit. The auxiliary nursing staff of the IEF project will supervise, train, and provide a quality control check on the activities of the community health volunteers. They will make home visits independently as well as along with the community health volunteer. The gardening promotion intervention will be phased into those communities where community health volunteers and local leaders express an interest. The community health volunteers will identify those households not growing vitamin A-rich foods and will promote home cultivation of a limited number of varieties. The system of primary eye care services will be based on screening and referral from the community health volunteers and auxiliary nurses to the physicians in the CESAMOS. Having been trained by the IEF specialist, the CESAMOS physicians will handle the major case load requiring treatment. They will refer selected cases to the IEF ophthalmologist who will be based in a special unit at the Las Crucitas CESAMOS. The various interventions will be implemented in a phased manner beginning with vitamin A distribution and nutrition education. These will be followed by the development of the primary eye care system, and finally home gardening will be promoted. Initial training will be reinforced with monthly group in-service sessions thus allowing for not only additional topics to be covered and reinforcement of the initial training, but also the opportunity

for providing a forum for the discussion of immediate problems. The project stresses the importance of regular and frequent supervision.

C.2 A population-based health information system will be utilized. Ministry of Health community health volunteers are assigned responsibility for monitoring 30 households each. These volunteers are supervised by an Auxiliary Nurse who has the responsibility for 30 volunteers. Eligible children and women will be defined through a household registry system, the clinic-based record system and their participation in the bi-monthly mini-campaigns. The Auxiliary Nurse will abstract information from the community health volunteer registers and reports on a monthly basis. The Project Coordinator will analyze and summarize these reports by hand with assistance from an auxiliary nurse. For evaluation purposes, a baseline and end-of-project survey will be conducted in two parts. The first part (now completed) will collect data on demographic characteristics, coverage, food consumption patterns, and knowledge, utilizing EPI-cluster survey methodology. The second part (presently in the planning stage) will survey a sub-sample for bio-chemical analysis of serum-retinol levels. The preliminary baseline survey results will be presented to all involved parties in April, 1991. The results will be discussed in the monthly training/administrative sessions to be conducted for all project-related staff. At end-of-project, the baseline survey will be repeated utilizing the same methodology and the results will be distributed.

SECTION C.3c DIP FOR NUTRITIONAL IMPROVEMENT

3c.1 Although the project will not address a specific intervention on breast feeding, improved weaning practices, nor improved nutrition of the pregnant and lactating woman, elements of these behaviors are included in the health and nutrition education package that will be promoted by the project.

3c.2 Information is not readily available specifically for the marginal peri-urban areas where the project is to provide services. Published information is available for the metropolitan region of Tegucigalpa. However, because this information is not stratified by socioeconomic status, it is felt that this information does not reflect accurately the peri-urban areas. Instead, the information being presented in the following sections, unless otherwise stated, are the national averages. It is felt that this information is closer to the real situation for the peri-urban areas of Tegucigalpa.

The National Survey of Food Consumption was conducted in 1987 by the MOH. This survey revealed that malnutrition is a serious problem with infants and children under 5 years of age. The following national data is corrected for Z scores:

Nutritional Status of Children Less than 5 Years
According to Grade of Malnutrition/Percentages

Nutritional status	Weight /Age	Height/Age	Weight/Height
Normal	62.0	55.3	96.1
Minimal Mal. (Gr.1)	19.7	13.1	0.2
Moderate Mal. (Gr.2)	14.5	19.3	0.0
Severe Mal. (Gr.3)	3.8	12.3	3.7

3c.3 According to the National Survey of Food Consumption of 1987, 22.8% of the infants stopped breast feeding as early as 1-3 months of age and an additional 17.9% between 4-6 months of age. The study revealed that milk is the first foodstuff introduced in 50.7% of the cases between 0-3 months of age and in 12.9% of the infants between 4-6 months. Rice is introduced in 53.4% of the infants between 4-6 months of age. Beans are introduced in 31.4% of the infants during the period of 0-6 months. Tortillas are introduced to 41.7% of the infants before they complete 6 months of life. Chicken was offered before the 6th month to 36.5% of the cases studied.

This survey revealed that 75% of the families interviewed were consuming less vitamin A than the recommended daily allowances. The survey showed that 55.4% of the families were consuming less than the 2000 calories per capita per day considered to be the minimal daily requirement. Eighty percent of Hondurans have a diet composed of corn, beans, rice, platanos, carbohydrates and vegetable protein. This diet has had little variation over the centuries until the last 10 years when wheat began to play an important role in the diet. Although there is no data to prove the hypothesis, it is commonly believed that, since structural readjustment was introduced into the Honduran economy in early 1990 and with subsequent significant inflation having occurred, at the present time, the availability of foodstuffs to most families is significantly more limited than was found in 1987.

3c.4 The project's strategy for improving the nutritional status of infants and children will be three-pronged consisting of vitamin A supplementation (capsule), nutrition education, and the promotion of home gardening, supported by EPI and ORT promotion. The project will begin activities with vitamin A supplementation and nutrition education, phasing in home gardening and primary eye care after all of the volunteers are trained and in-place and the information system is fully operative.

The two mechanisms of delivery of project interventions are community "mini-campaigns" and follow-up home visits. The mini-campaigns, to be organized in conjunction with the MOH from the four CESAMOS, will provide the venue for vitamin A supplementation, nutrition education, ocular screening, immunization, and ORT promotion. The community health volunteer

will conduct monthly visits to every home on her register to follow-up on those mothers and children who did not attend the mini-campaigns. During these visits the volunteer will also conduct nutrition counseling, and update the register. The Community Health Volunteers and Auxiliary Nurses will also meet with mothers in small groups on a monthly basis for group demonstration sessions.

There are many constraints to reducing vitamin A deficiency and improving nutritional practices in children. Knowledge is limited concerning the use of vitamin A and energy dense foods available in the home and the effects of vitamin A deficiency on child morbidity and mortality. By using women selected by their own communities as community health volunteers, mothers will receive nutrition education from a peer. The limited geographic area allows the Community Health Volunteer to meet in groups and individually with mothers on a frequent basis. This allows the repetition of nutrition messages and one-on-one counseling of mothers.

The messages delivered through these contacts will be selected based on the age of the children in the household, and to the extent possible, relevant to the constraints of time and vitamin A food availability at the household level. A limited set of messages is being developed and a process of "concept testing" of messages will be explored using focus groups to be conducted by the Auxiliary Nurses under supervision of the Project Coordinator. Several methods of delivery (facilitation, demonstration, story telling) will be used on several levels (individual, group). The audience will be primarily mothers. However, fathers and other community members representing existing community structures (patronato and women's groups) will be targeted.

To address the possible issues concerning availability of vitamin A rich foods in the household, gardening promotion will emphasize production of vitamin A rich vegetables and fruits appropriate to a peri-urban environment. Both mothers and fathers will be included as targets in garden promotion. Local technical assistance for the home gardening activities and for the nutrition education messages development (taking advantage of the significant local social marketing experience related to family planning and oral rehydration therapy) will be obtained. Lic. Vicki Alvarado, the Project Coordinator, will be the person with overall technical responsibilities for these activities.

3c.5 The project objective for nutrition education, the indicators, and benchmarks established for the nutrition education intervention are as follows:

Objective: Provide annual nutrition education related to vitamin A to 80% (5800) of mothers with children less than 5 years, ensuring that 75% of the mothers can identify two or more locally available vitamin A rich foods.

Indicator: Percent of mothers reached annually.
Percent of mothers who can identify 2 or more vitamin A rich food sources.

Benchmarks: 1900 mothers by September, 1991
5800 total number of mothers by December, 1991
5800 mothers from January to June, 1992
5800 mothers from January to June, 1993

The monitoring system will tally the numbers of women reached on a monthly basis. The percentage of women who can identify vitamin A rich foods will be evaluated by a sub-sample of beneficiaries at the mid-term and at the time of the end-of-project survey.

