PROJECT HOPE

Improving the Health of Guatemala's Most Vulnerable Population: Migrant Women and Children in the Boca Costa Region of Southwestern Guatemala

Cooperative Agreement FAO-A-00-97-00030-00

DETAILED IMPLEMENTATION PLAN

Project Duration:
September 30, 2001 – September 29, 2005

Submitted to:
USAID/DCHA/PVC
Room 7.6-D, RRB
1300 Pennsylvania Avenue
Washington, DC 20523-7600

Submitted by:
Project HOPE –
The People-to-People Health Foundation, Inc.
Millwood, Virginia 22646
Tel: (540) 837-2100
Fax: (540) 837-1813

March 29, 2002

Contact persons:
Bettina Schwethelm, PhD, MPH
Director, Maternal & Child Health Programs
Luis Benavente, MD, MSc
Associate Director, MCH Programs

Victor Calderon, MD, MPH
Country Director, Guatemala
Anabella Aragon, MD
Deputy Director, Guatemala

TABLE OF CONTENTS

ACRONYMS

ADISS	Asociación para el Desarrollo Integral y Sostenible de la Salud
ANACAFE	National Association of Guatemalan Coffee Growers
APROFAM	Asociación Pro Bienestar de la Familia
ARI	Acute Respiratory Infection
BASICS	Basic Support for Institutionalizing Child Survival
CARE	Cooperative for Assistance & Relief Everywhere
CAs	Cooperating Agencies
CBDAs	Civilian Based Defense Association
CE	Continuing Education
CEDEC	Education Center for Cooperative Development
CEIPAS	Centro Integral para Programas de Atención en Salud
CEO	Chief Executive Officer
CHAPS	Community and Health Partnerships
CMR	Child Mortality Rate
CORE	Child Survival Collaboration and Resource Group
CS	Child Survival
CSTS	The Child Survival Technical Support Project
CSTS' ISA	Institutional Strengths Assessment
CS-XIII	Child Survival projects, 13rd round
CVs	Curriculum Vitaes
DFID	UK Department of Foreign International Development (UK)
DHS	Department of Health Services
DIP	Detailed Implementation Plan
DOSA	Discussion-Oriented Organizational Self Assessment
DRFs	Drug Revolving Funds
ENSMI	Encuesta Nacional de Salud Materno Infantil
EPI	Expanded Program in Immunization
FAX	Facsimile
FGDs	Focus Group Discussions
FP	Family Planning
GOG	Government of Guatemala
HFA	Health Facility Assessment
HIS	Health Information System Specialist
HIV/AIDS/STIs	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome/Sexually Transmitted Diseases
HU	Health Unit
IEC	Information, Education, Communication
IGSS	Guatemala Social Security Institute
ILO	International Labour Organization
IMCI	Integrated Management of Childhood Illness
IMR	Infant Mortality Rate
INE	Instituto Nacional de Estadistica
INGUAT	Instituto Guatemalteco de Turismo
IR	Intermediate Results
KPC	Knowledge, Attitude and Practices
LAM	Lactation Amenorrhea Method
MCH	Maternal Child Health

MNH	Maternal and Neonatal Health (a JHPIEGO program)
MOE	Ministry of Education
MOH	Ministry of Health
MTE	Mid-Term Evaluation
NGO	Non-Governmental Organization
OCA	Organizational Capacity Assessment
OR	Operations Research
PACT	U.S. Technical Assistance Agency based in Washington, D.C. (formerly Private Agencies Collaborating Together)
PAHO	Pan American Health Organization
PCI	Project Concern International
PHR-II	Partners in Health Reform – Abt Associates Health System Reform TA Project
PID	Pelvic Inflammatory Disease
PRA	Participatory Rural Assessment
PREALC	Programa Regional de Empleo para America Latina/Caribe
PVO	Private Voluntary Organization
Q	Quetzaltenango
QI	Quality Improvement
R	Retalhuleu
RH	Reproductive Health
RH/STI	Reproductive Health/Sexually Transmitted Diseases
RHT	Rural Health Technician
SIAS	Ministry of Health/Guatemala Integrated Health Care System
SM	San Marcos
So	Sololá
SO3	Strategic Objective 3 (SO3) of USAID/G-CAP is "Better Health for Rural Women and Children"
Su	Suchitepequez
TBA	Traditional Birth Attendant
TFT	Training for Transformation
TTV	Tetanus Toxoid Vaccine
U.K.	United Kingdom
URC	University Research Center
U.S.	United States
USAID	U.S. Agency for International Development
USAID/G	U.S. Agency for International Development/Guatemala
USAID/G-CAP	U.S. Agency for International Development/Guatemala Strategic Objective 3 (SO3), "Better Health for Rural Women and Children"
VHB	Village Health Bank
WHO	World Health Organization

SECTION I: PROGRAM DESCRIPTION

A. EXECUTIVE SUMMARY

Project HOPE was awarded a four-year extension to extend and expand its successful CS-XIII project, aimed at improving the health of women and children residing in or migrating to coffee plantations in the Boca Costa region of southwestern Guatemala. The CS-XIII project provided benefits for more than 200,000 migrant and resident children and women of reproductive health on about 150 coffee plantations in the departments of San Marcos (SM), Quetzaltenango (Q), Suchitepequez (Su), Retalhuleu (R), and Sololá (So). The current CS-XIII project is expanding the program, adding 100 plantations and 4 municipalities within these five departments. The current project will provide targeted assistance to some of the municipalities of origin of the migrant – as well as increase the program's reproductive health focus and strengthening overall sustainability. As with the CS-XIII sites, the proposed new plantations are all privately owned, large enough to employ migrant families during the harvest season, and have a sufficient resident and migrant population to warrant the establishment of a health unit and the training a health promoter.