3c.6 (not applicable)

3c.7 The nutrition education messages developed by the project for training community health volunteers will stress the important behaviors of nutritional practices during and after the occurrence of infectious disease (diarrhea and ARI), breast feeding, introduction of complementary foods, and consumption of vitamin A and energy-dense foods. The project will develop a set of culturally appropriate and age-specific messages using a variety of simple delivery methods that will be communicated to several audiences on multiple levels. A process by which nutrition behaviors are investigated through simple qualitative research methods (focus groups) will be an on-going component of the project. These messages will be developed after analysis of the baseline survey results.

3c.8 A major objective of this project is the prevention of vitamin A deficiency. Statistics on the estimated prevalence of night blindness are not available. Data on estimated adequacy of vitamin A intake, reported from the National Survey on Food Consumption conducted in 1987, show that for children 18-59 months of age, 53.2% receive less than 50% of the RDA of vitamin A, and 18.2% have an intake below 10% of the RDA, considered very inadequate.

The data available for the Tegucigalpa area indicate that 47.1% of children 18 to 59 months of age consume less than 100% of the RDA for vitamin A. Twenty-one percent of this population consume less than 50% of the RDA of vitamin A. Because these results are not stratified by population, to differentiate the marginal areas from the wealthy areas within Tegucigalpa, the

percentage of children in the marginal areas not receiving the RDA of vitamin A is expected to be considerably higher.

The data suggest that the age-specific and region-specific intake of vitamin A from the diet has not changed substantially from the figures published in the 1965-67 Central American Nutrition Survey conducted under the Inter-Departmental Committee for Nutrition in the National Defense, and the Institute for Nutrition of Central America and Panama (INCAP). We understand that the 3000 plasma samples collected during the 1987 survey, which were intended to be assayed for retinol concentration, will not reveal useful data because of technical problems encountered in their handling.

Additional anecdotal information from the Maternal-Child Hospital of the MOH in Tegucigalpa indicates further evidence of vitamin A deficiency. Among the children seen at the Hospital from January to October, 1989, there were 645 children admitted with a diagnosis of protein-calorie malnutrition. Of these children, all were reported to have presented with evidence of associated vitamin A deficiency. Estimates received from Dr. Elias Handal from the same hospital indicate that 35 cases of frank xerophthalmia were seen during 1989. Project staff have not been able to determine where these cases were referred from, (an urban or a rural area), nor if they were a consequence of the measles outbreak in 1989.

Although the new Sanitary Code of the country specifies that table sugar should be fortified with retinol palmitate, only a portion of the sugar brought to market in 1989 was fortified and none was fortified in 1990. The situation for 1991 is unclear. The Division of Nutrition of the MOH will be collaborating with the National Federation of Sugar Producers in a literature review during the period of March to May 1991. The first part of the review will look at alternative local food sources of vitamin A and the second part will examine the logistic systems used by the sugar producers for market distribution of their product. This activity is being financed by UNICEF.

Natural sources of Vitamin A in Honduras include carrots, papaya, mangos, yams, and green leafy vegetables. Red palm oil is grown on the north coast for export. The IEF baseline survey completed in February 1991, indicates that a variety of vitamin A rich foods are available in the peri-urban areas. However, consumption of these foods varied widely. Of the 542 households surveyed, only 8.5% of the households reported consuming a dark green leafy vegetable; 65.1% consumed carrots; 14.5% consumed papaya; 67.3% consumed milk or a milk product. Of the foods reported to be available and consumed in the household, the frequency of consumption by children aged 0-72 months was low. The project will have an education component and a home gardening component so as to promote local consumption of available vitamin

A and energy rich foods. SEE APPENDIX 3, Preliminary Baseline Survey Results.

3c.9 The project will follow the national and local policies and norms of the Ministry of Health for vitamin A capsule distribution. The age group dosage is 100,000 IU for infants 6-11 months and 200,000 IU for children 12-60 months. The MOH child survival activities are directed to children under age 5. Therefore, the capsule distribution will be up to the age of 60 rather 72 months. Capsules will be distributed on a 6 monthly schedule.

Capsules will be distributed at multiple levels of the health delivery system and by various categories of personnel. Bi-monthly mini-campaigns (rallies) will be conducted in conjunction with EPI activities. At the household level and as a follow-up to assure the provision of capsules to children who did not receive them during the mass campaign distribution, the Community Health Volunteer will provide local distribution on a house-to-house basis. Assistance will be provided to them by the Auxiliary Nurse supervisors. Distribution will also take place through the normal service structure of the 4 health centers in the Las Crucitas area.

The project will train the following categories and numbers of health workers in the prevention of vitamin A deficiency:

TYPE	NO.	INITIAL TRAINING	IN-SERVICE
Community volunteer	180	3 hours	Monthly 1 hour
Auxiliary nurse sup.	18	3 hours	Quarterly 3 hour
Other professionals	18	3 hours	Quarterly 3 hour

Initial training will be provided for a total of 9 hours. In-service training will be provided for a total of 27 hours annually. It is important to note that both the Community Health Volunteers and the Auxiliary Nurses will receive from the MOH a 5 day initial training period in comprehensive integrated child survival interventions from the MOH. The 3-hour vitamin A-specific training module will be included within the MOH training program and will be provided by the IEF staff. The first training session took place during the period of February 4-8, 1991.

3c.10 The project objective for vitamin A distribution (capsule), the indicator, and benchmarks established for the vitamin A supplementation intervention are as follows:

Objective: Provide semi-annual vitamin A supplementation to 80% (9200) of the children aged 6-60 months.

Indicator: Percent of children aged 12-60 months who received vitamin A capsule in the past 6 months.

Benchmarks: 9200 children by July, 1991
9200 children by January, 1992
9200 children by July, 1992
9200 children by January, 1993
9200 children by July, 1993

Pending definition of MOH policy, breast feeding mothers who are within two months of delivery of their infant, may be included in our target population for vitamin A capsule distribution. This will be determined at the mid-term evaluation. The number of potential beneficiaries is approximately 1700 women annually.

C.3e DIP FOR OTHER PROJECT INTERVENTIONS

A. The project objective for demonstration gardens, the indicator, and benchmarks established for the gardening intervention are as follows:

Objective: Establish demonstration gardens in 12 areas (Patronato and Women's Groups) by the end of the project.

Indicator: Number of functioning demonstration gardens.

Benchmarks: 6 gardens by December 1991
12 gardens by June 1992

The rationale for including a gardening intervention is to address the issues of availability and use of vitamin A rich foods at the household level. The Patronato and Women's Groups will be the primary focus of this intervention. Staff will receive training in urban gardening techniques. Each auxiliary nurse will begin their activities by first identifying one Patronato or Women's Group and conducting a small training session with assistance from MOH staff. Training will stress promotion of vegetable and fruit varieties already under cultivation, and the promotion of hardy vegetables and fruits that require little space, water and care, e.g., squash, papaya. Simple hand tools will be available on loan and selected seed varieties will be distributed. Staff representing the Ministries of Health (and where possible the Ministry of Agriculture and other local organizations) will be provided orientation in gardening techniques. Meetings with community members will be held in all communities to discuss ways to promote gardening activities. A revolving seed fund will be made accessible to the community for those households willing to purchase the seeds at cost. The possibility of establishing a seedling center (e.g., papaya, mango etc,) will be investigated.

Training of community members will be the responsibility of the Auxiliary Nurses. Supervision of the garden projects will be made part of the monthly supervisory visits to each community. Food production and storage messages will be developed along with the nutrition messages. These messages will be developed following the same procedures of concept testing and message development. Additional focus groups utilizing men will also be explored.

Ing. Roberto Rodriguez, employed by the Mayor's office, has been contacted to provide technical assistance to the project in home gardening techniques. The goal of this organization is to provide training for individuals and groups who are interested in developing appropriate agricultural techniques for home-based and small scale food production. The training center is located in a semi-rural area on the outskirts of Tegucigalpa.

B. The project objective for eye examinations, the indicator, and benchmarks established for the primary eye care intervention are as follows:

Objective: Provide annual eye examinations and treatment or referral for eye disease for 75% (8625) of the children under age 5 years.

Indicators: Percent of children under age 5 who have been screened for ophthalmic disease in the past 12 months.

Benchmarks: 8625 children by July, 1991
8625 children by July, 1992
8625 children by July, 1993

The rationale for including an intervention of primary eye care is because of the association between vitamin A deficiency and xerophthalmia. Since the project staff and collaborators will have systematic contact with the eligible children through the vitamin A distribution activity, the opportunity is provided to simultaneously screen the population for xerophthalmia or any other ophthalmic disease. A referral chain will be established so that the first review of the findings of the community volunteer and the auxiliary nurse will be conducted at the health center level by a MOH general physician. If the physician cannot resolve the problem, referral will be made to the IEF ophthalmologist. In order to optimize efficiency and to maintain the provision of services at the lower levels of the system, the ophthalmologist will provide a series of initial training sessions, regular in-service supervision, and a review of cases with the general physicians. It is felt that the health worker will not be overwhelmed by the addition of this intervention since it will be provided within the present delivery system and simultaneously with the other interventions. This intervention

will be phased in after the vitamin A distribution and nutrition education activities have already been in operation. The person responsible for the overall technical oversight of this component is the staff ophthalmologist (to be named). The ophthalmologist will receive headquarters assistance from the Senior Medical Director of IEF, Dr. Larry King.

SECTION D. PROJECT HEALTH INFORMATION SYSTEM

D.1 The HIS is being developed in close collaboration with the MOH with back-stopping from the IEF headquarters. Personnel from the Ministry of Health Science and Technology Division are also available to the project staff. Additional technical assistance support from VITAL in the design and review of the HIS will be investigated. One computer will be purchased in order to serve all project needs and standard software will be available. The Project Coordinator and Office Manager will complete a micro-computer course in Tegucigalpa to develop a basic knowledge of software programs. The project health information system will be fully operational in all areas by the end of April, 1991.

D.2 The health information system will provide essential data for supervision of health personnel, track commodities and supplies, and record routine service delivery. The project health information system is developed in close coordination with the Ministry of Health community service structure and the MOH's health information system. Community Health Volunteers maintain a registry of 30 households. An Auxiliary Nurse supervises 30 volunteers. The Auxiliary Nurse visits each volunteer on an average of 2-3 times per month and conducts regular monthly group meetings with all of the volunteers under her supervision. The IEF Project Coordinator supervises six Auxiliary Nurses (plus one nurse who helps her with data) and meets with them on a weekly basis.

The Community Health Volunteer collects primary data (attendance, coverage, and morbidity) and enters it into her registry on a daily basis. The Auxiliary Nurse abstracts and summarizes this data on a monthly basis when she conducts her regular group session with the volunteers. The Project Coordinator collects the data from each of the nurses on a monthly basis and summarizes the information by hand for the entire project area. The coordinator stores the data in the project administrative office, and submits a monthly report to the IEF headquarters for review. To aid in the analysis and reporting, a computer program is being considered to summarize data by Community Health Volunteers, area and month. Data will be displayed in tables and graphs using descriptive statistics only. During routine supervisory visits, the nurses make a quality check of the data collection by reviewing the volunteers register and by visiting a sample of the households. Donors will be informed of all results on an annual and end-of-project basis.

Monthly reports will be used at the monthly staff meetings to provide feedback to the Auxiliary Nurses. During these meetings, the supervisory schedule is developed for staff. Each of the nurses in turn will use the summarized data during their monthly supervisory visits with each Community Health Volunteer and communities. Data from the reports will be used for the annual reports for submission to Bethesda and AID.

The data required to assess the effectiveness of the project in reaching its objectives is defined by the project indicators. The data sources for the indicators include the Auxiliary Nurse monthly reports and the evaluations conducted at baseline and at end-of-project. Progress towards the coverage objectives (vitamin A, nutrition education, ocular screening) will be monitored monthly through the Auxiliary Nurse supervisory reports. Progress towards achieving the gardening objective will be monitored by a separate report format.

In addition to the baseline and end-of-project evaluation surveys, other surveys will be conducted. In late 1991, a small survey will be designed and conducted to investigate the most culturally appropriate methods of presenting coverage statistics to the Community Health Volunteers and other community members. Additionally, periodic assessments of the quality of project activities (correct dosing, correct target groups, correct identification of diarrhea/ARI, message delivery, and appropriateness of educational messages) will be performed.

D.3 This project will be population based. Twenty-five communities will be covered. A census of all the communities has been completed, although not verified, by the Ministry of Health. Community Health Volunteers have the primary responsibility for this activity. Updating is performed on a continuous basis via the regular household visit by the Community Health Volunteer and the Auxiliary Nurse supervisor. One hundred and eighty Community Health Volunteers and 6-7 Auxiliary Nurse supervisors are scheduled to work in the project area.

D.4 The project staff will receive training in information collection, analysis and interpretation on an on-going basis. The Project Coordinator will have the primary responsibility for training and orientation of staff to the HIS. She will have technical assistance during the routine management visits provided by the Public Health Program Coordinator at IEF headquarters. The Project Coordinator will also receive technical assistance from the Center for Studies of Sensory Impairment, Aging and Metabolism (CESSIAM), in Guatemala City, Guatemala, for the development of specialized nutritional evaluation activities. The Health Information System is designed to monitor health worker performance and to structure supervision. The significant emphasis on supervision is a critical strategy for helping to assure better quality monitoring

and evaluation. Lic. Vicki Alvarado, the Project Coordinator, is responsible for data collection at all levels. One hundred and eighty Community Health Volunteers, the auxiliary nursing staff, and the Project Coordinator will be trained.