Prior to the CS-XIII project, private plantation residents and migrants had virtually no access to health services on site; government agencies did not plan annually for the influx of migrants and allocate additional resources; and quality of care and community outreach was poor. HOPE undertook to strengthen the technical and management capacity of these agencies, as well as the Guatemalan organization of coffee growers (ANACAFÉ), and local NGOs. HOPE's aim was to increase the access of the target population to primary care and preventive activities at the health facility level and on the plantations, to improve the quality of such care, and to increase community demand in clinical and preventive care. The project's direct, intended results included establishment of 150 plantation-based health units, institutional strengthening of Health Area Councils, training of health promoters and traditional birth attendants, establishment of teams of master trainers, and health messages developed for and transmitted by radio stations. In addition, the project has had unanticipated benefits, e.g., a department assuming responsibility for training additional health facility staff, plantations assuming responsibility for improving living conditions for migrant families, and plantations contracting on their own with private health professionals to assist promoters.

The remaining challenges – which are being addressed by the current extension – are considerable. As indicated, there are a substantial number of plantations in the departments that are not currently being served. Only child and maternal care was addressed by the CS-XIII project, while increased emphasis will be placed on child spacing and STIs, including HIV/AIDS, in the current project. Limited funds from the Summit Foundation enabled HOPE to explore new strategies for family planning and reproductive health on plantations in two districts in Quetzaltenango that will inform the project as RH activities are scaled up. Language barriers on the plantations create communications problems that argue for strengthening health education in the migrants' communities of origin. A dependable supply of essential medications must be assured at the health units. And local organizations require continued strengthening, so that they have the capacity to sustain the project activities.

The current extension will reach approximately 330,000 beneficiaries, including 162,304 children under five and 171,959 women of reproductive age, and provide substantial benefits to migrants and residents in the target area through capacity building of the MOH and other partner agencies.

The overall goal of the extension, as with the CS-XIII project, is to provide better health in a sustainable manner for women and children residing in or migrating to coffee plantations in the Guatemala's Boca Costa Region. This will be accomplished by achieving tripartite collaboration among employers, government, and NGOs. In terms of strategic approach, the focus will be exclusively on building the capacity of the project's local public and private partners by strengthening the activities they are currently engaged in or have been designated to be engaged in – planning, services delivery, training and supervision, and outreach and collaboration with the communities. Project HOPE itself will not engage in the delivery of services to residents or migrants in the target area.

The project provides capacity-building support to its partner agencies for the following interventions: Immunization (5% level of effort), nutrition and breastfeeding (20%), acute respiratory infection (15%), diarrhea (10%), malaria (5%), maternal and newborn care (20%), child spacing (15%), and HIV/AIDS/STIs (10%). The project will provide technical, management, financial, research, monitoring, and evaluation support to its local partners, who are directly responsible for carrying out the interventions.

Project partners are the MOH, IGSS (Guatemala Social Security), 29 municipalities, ANACAFÉ, local NGOs, and 250 coffee plantations. (Four new municipalities and 100 new coffee plantations were added). Four new NGO partners will collaborate with the project in the new municipalities. HOPE will also collaborate with the Ministry of Education and USAID cooperating agencies (CAs) in certain interventions. In disseminating health messages in migrants' communities of origin, the project will engage a broad array of partners including political and cultural organizations, churches, indigenous women's groups, cooperatives, teacher organizations, auxiliary mayors, and community leaders**.**

- The cost extension is third-cycle funding.
- Proposed start and end dates: September 30, 2001 – September 29, 2005.
- Level of funding: $2.5 million.
- Name and position of local USAID Mission representative with whom the proposed program has been discussed: Edward Scholl, Health and Population Advisor.
- Main authors of the proposal:
  Dr. Victor Calderon, HOPE Guatemala Program Director; Dr. Anabela Aragon, Deputy Director, and their team, with contributions from the local MOH and IGSS.
  Dr. Bettina Schwethelm, HOPE Director, MCH Programs with support from Dr. Luis Benavente, Associate Director MCH; Virginia Lamprecht, Reproductive Health Specialist; and Juan Carlos Alegre, Information Specialist.
- Contact Person: Dr. Bettina Schwethelm.

B. CSGP DATA FORM

C. DESCRIPTION OF DIP PREPARATION PROCESS

The DIP Guidelines (Dec 2001) were translated locally into Spanish. After review by HOPE HQ, the translation was shared through CSTS with other PVOs preparing a DIP for a Spanish-speaking country.