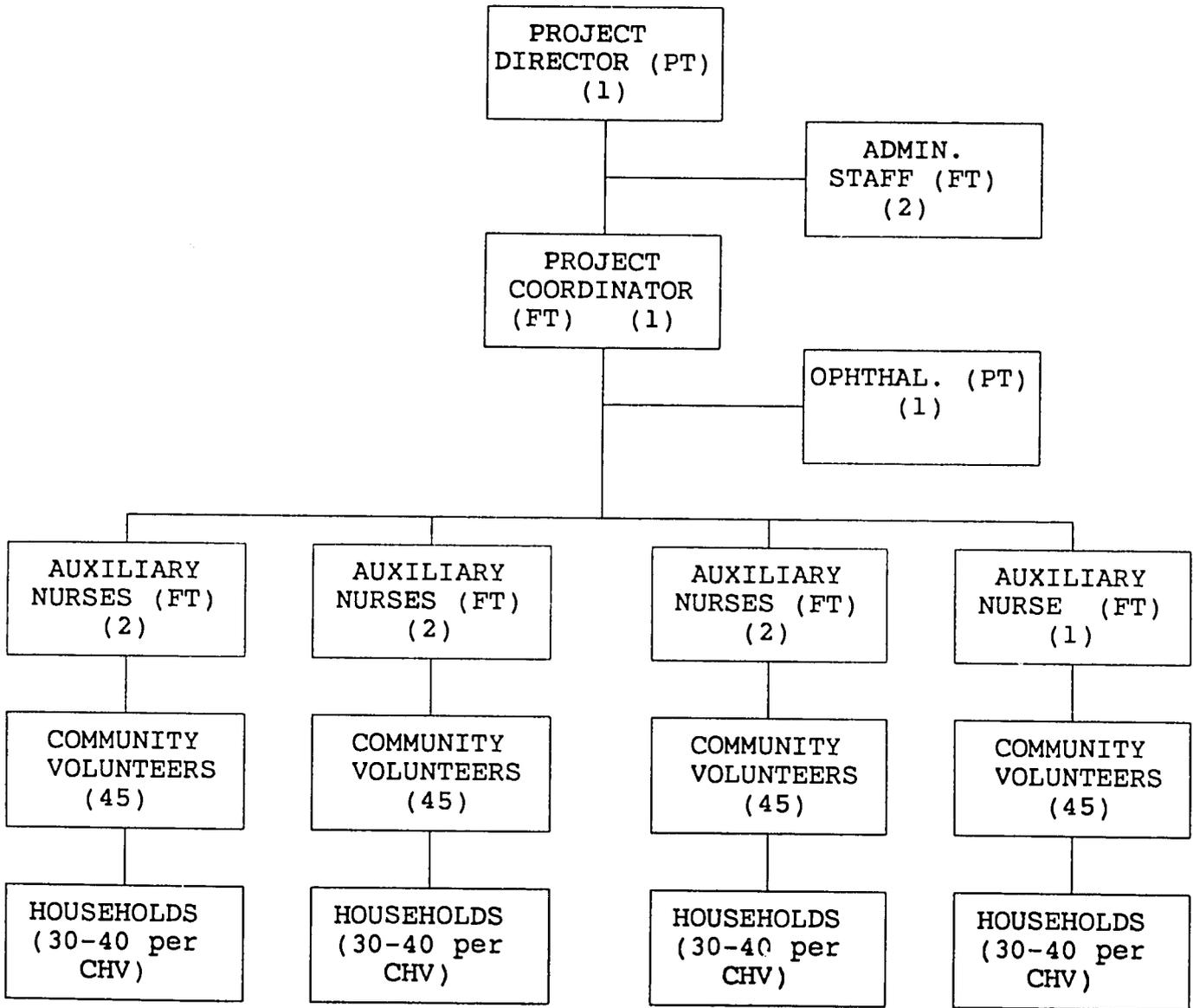
D.5 The first part of the baseline survey was conducted in February 1991. The IEF personnel, in collaboration with the Ministry of Health authorities, designed the survey. To carry out the survey, the Patronato from the community assisted in informing their members of the survey. After field testing of the survey instrument, the survey was conducted over a period of seven days using an EPI cluster-survey methodology (30 clusters of 7). Interviews were conducted by the IEF Auxiliary Nurses (3 teams of 2) with assistance from Community Health Volunteers. The Project Coordinator, the headquarters Public Health Program Coordinator, and Ministry of Health staff (social workers and promoters) provided supervision for the interview teams. The survey consisted of household and child data (demographic, coverage of EPI and vitamin A, history of diarrhea and ARI, dietary history, household food production, and knowledge data). Since the activity was part of the Auxiliary Nurses' training the total cost of the survey was limited to those costs related to transportation and photocopying. SEE APPENDIX 3, Preliminary Baseline Survey Results.

The second part of the baseline survey is planned for June 1991 and will consist of a bio-chemical assessment of serum-retinol, conjunctival impression cytology (CIC), and the design and use of a comprehensive dietary history instrument. The initial technical assistance for planning this activity was provided by CESSIAM in March, 1991. The survey will be conducted with additional assistance from CESSIAM, the Ministry of Health Office of Nutrition, and the Science and Technology Division. Blood samples will be collected by technicians from the MOH and CESSIAM and will be analyzed using the high pressure liquid chromatography (HPLC) machine at the Division of Environmental Health and Toxicology laboratory. A CESSIAM member will work with Honduran technicians to identify a smaller sample of children for CIC analysis. The activity will allow the opportunity to evaluate the extent of vitamin A deficiency in the peri-urban areas of Tegucigalpa and to transfer skills in HPLC and CIC technology to Honduran technicians.

SECTION E. HUMAN RESOURCES

E.1 The overall organizational chart of the proposed project is presented on the following page. There are three key professional positions, seven promoter-level positions, and two support positions. The four key professional positions are:

HONDURAS PROJECT ORGANIZATIONAL CHART



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- A. The Project Director, Prof. Maria Antonieta Dominguez King, is a Honduran economist and professional manager and will work with the project on a part-time basis. The Project Director will provide overall leadership to the project and coordination between the field operations in Honduras and the IEF Headquarters in Bethesda. The director will be responsible for financial management and accounting, communication with local Ministry of Health officials and other institutions (AID, UNICEF etc.), personnel decisions along the chain, and official progress reports.
- B. The Project Coordinator, (Vicki Alvarado) is a Honduran with a professional nursing and nutrition background and will work with the project on a full-time basis. The Project Coordinator will have overall responsibility for programming and coordination between the project field activities (including activities of the Ophthalmologist) and the Project Director's office. The coordinator will be responsible for supervision and training of field staff, development and implementation of each of the interventions, preparation of the educational materials, daily scheduling and logistics, monitoring the information system, and reporting.
- C. The Project Ophthalmologist, (to be named) will be a Honduran ophthalmologist and will work with the project on a part-time basis. The project ophthalmologist will have responsibility for the training, supervision and quality control of the eye-care component. This will include training of IEF staff and MOH personnel in primary eye care activities, follow-up support, and provision of direct services. In addition, the ophthalmologist will review the information from the auxiliary nurses with the project coordinator for processing in the HIS.
- D. The project will also employ six Auxiliary Nurses on a full-time basis to function as supervision and promotion staff for the MOH community volunteers. Support staff for the project will also include an office supervisor with secretarial and bookkeeping skills, and one driver. Position descriptions for each of the key project staff are to be found at the end of this section. Lists of tasks the Auxiliary Nurses and Community Health Volunteers will perform are outlined in APPENDIX 4A-B. The policy of the Peace Corps office in Honduras to preclude urban assignments for the PCVs eliminates, for the moment, the prospect of PCV participation in the proposed service delivery project.

Responsibility for the specified functions will be invested among key personnel as follows:

- 1) Project Administration and Management: The duties of administration and management of the project will be shared, principally between the Project Director and the Project Coordinator. The institutional relationships involving the IEF/Honduras office and the IEF/Bethesda office will be conducted by the Project Director. The Director will be ultimately responsible for in-country aspects of the project, and the immediate project superior of the Project Coordinator. The Director will have the primary responsibility for personnel and employment issues; all budgeting, disbursement and financial accounting; and the filing of periodic reports. She will be assisted by an Office Supervisor who will work on a full-time basis.

- 2) Oversight of Technical Health Activities: The technical oversight for the project will be shared, principally between the Project Coordinator and the Project Ophthalmologist with back-stopping from IEF/Bethesda personnel. The Project Coordinator will have overall responsibility for development of the specific content of the training and services for the project including vitamin A supplementation, nutrition education, and gardening components. The Project Ophthalmologist will have responsibility for the specific content of the primary eye care training and services component of the project, and will be assisted by the IEF/Bethesda Senior Medical Director.

Technical back-stopping for the project will be shared, principally between the Public Health Program Coordinator at IEF headquarters, Mr. John Barrows, and the Senior Medical Director at IEF headquarters, Larry King Jr., M.D. Mr. John Barrows, will make 2-3 technical support visits annually in support of the project, and a like portion of his time at headquarters will be engaged in project-related activities. He will also participate in the mid-term and end-of-project evaluations. The Public Health Program Coordinator will be responsible for assuring prompt forwarding of technical resource materials for the key project staff and coordination of additional technical assistance for the project. Dr. Larry King, will provide technical assistance to the Project Ophthalmologist as required, and make visits to Honduras for other IEF related activities as required.

- 3) Health Information System: The detailed planning of the HIS will be undertaken by the Project Director and the Project Coordinator with the back-stopping of the IEF Public Health Program Coordinator. Further technical assistance for a VITAL systems analysis/HIS consultant will be investigated. The Project Coordinator will have overall responsibility for the daily monitoring of the HIS and the monthly reporting of project outputs. The baseline survey and end-of-project

survey will be the responsibility of the Project Director and Coordinator with back-stopping from IEF headquarters and technical assistance from CESSIAM.

E.2 There will be 180 Ministry of Health sponsored Community Health Volunteers. They will be supervised by the project staff Auxiliary Nurses. There will be a ratio of 1 Auxiliary Nurse to 30 Community Health Volunteers. An additional "floater" Auxiliary Nurse supervisor will be hired in order to: 1) replace other nurses when they are absent so as to avoid gaps in service provision, 2) assist the Project Coordinator and the other nurses with the data collection, 3) be available for special ad-hoc assignments.