The DIP preparation started with an internal retreat of HOPE-G staff. It lasted five days and introduced recently hired staff as well as other employees to the results of the KPC 2001 survey, details of the extension project, and conclusions of the CS-CIII final evaluation. During the session, the participants analyzed the recommendations given by the external evaluator and the evaluation team. Workgroups also reviewed line by line the DIP Guidelines, identified information sources, planned sessions to prepare specific sections, and determined technical areas at which staff required an update.

The wrap-up meeting summarized the consensus on how this program could increase its impact in the target area, overcoming the limitations and challenges identified. Being an internal event, this helped to develop a common vision before negotiating later with partners about the roles and responsibilities, and strategize about interventions. After this retreat HOPE staff reviewed TRM and other sources to refine methodologies and procedures.

Three workshops were conducted with the participation of MOH Health Areas, (88 attendees) and a fourth with partners from the IGSS (14 attendees). Each workshop had the following agenda:

a) presentation and discussion of the results of the CS-XIII final evaluation.
b) small group discussion with a different guide of issues given to each group.
c) plenary discussing conclusions and recommendations.

The discussion guides focused on a review of interventions, goals, objectives and indicators, and on defining the roles and responsibilities of partners implementing project activities. The guides also required specific input on activities such as training, outreach, improving the HIS, and M&E.

The work groups provided useful recommendations to improve supervision and community outreach. The discussion helped to discover that local governments had resources to invest in health initiatives but the MOH staff did not feel involved in developing proposals. Sustainability was one of the main topics discussed. Participants drafted graduation criteria for plantations able to sustain the HU by themselves, without external support.

After these workshops with partners, HOPE-G formed small groups in charged of drafting specific sections of the DIP, in Spanish. The local review of the first drafts had the participation of a member of HOPE HQ staff. Sections written by such groups were presented and discussed with the larger group and then revised by the Country Director and the Deputy Director. The final version was send by email to HQ. Here, sections were distributed among HQ staff for editing and tranlsation into English. Qu4stions focusing on clarifications were sent to HOPE-G by email. Usually responses were received on the same day. Edited sections were then sent back to HOPE-G to make sure the translation and adaptation had kept the original sense and purpose. The Deputy Director in HOPE-G had the final draft translated again into Spanish to verify with the local staff that their commitments were expressed properly in the final version of the DIP. Although one persion in HQ guided the overall process, the local staff has basically written the DIP.

D. PROGRAM SITE ANALYSIS

1. Project Location

The project is located in the Boca Costa, a narrow strip of land in the lower lying regions of Guatemala, about 20 miles wide and 40 miles in length. The target area encompasses 5 departments and 29 municipalities with an estimated population of about 300,000, including residents and migrants. HOPE has added nine municipalities to the original 20. Four of these new municipalities are located in the highlands of the Department of San Marcos, a home to many of the families which annually migrate to the coffee plantations in the Boca Costa to pick Guatemala's export coffee beans. The table below lists the participating municipalities and their location.

Table 1: Municipalities

Department	**CS-XIII**	**NEW**	
		Boca Costa	**Highland**
San Marcos	San Rafael pie de la Cuesta El Rodeo San Pablo La Reforma Malacatan Tumbador Nuevo Progreso El Quetzal		Sipacapa San Miguel Ixtahuacan Concepción Tutuapa Comitancillo
Quetzaltenango	Colomba El Palmar Sta Maria de Jésus Genova Flores Costa Cuca	San Martín Sacatepéquez Coatepeque	
Suchitepequez	Sta Bárbara Chicacao Zunilito San Francisco Zapotitlan Pueblo Nuevo	Patulul Samayac Cuyotenango	
Sololá.		Santiago Atitlán*	
Retahuleu	San Felipe		

* Exchanged for Santa Catarina Ixtahuacán, where coffee plantations no longer employ migrants.

San Felipe and Santiago Atitlán are included for their geographic location, but with respect to technical support will be included with the departments of Suchitepequz and Quetzaltenango.

During the project extension, HOPE will add 100 coffee plantations to the original 150, expand the focus to include reproductive health, provide limited support to the Ministry of Health of the four highland municipalities in San Marcos (development of master trainers and education materials), and share education and IEC materials with the MOH of the departments of Quiche and Huehuetenango, which provide the majority of migrant families to the Boca Costa.

2. Target Population

There are approximately 697 villages in the Boca Costa and 1,296 villages in the 29 municipalities of the total target**.**

Table 2: Beneficiary Population

Population	0-11 months	12-23 months	24-59 months	Women 15-49 years	Total
Residents	29,258	30,278	85,053	153,095	297,684
Migrants	3,605	3,730	10,480	18,864	36,679
Total	32,863	34,008	95,533	171,959	334,363

Source: Health Areas

The information for the migrant population constitutes an estimate. The MOH has planned to conduct a census in the communities of origin of the migrants for some time now, but has been unable to do so.

Approximately 39,000 births are expected per year in the target area.