We are working within the structure of the Ministry of Health. Continuous training and close supervision are considered to be very important incentives for retention and good job performance. The MOH provides their volunteers (those with children under age 5 only) with a monthly supplemental food allowance and free medical care. Other non-monetary incentives will be explored.

E.3 Initial training related to vitamin A and child survival will be provided for all staff. The Ministry of Health will provide the training concerning all child survival interventions except vitamin A which will be provided by the IEF Project Coordinator. The IEF Project Ophthalmologist will serve as the trainer in primary eye care. He/she will be periodically assisted by members of the Society for Ophthalmology. The Project Coordinator is an experienced nutritionist. She will provide training to the auxiliary nurse staff. She will be assisted by professionals from the Nutrition Division of the Ministry of Health and PAHO. It is important to note that in-service training is considered to be a priority activity of our project. It will be provided on a monthly basis to the Auxiliary Nurses and to the Community Health Volunteers.

The Ministry of Health has expressed its commitment and interest in integrating the project completely into the comprehensive child survival service package which they are planning to provide. Therefore, they have offered to interact with the IEF staff not only at the service level, but also in training activities.

SECTION F. MANAGEMENT AND LOGISTICS

F.1 The entire project staff, including the Project Director and the Project Coordinator, are Honduran nationals and permanent residents in Honduras. The IEF headquarters administrator has visited Honduras in order to work with the Project Director and the Project Coordinator in order to enhance their management skills. Further visits will be arranged as required. The

Project Director has been a professor for the last 15 years at the National University in the Faculty of Economics.

F.2 One Nissan 4x4 diesel vehicle has been purchased. Good local maintenance facilities are available from the dealer where the vehicles were purchased. The Auxiliary Nurses will be transported to their community work sites in the morning and a vehicle will provide them with return transportation to a central site at the completion of the work day. In the interim, vehicles will be at the disposal of the Project Director, the Project Coordinator and Project Ophthalmologist.

F.3 Vitamin A capsules and ophthalmologic equipment and supplies are required for the project. We are attempting to identify in-country sources of vitamin A capsules (through UNICEF and the Ministry of Health). We have budgeted for the eventuality that IEF would need to supply all capsules in order to reach our coverage targets (23,000 capsules annually). These supplies are received in Bethesda, Maryland at the IEF headquarters and are shipped to Tegucigalpa, Honduras. The necessary capsules are presently in Honduras.

For the primary eye care intervention, the equipment required for the Las Crucitas referral unit is being purchased and will be shipped to Honduras in April, 1991. The initial supply needs for primary eye care treatment will be supplied by the IEF during the first half of the project. The Project Ophthalmologist will work with the MOH to determine what supplies should be included in future orders made by the MOH Central Medical Stores.

SECTION G. DIP SCHEDULE OF ACTIVITIES
 (See following pages).

SECTION H. COUNTRY PROJECT BUDGET
 (See following pages).

SECTION I. DIP SUSTAINABILITY STRATEGY

I.1 This project, in its design, pays maximum attention to the importance of involving the community. The most important community entity, the Patronato, is the community selected formal leadership council. They are a local group which has authority for organizing the population. By virtue of their support of a project, community acceptance and participation is strengthened. In addition, local Women's Groups have been involved with the project and will play an important sustaining role. In those areas where Women's Groups do not exist, Auxiliary Nurses will encourage group formation to ensure that there is at least one Women's Group per community. The selection

International Eye
 Organization Foundation
 Country Honduras

DIP SECTION G: COUNTRY SCHEDULES OF ACTIVITIES

SCHEDULE OF ACTIVITIES BY QUARTER (Check box to specify quarter and year)

	Year 1				Year 2				Year 3			
	1	2	3	4	1	2	3	4	1	2	3	4
1. Personnel In Position - specify e.g.												
Project Manager	X											
Technical Coordinator	X											
Community/village health workers		X										
Health Information System		X										
Other Support		X										
2. Health Information Systems (HIS) - specify e.g.												
Consultants/contract to design HIS		X										
Develop and test HIS		X										
Baseline survey												
Design/preparation		X										
Data collection and analysis		X										
Dissemination and feedback to community and project management		X	X									
Registration/Record/System												
Design/preparation		X										
Implementation		X	-	-	-	-	-	-	-	-	-	-
Dissemination & feedback to community & Project Management			X									
3. Training - specify e.g.												
Design		X	X									
Training of trainers		X	X									
Training manual and materials		X	X									
Training sessions		X	-	-	-	-	-	-	-	-	-	-
Evaluation of knowledge of skills		X			X			X			X	
4. Procurement Of Supplies												
	X	X	-	-	-	-	-	-	-	-	-	-

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DIP SECTION G: COUNTRY SCHEDULES OF ACTIVITIES

International Eye
 Organization Foundation
 Country Honduras

SCHEDULE OF ACTIVITIES BY QUARTER (Check box to specify quarter and year)

	Year 1				Year 2				Year 3			
	1	2	3	4	1	2	3	4	1	2	3	4
5. Service Delivery to be Initiated												
AREA 1												
ORT												
Immunization												
Nutrition												
Breastfeeding/Weaning Education												
Vitamin A		X	-	X	-	X	-	X	-	X	-	X
Maternal Nutrition												
Growth Monitoring Promotion												
High Risk Birth Prevention												
Other Eye Exams Gardening			X	-	X	-	X	-	X	-	X	-
AREA 2												
ORT												
Immunization												
Nutrition												
Breastfeeding/Weaning Education												
Vitamin A												
Maternal Nutrition												
Growth Monitoring Promotion												
High Risk Birth Prevention												
Other												
6. Technical Assistance Visits Scheduled												
HO/HO/Regional office visits	X	X		X		X			X			X
Local Consultants		X	X			X						
External technical assistance	X	X				X						X
7. Progress Reports Required												
Annual project reviews					X				X			
Annual reports					X				X			
Midterm evaluation						X						
Final evaluation												X

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FORMAT G: ESTIMATED COUNTRY (HONDURAS) PROJECT BUDGET

	Year 1		Year 2		Year 3		Total		Total
	AID	IEF	AID	IEF	AID	IEF	AID	IEF	
I. PROCUREMENT									
A. EQUIPMENT and SUPPLIES									
TECHNICAL									
1. Vehicle	0	15,000	0	0	0	0	0	15,000	15,000
2. Ophth. Equip.	0	1,000	0	0	0	0	0	1,000	1,000
3. Slide Proj.	0	350	0	0	0	0	0	350	350
4. Camera	0	300	0	0	0	0	0	300	300
OFFICE EQUIPMENT									
1. Computer	0	1,200	0	0	0	0	0	1,200	1,200
2. Printer	0	350	0	0	0	0	0	350	350
3. Volt. Reg./UPS	0	1,200	0	0	0	0	0	1,200	1,200
4. Office Furniture	0	4,000	0	0	0	0	0	4,000	4,000
5. Typewriter	0	250	0	0	0	0	0	250	250
6. Photocopier	0	1,000	0	0	0	0	0	1,000	1,000
7. Fax	0	600	0	0	0	0	0	600	600
SUPPLIES									
1. General Office	1,500	0	1,750	0	1,750	0	5,000	0	5,000
2. Paper/Printing	750	0	750	0	750	0	2,250	0	2,250
3. NutriAto1	0	0	0	4,000	0	0	0	4,000	4,000
4. Train. Materials	2,000	0	1,000	0	0	0	3,000	0	3,000
5. Main./Ins.	300	0	300	0	300	0	900	0	900
6. Uniforms	120	0	240	0	240	0	600	0	600
7. Vitamin A	0	0	0	2,000	0	0	0	2,000	2,000
B. SERVICES									
Local Consultant Support (30 days/yr)	1,500	0	1,750	0	2,000	0	5,250	0	5,250
Travel/Per Diem	0	3,500	0	4,000	0	4,500	0	12,000	12,000
Enumerators & logistic support	1,500	0	0	0	2,000	0	3,500	0	3,500
SUBTOTAL I.	7,670	28,750	5,790	10,000	7,040	4,500	20,500	43,250	63,750
II. EVALUATIONS									
Consultants	0	0	5,000	1,500	5,000	1,500	10,000	3,000	13,000
Travel/Per Diem	0	0	2,500	1,000	2,500	1,000	5,000	2,000	7,000
Admin/Report Costs	0	0	750	0	750	0	1,500	0	1,500
Midterm/Final Eval	0	0	1,500	0	2,000	0	3,500	0	3,500
Local fees, per diem									
SUBTOTAL II.	0	0	9,750	2,500	10,250	2,500	20,000	5,000	25,000