3. Health Status of the Population

The regional infant (IMR) and under five (CMR) mortality rates are 58 per 1,000 and 79 per 1,000 live births, respectively [ENSMI 1998-99]. Current rates among the plantation resident families are likely higher. Children under five die of pneumonia, dehydration, fever with unknown etiology, malnutrition, and parasitic infections (Annual reports of the Health Areas). Main causes of infant morbidity are ARIs, diarrheal diseases, skin infections, and malnutrition. Diarrheal diseases, ARIs, intestinal parasites, anemia, and skin infections are the primary causes of morbidity in children 1-4 years.

According to the Guatemalan DHS (ENSMI), 54.8% of children under five in South Western Guatemala are stunted (< 1SD in height-for-age) and 28% are severely stunted (<2SD); for children of Mayan descent these percentages increase to 67.3% and 35.3%, respectively (ENSMI 98-99, Departmental Health Plans, 2000); of the three-fourths of children 12 – 23 months with immunization cards, only 60.3% were completely immunized. According to Project HOPE's final KPC survey (August 2001), 24.6% of children 0-23 months were severely stunted (< 2SD of weight-for-age) and only 42% of children 12 – 23 months were completely immunized.

In SW Guatemala the primary causes of maternal mortality (a rate probably higher than the estimated 190 per 100,000) include hemorrhage, post-partum sepsis, ruptured and atonic uterus, and malnutrition. Primary causes of maternal morbidity are anemia, urinary tract infections, peptic ulcers, malnutrition, and vaginal discharge. Of the women who delivered in the five years preceding the ENSMI, 39% of all women and 51% of indigenous women in SW Guatemala were below 145 cm in height. Only 53.7% of women received prenatal care from a physician or nurse (similar to the 56.6% obtained in HOPE's final KPC), and 71% delivered at home. Less than a third of women in union (30.4%) use a family planning methods, 22.8% of women a modern method (21.6% of women with children under two in HOPE's KPC survey). With respect to the cumulative rate of notified cases of HIV, the departments in the target area occupy the second (Retaluleu), fourth (Suchitepequez), eighth (Quetzaltenango), 12th (San Marcos), and 14th place among the 22 departments of Guatemala, with a range of 10.9-54.3 per 100,000 inhabitants. Quetzaltenango, the fifth largest department, contributes the second largest number of AIDS cases to the total (273 -- .MOH, General Division of Regulation, Surveillance, and Control of Health, 7/2000).

4. Major Opportunities and Constraints to Maternal and Child Health.

Migrants constitute the most at-risk group for health in Guatemala. They seek seasonal labor, because they do not have sufficient land for subsistence farming or other employment. They are mainly of Mayan origin and come from the highlands, where they are exposed to a vastly different climate and disease profile than in the tropical lower lying areas, where malaria and dengue are common. Women often do not speak Spanish; 90% of migrant women are illiterate (HOPE Migrant KPC survey, 1998). The timing of the harvest season makes it impossible for migrant children to complete a school year, thus contributing to the pool of non/low literate vulnerable groups. In addition, the migrant population differs in its view of health and causation and treatment of illness from the local residents and health providers. They lack the traditional support networks available to them in their highland communities (TBAs, healers) and do not have a strong sense of community with the families sharing their living space. Serious overcrowding in the *galeras* (families share open space with limited protection from the elements, dirt floors, and limited sanitary, cooking, and food storage facilities) increases exposure to infectious diseases, but also makes it difficult for the migrants to follow some of their usual customs. Program constraints to improving health status include the fact that an average of five languages is spoken on a plantation during the harvest season. Also males are generally the head of household, and women may need permission to seek care and participate in education meetings. Migrant families have no time during the day for organized health education activities (e.g., mothers' clubs); and at night activities are hampered by lack of electricity at the *galeras.* Care-seeking at existing MOH/IGSS health facilities is affected by geographical distance, lack of transport, and incompatible hours of operations (days only).

Plantation residents arrived in the area some time ago, some as migrants, and, with the permission of the owners have formed villages. The men are primarily engaged in weeding, cutting trees, as guards, and other plantation work. Other family members may participate in picking coffee during the harvest season, but at other times work off the plantation, selling in markets, making clothes, etc. Some of these communities have schools that are supported by the plantations, because there are no schools in the vicinity, and some communities have health promoters, TBAs, traditional healers, and small drug outlets. Resident workers have even joined labor unions against the wishes of the owners. This has resulted in individuals being fired, and has negatively affected permission for new housing on plantation land. The plantation residents do not own land, but live on space provided by the owners. These communities have internal structures with leaders (including promoters, pastors, auxiliary mayors) that make decisions for the community. The houses of the residents are constructed with

cement blocks or wood and most have piped water and latrines. Opportunities for providing health education and improvements are much better for the plantation residents.

Following the Peace Accords of 1996 and with a new MOH National Health Plan 2000 – 2004, there is an excellent opportunity and conducive policy environment for improving the health of the project's target groups. Improving maternal and child health (MCH), particularly in indigenous and migrant groups are the top two priorities of the MOH. There is also an increased focus on preventive services, quality and effectiveness of care at all levels, and emphasis on decentralization, community involvement, and increased participation of the private sector. The central MOH considers HOPE a lead agency in working with these vulnerable groups and has sought its Country Director's input to the development of national policies and guidelines for implementation.