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FORMAT G: ESTIMATED COUNTRY (HONDURAS) PROJECT BUDGET

	Year 1		Year 2		Year 3		Total		Total
	AID	IEF	AID	IEF	AID	IEF	AID	IEF	
III. INDIRECT COSTS (See 6 & A line item)									
IV. OTHER PROGRAM COSTS									
A. PERSONNEL									
1. Project Director (50%)	13,000	6,500	14,475	6,000	14,400	7,000	41,875	19,500	61,375
2. Project Coord.	7,200	0	10,640	0	13,160	0	31,000	0	31,000
Benefits	850	0	1,200	0	1,500	0	3,550	0	3,550
3. Project Ophthalm.	5,400	0	8,000	0	10,000	0	23,400	0	23,400
Benefits	540	0	800	0	1,000	0	2,340	0	2,340
4. Adm. Asst./Bookkp	4,000	0	6,650	0	8,350	0	19,000	0	19,000
Benefits	550	0	785	0	950	0	2,285	0	2,285
5. Promoters (7)	6,000	0	10,800	0	13,500	0	30,300	0	30,300
Benefits	1,100	0	1,900	0	2,100	0	5,100	0	5,100
6. Driver	1,200	0	1,620	0	2,100	0	4,920	0	4,920
Benefits	175	0	300	0	330	0	805	0	805
7. Watchman	200	0	1,000	0	1,200	0	2,400	0	2,400
Benefits	45	0	220	0	240	0	505	0	505
SUBTOTAL IV. A.	40,215	6,500	58,170	6,000	68,590	7,000	166,975	19,500	186,475
B. TRAVEL AND PER DIEM									
1. Short-term									
Local staff per diem	500	0	700	0	750	0	1,950	0	1,950
Local staff travel	500	0	700	0	750	0	1,950	0	1,950
Int'l. Prof. Meet. (Airfare/per diem)	1,800	0	4,000	0	4,400	0	10,200	0	10,200
2. LONG TERM									
No requirements									
Subtotal IV. B.	2,800	0	5,400	0	5,900	0	14,100	0	14,100

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FORMAT 6: ESTIMATED COUNTRY (HONDURAS) PROJECT BUDGET

	Year 1		Year 2		Year 3		Total		Total
	AID	IEF	AID	IEF	AID	IEF	AID	IEF	
C. Other Direct Costs									
1. Vehicle Operat.									
Fuel	3,000	0	5,000	0	5,500	0	13,500	0	13,500
Maint./Spares	1,500	0	1,750	0	2,000	0	5,250	0	5,250
Ins/Lic/Reg	1,500	0	1,600	0	1,700	0	4,800	0	4,800
3. Office Operations									
Rent/repairs	900	1,000	0	1,500	0	1,500	900	4,000	4,900
Telephone/instal.	1,000	0	1,200	0	1,200	0	3,400	0	3,400
Postage/Courier	200	0	500	0	500	0	1,200	0	1,200
Utilities	200	0	500	0	500	0	1,200	0	1,200
Miscellaneous	300	0	334	0	350	0	984	0	984
Freight/Ins.	1,000	0	500	0	500	0	2,000	0	2,000
4. Training Sessions									
Per Diems	200	0	250	0	150	0	600	0	600
Supplies	500	0	500	0	500	0	1,500	0	1,500
Facilities	500	0	500	0	500	0	1,500	0	1,500
Subtotal IV. C.	10,800	1,000	12,634	1,500	13,400	1,500	36,834	4,000	40,834
SUBTOTAL IV. A.B.C.	53,815	7,500	76,204	7,500	87,890	8,500	217,909	23,500	241,409
SUBTOTAL	61,485	36,250	91,744	20,000	105,180	15,500	258,409	71,750	330,159
6 & A 21.9%	13,465	3,559	20,092	4,380	23,034	3,395	56,591	11,334	67,925
TOTAL	74,950	39,809	111,836	24,380	128,214	18,895	315,000	83,084	398,084

111,749
 18,895
 = 20,656

of the Community Health Volunteer by the local women, with support from the Patronato, will help assure that the communities' interests will be reflected and that the Community Health Volunteer will be supported in her work.

Regular meetings with the Patronato and the Women's Groups will be held in order to monitor ongoing public support. Feed-back will be provided as to the level of activities being performed in their communities. During these meetings, additional community-expressed needs will be assessed, and if appropriate, incorporated into future training for the Auxiliary Nurses and Community Health Volunteers training.

I.2 The International Eye Foundation has taken great care to discuss this DIP with both the public and private sector health and development agencies involved with the Las Crucitas area. As has been previously described, this project is designed to have maximum collaboration between the IEF and the Ministry of Health as well as the private voluntary community. The policy of the MOH for the development of peri-urban child survival services is to maximize community involvement, utilize community volunteers, and to offer a comprehensive integrated set of child survival interventions within the context of the development of a full program of basic primary health care services for the peri-urban marginal areas.

For the Ministry of Health our collaboration is established from the central to the peripheral levels. Our collaborators include:

Central level	Dr. Alirio Cruz	Sub-Director General Community Development
	Dr. Carmen Miranda	Director General Nutrition Division
	Dr. Fidel Barahona	Director Science and Technology
Municipal Area Level	Dr. Heladio Ucles	Director
	Dr. Carlos Villalobos	Area Health Director
	Lic. Hilda Carolina Membreno	Head of labor Division
Health Center	4 CESAMOS physician directors Social work and nursing staff	

The DIP was also been discussed with the authorities of the Maternal and Child Health Division of the MOH, the Vice-Minister of Health and the Director General of Health. Dr. Davila, the PAHO nutrition advisor, has offered his collaboration.

As well, the DIP was discussed with a multiple of private agencies which are working in the Las Crucitas area. In-depth discussions were held with Ms. Carol Edwin, Coordinator of the Project HOPE child survival project which is working in 20

communities which depend upon the Las Crucitas CESAMOS. Lessons learned from her experiences were utilized for this design. The communities where HOPE is presently working are different from the areas defined for the IEF by the MOH.

There are a number of private organizations working within the area in which the project is in communication. They include Project Hope (child survival project), Hermanas Franciscanas (Catholic organization providing ambulatory medical care services), World Vision (community development), Junta Nacional Social Bienestar (national organization providing services to preschoolers), Mayors Office (community organization), and Don Bosco (Catholic organization providing ambulatory medical care services). Coordination will be carried out with these organizations where possible.

There is no financial exchange anticipated between the MOH and the project. Where appropriate, the project will assist the MOH with supplies (vitamin A capsules, ophthalmic supplies). However, the MOH will be encouraged to obtain regular supplies through their central stores and through other major donor agencies (UNICEF). Technical assistance for developing the DIP was provided by Donald C. Kaminsky, M.D., M.P.H., the former Director for Project Hope, Honduras. Dr. Kaminsky was supported by VITAP during his consultancy in December, 1990.

I.3 IEF wishes to assist the MOH in the development of a sustainable health deliver system. We plan to do this by offering our project intervention within their health system and in the geographic areas defined as a priority by them. Our training will be provided not only to the IEF staff but also to all MOH collaborating personnel. IEF will work with the MOH to integrate key information questions (vitamin A coverage, nutrition education activities, etc.) into the MOH-HIS so that necessary data to monitor project activities can eventually be gained directly from their HIS. Our vitamin A oriented project is being fully integrated into the comprehensive child survival services plan of the MOH.

The Lions Club of Tegucigalpa and a Rotary Club (Tegucigalpa Sur) will be encouraged to get involved with the primary eye care intervention. They will be asked to supply equipment, supplies, and donated professional services time. Their interest in primary eye care is long standing and projected to continue indefinitely.

I.4 This project has no cost recovery strategy planned. It is considered that the community is already providing a maximum contribution through the work of the community volunteers who are serving as the backbone of the system.

I.5 This project has been fully integrated into the local institutional priorities and plans from the time of its conception. The DIP was discussed and defined in collaboration with community representatives, at all levels of the MOH and with other PVOs operating in the Las Crucitas area. The strategy for implementation is to fully integrate the vitamin A interventions of IEF into the comprehensive child survival service package of the MOH. Phase-over at project completion will be greatly simplified since we have integrated the activities since the inception of the project. Program management skills of the staff from the local institutions will be strengthened by virtue of the day-to-day contact with the IEF staff and the joint problem solving which will be required.

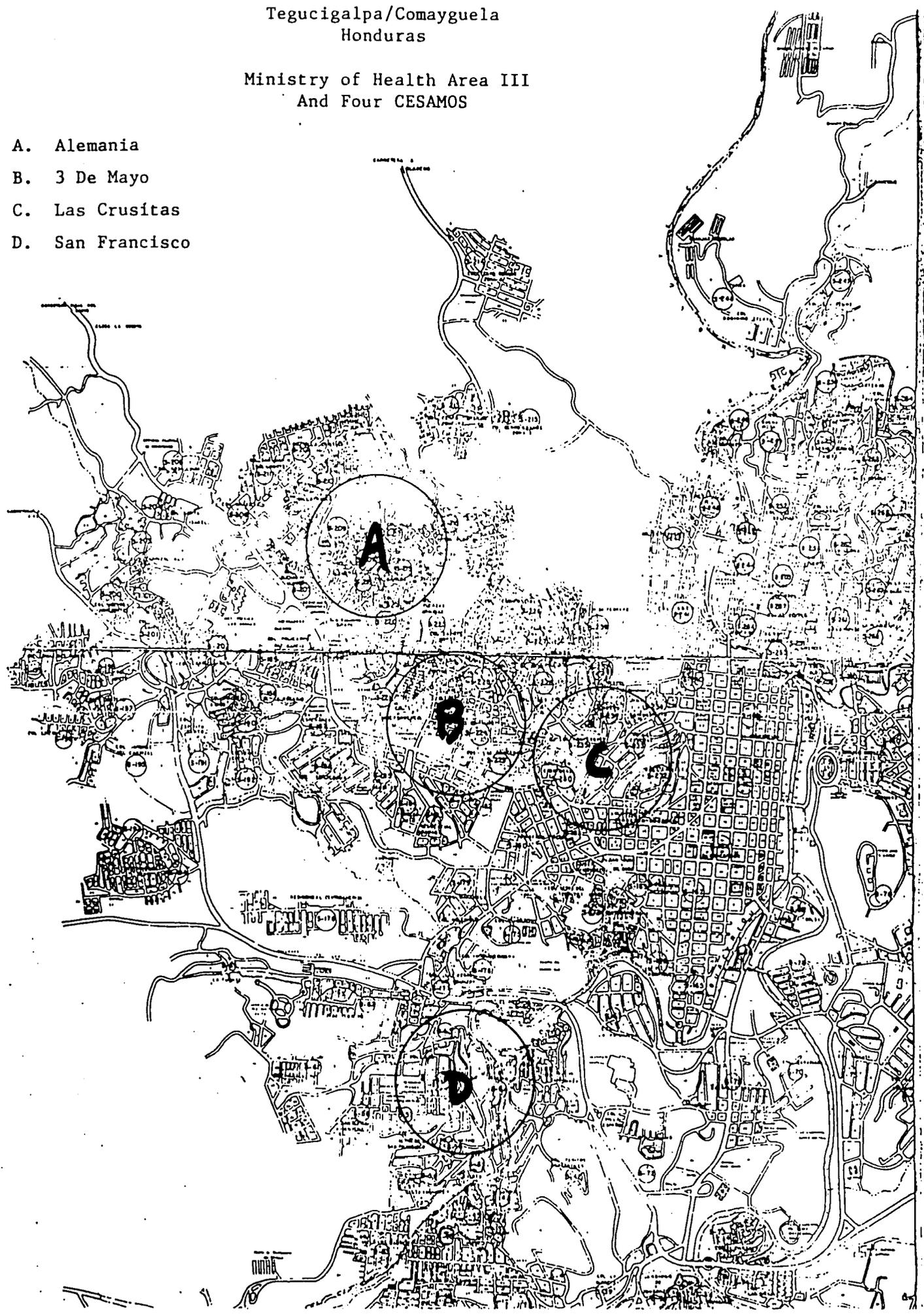
Appendices:

1. Map
2. List of Communities
3. Preliminary Baseline Survey Results
4. Task descriptions

Project Target Area
Northwest, Peri-Urban
Tegucigalpa/Comayguela
Honduras

Ministry of Health Area III
And Four CESAMOS

- A. Alemania
- B. 3 De Mayo
- C. Las Crusitas
- D. San Francisco



HONDURAS PRIORITY COMMUNITIES

	0-11	12-59	# <5	Tot. %	15-49	# Pop.	# HH's
LAS CRUSITAS							
1. Jose Angel Ulloa	125	529	654	6%	1026		800
2. Jose Antonio Durarte	33	148	181	2%	365		240
3. Jardines de Carrizal	18	40	58	1%	102		110
4. Rafael L. Callejas	28	122	150	1%	343		310
5. 1 de Diciembre	39	148	187	2%	348		340
6. Altos del Paraiso	27	117	144	1%	292		210
7. Fuerzas Unidas	20	59	79	1%	169		110
8. Cantarero	0	0	0	0%	0		100
3 DE MAYO	290	1163	1453	13%	1453	6872	1839
1. Fuerzas Armadas	14	53	67	1%	0		
2. San Martin	45	186	231	2%	0		
3. Ayestas	244	930	1174	11%	0		
4. Campo Cielo	111	423	534	5%	0		
5. Independencia	175	667	842	8%	0		
ALEMANIA	589	2259	2848	26%	2848	18650	3612
1. Villa Franca	225	800	1025	9%	1400		
2. Villa Cristina	150	450	600	5%	600		
3. San Juan Del Norte	100	300	400	4%	500		
SAN FRANCISCO	475	1550	2025	18%	2025	10374	1562
1. La Popular	254	279	533	5%	429		
2. Altos de San Francisco	379	429	808	7%	525		
3. Israel Norte	162	132	294	3%	425		
4. El Retiro	210	321	531	5%	318		
5. Altos Los Laureles	284	434	718	7%	450		
6. 21 de Febrero	232	355	587	5%	1025		
7. La Fatima	172	230	402	4%	437		
8. San Buena Ventura	198	232	430	4%	839		
9. 19 de Septiembre	175	215	390	4%	295		
	2066	2627	4693	43%	4693	25758	4293
	3420	7599	11019	100%	11020	61654	11306
	31%	69%	18%		18%	60,248	10,152