Agriculture (coffee, sugar, corn, and wheat) is the primary economic activity of the residents in the target area, followed by trading, services, and manufacturing of garments. Coffee plantations employ about 10-20% of the resident population in the Boca Costa, however, the low coffee prices on the world market has reduced employment opportunities for the residents. The annual per capita income is $US236, substantially below the national average of $354, classifying most of the residents as poor to extremely poor (Population and Environmental Characteristics, INE, 1994). Because of lack of land for subsistence farming, lack of tools and technology, and low levels of education, many of the indigenous Mayan families are forced to migrate to the lower-lying regions of Guatemala to pick coffee and or harvest other agricultural product. However, during the last coffee harvest, plantations paid only up to Q18 (= $US2.25) per *quintal* of coffee beans picked, compared to Q25-30 ($3.74) in the previous harvest season. An adult worker on the average can pick about one quintal per day or 1 ½ - 2 quintales, if supported by his wife and children. This contributes even further to extreme poverty in this high-risk group.

Most residents are Catholic, followed by various protestant sects. The indigenous groups have merged Catholic and pre-Colombian beliefs. For them all life events, from the birth of a child to the planting of corn, are guided by this complete fusion of Mayan gods and Catholic beliefs (INGUAT Guatemala, Population, Language and Religion). Machismo, religious and other cultural beliefs limit the social, political, and economic participation of women in society and confine them mainly to the home. However, extreme poverty forces migrant women to participate in seasonal labor. Resident men prefer their wives to remain at home and take care of the children.

According to the HOPE KPC baseline surveys (1997, 1998), 61% of resident and 26.1% of migrant women had ever attended school, and only 6.3% of the former and none of the latter group had completed primary education.

Residents in the target area are served by a number of agencies, primarily the MOH, IGSS (in Suchitepequez), NGOs, and ANACAFE on some of the coffee plantations. The MOH has a referral hospital in each department. The number of health centers and post and the number of providers is listed in the table below. In addition, there are about 1,600 health guardians that extend coverage and health education to the most rural areas under the SIAS. The IGSS has 120 health providers in the target area in the department of Suchitepequez to provide health services and health education. ANACAFE operates six clinics in the rural areas close to the coffee plantations. The number of private providers in the target areas is unknown, but these are mainly located in smaller and larger towns and are not accessible to most of the rural target population. However, there are about 14 NGOs that are providing health services and education in the target area, mostly to the rural population. In addition, there are about 1,500 health promoters and a similar number of TBAs that provide health

education (and the TBAs, prenatal care and home deliveries). With the CS-XIII project, HOPE established 150 health units on private coffee plantations, each operated by a promoter trained in health education and in the standard case management of common childhood illnesses to serve resident and migrant families. Even though health services of the MOH and NGOs are mainly free, they are difficult to reach (30-90 minutes by car) and transport is costly (up to Q25), more than the head of household may earn for a day's labor picking coffee. Walking may take one to two and a half hours for reaching the closest health facility. For migrants, there is usually no time during the harvest, when all daylight hours are dedicated to picking coffee. In addition, transport may not be available, and the migrant families do not share the same language and beliefs of the health workers. As a result, they generally do not seek care when they are ill.

Resident mothers often consult mothers and mothers-in-law when children are sick, then seek out healers or pharmacies and drug vendors. When children finally arrive at a health facility, they are often very seriously ill. Some mothers work as domestic servants, wash clothes, sell food, or pick coffee. When mothers work, they leave their children with older siblings or relatives. For religious reasons they often do not seek care when children are ill. Migrant mothers take their young children with them to where they are picking coffee. They do not have access to grandmothers, healers, witch doctors, or drug sellers when anyone becomes sick, but may ask other migrant families that are inhabiting the same barracks for advice. They only go to a health facility if they are told so by the husband or group leader. In the CS-XIII baseline, only 35.1% of residents and none of the migrant children 12-23 months had been completely vaccinated. This increased somewhat to 42.1% of resident children with completed vaccinations at the project end, and 48.9% of resident children with measles vaccines.

The plantations and targeted resident communities are connected to main roads through tertiary dirt roads. Winter rains during the time of the coffee harvest often make these roads impassable. In addition, recently peasants have been occupying some of the plantations to put pressure on the government to obtain land. This has increased the amount of violence, assaults, and robbery in some of the more isolated areas.

5. Changes from the Proposal

The main change will be introducing AIN-C. Due to the current food insecurity, the GOG and MOH have prioritized integrated services towards the population, with a strong emphasis in preventing child malnutrition.

The MOH plans to train community guardians to conduct growth monitoring and promotion, GMP. In contrast with promoters treating sick children –predominantly male-, guardians –mostly women- will not be trained to treat. The number of promoters is small, even just one per community. In contrast the number of women involved in GMP is expected to reach a ratio of one guardian per 5 children during a given GMP campaign.

AIN is aimed to prevent episodes of clinical malnutrition, and stunting, by focusing in children that do not grow well. HOPE considers supporting this initiative in a sample of coffee plantations where the experience can be adequately documented.

Since the proposal was presented, HOPE has increased its involvement in networks of NGOs. ProRedes will coordinate initiatives toward child and maternal health in districts where the extension proposal will be active, increasing synergies and collaboration.

The Monitoring and Evaluation section proposed to switch from cluster sampling to LQAS.

The BCC and OR section provides more detail on research that can help to achieve project goals.

E. SUMMARY OF BASELINE AND OTHER ASSESSMENTS

1. KPC Survey

Purposes: a) assess if DIP objectives (CSXIII) had been reached; b) compare final with baseline; c) gather baseline data on RH; and d) gather baseline data about new target area.
Date of field work: August to September, 2001
Participants: HOPE, IGSS and MOH
Study area: Boca Costa
Study groups and sample size: a) Resident mothers with children under 2y in CS-XIII communities (n=300); b) Resident mothers with children under 2y in new target area (n=300; and c) resident women of reproductive age, pooled from CS-XIII and new areas (n=300).
Sampling design: cluster, parallel sampling
Survey tool: KPC 2000+ , modified
Main findings: A comparison of the baseline and final KPC noted significant progress in immunization coverage, proportion of children with a health card, early breastfeeding and complementary feeding, vitamin A supplementation coverage, ORT use rate, home fluids use rate during diarrhea, maternal knowledge of pneumonia danger signs, knowledge and use of child spacing methods, proportion of mothers with maternal cards, and proportion of women delivering in the hospital. The findings also provided information about knowledge and practices related to the new interventions. Specific numerical information is provided in the Technical section.

2. Knowledge and Performance of San Marcos Health Area staff on IMCI

Purposes: a) Determine if the knowledge and skills of institutional providers in Clinical IMCI/ Standard Case Management of sick children have improved after training and b) identify training needs.
Date of "field" work: September 2001
Investigators: 3 HOPE field trainers
Study area: Health Area San Marcos, 8 municipalities involved in the CS XIII project
Study groups, sample size: 21 workers, 4 physicians, 2 professional nurses, and 15 auxiliary nurses. In most instances, case management of one was observed.
Sampling design: Convenience sampling (that were facilities selected)
Tools : a) knowledge checklist ; b) supervisory checklist to observe and assess practices
Main findings: 80% showed a satisfactory knowledge of IMCI/Standard Case Management norms, but this knowledge is not always reflected in practice: Only 38% weighted the child, 48% took the temperature; one third assessed the weight-for-age with a chart, and 48% assessed clinical anemia. Approximately 70% of providers classified danger signs well, 57% inspected the immunization card, 90% explained the mother how to administer the medication to the child, and 19% verified mothers had understood the prescription.

3. Knowledge and Performance of Promoters in Charge of Health Units on Plantations

Purposes: a) to assess the knowledge and performance of HU promoters in Clinical IMCI- Standard Case Management of sick children, and b) identify training needs
Date of "field" work: September 2001
Investigators: HOPE staff
Study area: HUs in Boca Costa
Study groups, sample size: 25 promoters from 3 departments
Sampling design: Convenience, the promoters were supervised while providing service to a single sick child.
Tools: a) knowledge: general data, nutritional status, identification of general danger signs, management of respiratory infections (cough and pneumonia), management of throat infections, management of diarrhea, assessment of hydration status, and immunization schedule, and b) Performance: supervisory checklist including the above mentioned items plus screening for severe anemia.
Main findings: Progress in improving knowledge levels was regarded as adequate, considering that promoters had attended only a brief IMCI course. While none of the promoters followed all IMCI norms, more than 92% carried out basic procedures such as taking of temperature and measuring the child's weight. About two-thirds classified and gave dietary advice to the mother correctly, 56% promoters looked if the child had cough or difficult breathing, 92% counted the number of breathings in one minute, 24% asked the mother for signs and symptoms of diarrhea, and 52% revised the immunization card.

F. PROGRAM APPROACH

Goal: Better health for women and children residing or migrating to coffee plantations in the Boca Costa of South Western Guatemala.

1. Broad Program Approach

The approach will continue to be a combination of improving MOH and IGSS facility based services and the creation and strengthening community based services on the plantations, specifically promoter run Health Units (Hus), TBAs, and promoters from resident comunity, and CBDAs. At the onset of this extension, agreements will be developed with the new project partners and existing agreements reviewed and revised to reflect the expanded program emphasis. All project activities are shaped and vetted by the three health area councils, the NGOs participating in these councils, and IGSS. The overall approach of the proposed project will be on institutionalizing the role of the various partner agencies with respect to the project activities. In a planning workshop with each health area, the health area councils and project staff will define what activities and organizational structures will be institutionalized at the end of four years. To determine what needs to be strengthened to reach these sustainability benchmarks, a self-assessment tool will be developed (using input from tools such as ISA, DOSA, etc.) in the first project years and implemented. Health area councils and project staff will jointly determine the technical assistance required to reach established benchmarks.