1986

* of 1 year investment

- 27 voluntaries
- 1 person
- 1st patronato
- 1st person

\$ 20,650 x 16 = 330,400
for year #1 of country get

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Baseline Survey Summary

<u>Total Households:</u>	542	
Moved into area in last 6 mos	59/542	10.8%
No. Infants (0-11 mos)	248	
No. children (12-23 mos)	194	
No. Children (24-71 mos)	392	
Total:	834	
<u>Coverage Data:</u>		
Health Card (0-71 mos)	722/834	86.5%
Fully Immunized (12-23 mos)	168/193	87.0%
Vitamin A to children (12-71 mos) (within past 6 mos)	259/484	53.5%
Vitamin A to mothers of infants (within past 6 mos)	11/242	5.0%
Eye Exam of children (6-71 mos) (within past 6 mos)	24/686	3.4%
<u>Morbidity:</u>		
Diarrhea (0-71 mos) (within past 2 wks)	131/806	16.2%
Reporting feeding foods:		
more-	0/131	0.0%
less-	63/131	48.0%
same-	67/131	51.1%
Reporting use of ORT:	52/131	39.6%
Respiratory (0-71 mos) (within past 2 wks)	219/776	28.2%
Reporting feeding foods:		
more-	0/219	0.0%
less-	119/219	54.3%
same-	98/219	44.7%
<u>Prevalence of Nutritional Practices:</u>		
Breastfeeding of Infants (0-11 mos)	211/245	86.1%
Breastfeeding of children (12-23 mos)	93/193	8.1%
Complementary foods:		
(0-2 mos)	9/68	13.2%
(3-5 mos)	45/67	67.1%
(6-11 mos)	108/113	95.6%
Bottle feeding:		
(0-2 mos)	33/66	50.0%
(3-5 mos)	44/68	64.7%
(6-11 mos)	57/116	49.1%
(12-23 mos)	95/194	49.2%
(24-71 mos)	95/374	25.4%

Times a day fed:	
(0-11 mos)	2.2
(12-23 mos)	2.5
(24-71 mos)	2.9

Average Frequency of Consumption of Vitamin A and Other Foods
by Children 0-71 Months in 542 Households

<u>Food</u>	<u>% of Families Reporting</u>	<u>Frequency Consumption (per week)</u>	<u>Mean x's per day</u>
Espinaca (spinach)	.5	1.6	1
Acelga (greens)	0.0	** 1.0	1
Hojas de Yuca (cassava leaves)	1.2	1.1	1
Mostaza (mustard greens)	6.4	1.4	1
Chili Verde (green peppers)	58.0	4.4	1
Zanahoria (carrots)	65.1	** 2.8	1
Melon (cantaloupes, water)	82.4	3.1	1
Papaya	14.5	** 1.6	1
Mango	56.0	** 2.4	1
Huevos (eggs)	96.1	* 4.7	1
Leche (milk)	67.3	* 4.3	1.3
Higado (liver)	27.3	* 1.4	1
Carne/pescado (meat/fish)	52.9	* 2.0	1
Yuca (Cassava)	53.8	1.9	1
Malanga (taro)	8.3	1.5	1
Platanos (bananas)	74.7	4.0	1
Aceite/mantequilla/lard	95.2	6.2	1.6
Maiz amarillo (yellow corn)	28.0	9.7	2.4
Pasta	76.9	1.8	1
Churros (snack, junk foods)	65.6	4.3	1
Arroz/frijoles (rice/beans)	93.5	6.6	2

**
11.7/6 = 1.95
A 12.4
14.3

Production of Foods:

Households reporting Foods Grown	132/542	24.3%
Households reporting DGL-vegetables	3/132	2.0%
Households reporting Y-vegetables	12/132	9.0%
Households reporting Y-fruits	38/132	28.0%
Other (banana, guava, avocado, etc.)	127/132	96.0%
Households reporting sale of foods	2/132	1.5%

Knowledge of Vitamin A:

Households Reporting Knowledge of Vitamin A (Cap)	36/542	6.6%
for gen'l health purposes	29/36	80.0%
for eyes	26/36	72.2%

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Households Knowledge of Foods
Containing Vitamin A:

correct responses:	1493/4355	34.2%
incorrect responses:	451/4355	10.3%
uncertain:	2411/4355	55.0%

Households Reporting
Knowledge of Night Blindness

5/542	.09%
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Task Description
Auxiliary Nurses

The IEF/Honduras Auxiliary Nurses will report directly to the Project Coordinator. These individuals will be responsible for supervision and support of the Community Volunteers in their daily activities, with duties to include:

1. Assist the Project Coordinator in the training of the Community Volunteers. Specifically, the Aux-N will hold regular meetings with her CHVs individually and in small groups to discuss activities including supplementation, nutrition education, primary eye care, and gardening.
2. Visit each assigned neighborhood and CHVs within 2 weeks of their initial training to encourage household register preparation and maintenance. If the register is not completed or requires maintenance the Aux-N will ensure that the register is completed.
3. Conduct periodic meetings of all CHVs assigned. The Aux-N will direct a 1-2 hour meeting by first conducting a health/nutrition education class (as designed by the Project Coordinator). The first meeting will start within one month of the CS training. During the meetings the Aux-N will elicit questions and comments from the CHVs and identify problem areas and topics of interest for future meetings. The Aux-N will prepare a short checklist regarding the meeting. The checklist will include attendance, nutrition education topic(s) and any problems and topics of interest to be given to the Project Coordinator.
4. The Aux-N will visit each CHV 1-3 times a month. At this time the Aux-N will restock vitamin A capsules, and review the household register with the CHV. The Aux-N will assist the CHV in assessing the adequacy of the diet of children, or mothers that failed to attend campaign services, and/or to follow up on those households with children who have experienced an infectious disease episode.
5. The Aux-N will make her own direct follow up visits to households (either not assigned to a CHV or those households that the CHV was unable to see) in order to maintain the household register, provide vitamin A supplementation, eye screening, and to provide nutrition education.
6. The Aux-N will hold regular (monthly) meetings with the Patronato and Women's Groups to discuss project activities, conduct nutrition education and focus group sessions, and coordinate campaign activities.
7. Maintain a working relationship with area health/extension/promotion workers representing the MOH and other PVOs and NGOs.

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Task Description
Community Health Volunteer (MOH)

The tasks to be completed by the CHV are as follows:

1. The CHV will create a register of 30-40 households in her assigned area. Children under the age of five years, pregnant women, and infants delivered will be identified. The register will include the following information:
 - *(register under development)
2. The register will guide the CHV in her tasks. As such she will be involved in the following activities:
 - A. Provision of Vitamin A Supplementation to Children between 6-60 months
 - i. After completion of the register, the CHV, in coordination with the Aux-N (MOH and PVO personnel) administer one vitamin A dose to each child under 5 years of age who has not received it from any other source, and record receipt in the health card.
 - ii. Follow up visits to children and mothers who did not attend campaigns and planned events.
 - B. Provision of Vitamin A Supplementation to Mothers Within Two Months of Delivery.
 - *(to be assessed at MTE)
 - C. Investigation of Supplemental Foods Usage and provision of nutrition education
 1. Identify whether women are exclusively breast feeding their infants (0-4 months of age).
 - ii. Identify whether women are feeding their infants (4 months to 5 years) supplemental foods. Determine how many supplemental feedings are being done, and encourage increased feedings per day.
 - iii. If no supplemental foods are being given to the child identify whether vitamin A rich and energy dense foods are eaten by the family. If so, encourage feeding the child.
 - iv. If no supplemental foods are being given to the child and vitamin A and energy dense foods are not in the family's diet encourage the addition of available vitamin A and energy dense foods to the child's diet.
 - v. Identify those households with children who have experienced or are experiencing an infectious episode (diarrhea) and determine if and what mothers feed their children during and after diarrhea.
 - vi. Encourage mothers to continue feeding their children during and after an episode of diarrhea.

- D. Investigate eye problems (with supervision by the Auxiliary Nurse supervisor) using the four rules to recognize a healthy eye:
 - 1) the cornea should be clear, 2) the pupil should be black, 3) the white part should be white, and 4) the eyelids should open and close properly.
 - E. Promote home gardening (with supervision by the Auxiliary Nurse supervisor).
 - i. Meet with the Patronato and Women's Groups on a monthly basis to discuss progress of gardening activities.
 - ii. Provide information and support to households.
3. Assist the Auxiliary Nurse supervisor in conducting meetings, short training, and focus group activities.

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