Health facility activities: To assess and improve capacity at the health facility level, the project will teach its partners to conduct health facility assessments, based on instruments developed by BASICS and the situational analysis of MotherCare. The findings will determine technical assistance needs to remediate deficiencies, which may include joint work with the partner agencies to improve management manuals for health facilities; implement drug management systems (e.g., developed by

MSH) to improve drug supply and handling, etc. Based on positive experiences in introducing QI methods, with TA from URC, to health facilities in Mulanje/Malawi, the project, again with technical assistance from Calidad/URC, will train the master trainers in QI methods and assist them to work with a small number of facilities at a time to introduce this methodology. This will promote team building, problem-solving as a team and with the community, and improve the quality of services. The project will help the health facilities to document their results and share these with new facilities as they enter this process. Additional methods used periodically with health facility staff and community members include exit interviews and verbal case reviews (VCRs). The latter method, developed by Northrup and Chakraborty (APHA 2000) assesses examination, treatment, and counseling practices of providers through interviews with mothers and provides timely feedback to providers to improve case management. Given the large target area, the project will test new approaches with a limited number of facilities, share results with health areas, municipalities, and facility staff, and gradually involve new facilities.

Training and support/supervision: HOPE will continue to work with the existing MOH/IGSS master trainers who have been trained in child health, maternal care, and adult education methodologies during the CS-XIII project. The project will train two master trainer teams from ANACAFE and each team will have five members. The MOH and IGSS have agreed to increase the number of master trainers from 12 to 20 per department. The master trainers, in turn, are supported in their training of health facility workers, outreach staff, and community agents/promoters in HUs. HOPE's role is to assist with planning (assist with training needs assessment, curriculum development, post-training assessments, etc.); support implementation; monitor the quality of training; provide training materials; and monitor the quality of services through exit interviews, FGDs, VCRs, and other methodologies. The trainers and supervisors will also be trained and supported in the implementation of these monitoring tools. New trainings (curricula, etc.) will be developed/adapted for the new interventions (child spacing and HIV/AIDS/STIs). Introduction of the syndromic approach to treating STIs will be explored for health centers and health posts without access to tests and reagents.

***Plantation HUs*:** New HUs will be added in phases, 20 in Year 1, 30 in Year 2, and another 40 in Year 3 and 10 in year 4, to allow for the intensive training, supervision and follow-up time needed to assure the appropriate use of management protocols by the HU promoters and coordination with the respective plantations. Promoter needs and quality of services will be assessed through mini-studies with partner agency participation. Preliminary results from a study conducted in August 2001 provided information to strengthen existing curricula.

HOPE staff will continue to support the regular interactions of plantation owners with municipal health staff through the existing four and new plantation networks. These meetings, as well as meetings with individual plantation owners will review achievements; discuss concerns based on health data collected by HUs and facilities; and firm up the respective contributions to be made by the MOH, IGSS, and plantations to building a plantation health infra-structure. A recurrent cost-benefit analysis should provide the plantations with better information on the cost and value added by plantation health activities.

2. Integration of Interventions

In line with the national policies, HOPE takes an integrated approach to child and reproductive health. Guatemala officially adopted IMCI as a national strategy only in 2001 and decided to implement facility-IMCI in eight departments of Western Guatemala, including San Marcos and Quetzaltenango. Towards the end of the CS-XIII project, HOPE helped to establish master trainers at the department

level in IMCI and has assisted them in training health facility staff in IMCI in the target districts. The community-IMCI approach and curricula have not yet been completed at the national level, and the MOH is attempting to include AIN in the community-IMCI approach. HOPE participates actively in the IMCI national taskforces that are shaping the development and implementation of facility and community-IMCI. With respect to maternal/newborn care, the MOH is working with the MNH project, managed by JHPIEGO. HOPE has a strong ongoing relationship with this project and the planned activities which are focusing primarily on the health area/referral hospitals

3. In-Country Partners

Primary in-country partners are the MOH (national, health area/department level, municipal level, and health facility level), the Guatemalan Social Security Institute (IGSS – primarily in the department of Suchitepeqez and its health facilities), the Guatemalan Coffee Growers' Association (ANACAFE), local NGOs working in the target area, about 250 privately owned coffee plantations. In addition, HOPE has been working closely with a number of CA and local agencies, including URC/Calidad project, JHPIEGO/MNH project, Population Council, and will start working with APROFAM and family planning/community-based distribution activities.

4. Roles and Responsibilities of Partners

There will be no substantive change in the role of the local partners. The focus will be exclusively on building the capacity of the project's local partners (MOH, IGSS, Anacafé, NGOs, plantations) to integrate and institutionalize the essential program components in its routine activities. HOPE will not deliver services to residents or migrants in the target area. The role of HOPE staff as role models, mentors, coordinators, trainers, supervisors, motivators and monitors, shaped by the current CS-XIII project, will continue to evolve and expand. Existing agreements with the project partners are attached in **Attachment 3.**

5. Relationship

As specified above, the project has relationships and coordinates with a host of agencies at the national, departmental, and local level, including the MOH, IGSS, ANACAFE, local NGOs, the private-for-profit agricultural coffee growers, community groups, volunteers, and traditional providers. New relationships in the extension project will include APROFAM to strengthen community-based approaches for family planning, ProRedes, a new grant to strengthen SIAS and non-SIAS NGO networks in Guatemala (with a major focus on western Guatemala), JHPIEGO, ADISS, ADIPO CARE, OIT, Calidad en Salud , and Intervida . The project builds on HOPE's extensive past experience partnering with a host of technical assistance agencies and bringing their expertise to strengthen the MOH and other local partners at the health area and municipal level. Also with HOPE's experience in facilitating increased coordination and collaboration at the health area and municipal level, and HOPE's experience in training community promoters in case management of common childhood illnesses to increase access of at-risk populations in distant rural areas.

6. Opportunities for Synergies

With funding from a USAID/BHR/PVC Matching Grant, the National Lotteries Charity Board (U.K.), HOPE has become the leading provider of micro-credit to women in SM. The Village Health Bank (VHB) program (integrated micro-credit & health education) was initiated in July 1999 with the goal of alleviating poverty and raising the quality of life of impoverished women and their families. 77

VHBs are operating and have involved 1,900 women. During the first year, loan repayments have been nearly perfect and participants reported an average increase in income of over 40%. The program is operating in both the Altiplano and Boca Costa areas of the Department. By September 2002, the program will be sustainable and continue to operate on its own income. HOPE expects to have 115 VHBs and directly benefited over 4,000 women at that time. HOPE recently completed a small RH project with funding from the Summit Foundation in two municipalities of SM to develop new approaches and lessons-learned in FP and HIV/AIDS/STDs with youth and indigenous populations. HOPE also recently started a program with the ILO in early 2001 in four municipalities of San Marcos to increase school attendance in children under 14 and improve their health and nutrition status. On September 1, 2001, USAID/Guatemala contracted with JSI and their subcontractees, Manoff and HOPE, to implement the ProRedes project, primarily in the Western highland. This project will promote the development of networks of NGOs supporting the MOH decentralization efforts (SIAS) and NGOs not involved with the SIAS. These networks will receive technical and administrative support to strengthen its members to conduct priority health activities. ADISS, HOPE's local NGO, is currently implementing drug-revolving funds in the Boca Costa under the MOH/SIAS and is expected to expand this activity in the coming years.

7. HOPE's Role in National Planning and Policy Development

HOPE has been an active member in MOH national taskforces on facility and community-IMCI and Maternal Care and has provided solicited input on migrant health issues. With the current CS project and involvement in the ProRedes project, HOPE expects that its involvement at the national level will intensify over the coming years.

8. Challenges at the International Organizational, Country, and Project Level

HOPE is undergoing leadership changes at its highest level with concomitant changes in organizational strategies. This has delayed the process of conducting the planned capacity assessment of HOPE's headquarters, field office, and partner agencies to make it possible for HOPE to follow a planned sequential process. In addition, HOPE would like to move from a project-driven country focus to a strategically planned country program. Both of these processes are expected to challenge the organization over the coming years.

G. ORGANIZATIONAL DEVELOPMENT

1. Strengthening the PVO

In its proposal, Project HOPE contemplated a capacity assessment of its Guatemala Country Office and headquarters backstopping within the first 6 months of the extension, to be carried out by an organization such as PACT. However, Project HOPE began a broader organization-wide strategic planning process in October 2001. Some initial steps have been taken, such as a review of the organizational values. A thorough assessment of organizational needs and areas capacity development is expected to accelerate in April 2002. The Guatemala capacity assessment will now take place in this broader context. The paragraphs that follow are based on current information, recognizing that the new Strategic Planning process may result in the identification of different priorities for capacity building.

Project HOPE previously identified organizational needs in its document Women and Maternal and Child Health Strategic Plan for 2000-2005 (MCH Strategic Plan) as well as in a health workshop in 2000 with selected HQ and field staff (workshop). The areas identified for strengthening which are most relevant to this project follow. In each case, the bulleted area is followed by a brief description of this CS project will be used to build HOPE's organizational capacity:

- Reproductive health (MCH Strategic Plan)

Building on its credibility among project beneficiaries, Project HOPE has moved quickly to take advantage of the recent opening on the part of the Guatemalan government to address RH. Project HOPE has obtained funding from two foundations to hire RH focused staff and has integrated RH more fully into its CS activities. A recent subcontract to the "ProRedes" Project allows HOPE/Guatemala to share its increased capacity in RH with a number of local NGOs.

- Costing of select project activities (MCH Strategic Plan)

Cost studies of maintaining the health units will be carried out as the project activities are transitioned to the plantations. Knowledge gained in this area will strengthen capacity throughout HOPE as it continues to partner with the private sector in similar projects.

- Increased HOPE expertise in formal assessment of capacity of partner agencies and the use of formal indicators to assess capacity development. (MCH Strategic Plan)**.** The soon-to-be initiated strategic plan is expected to address this issue, particularly at the field office level.
- Increased use of operations research and qualitative methods (workshop)
- Because of its good standing in Guatemala and demonstrated commitment to improving the health status of high risk populations, HOPE is in a strategic position to develop and test new approaches, engage with key policy makers, and advocate changes based on well conceived pilot projects. Increased documentation of project impact and dissemination of lessons-learned across countries and regions (workshop)

With OR and more rigorous attempts to cull lessons from project activities, HOPE is committed to documenting and sharing findings and experiences within its own network of 28 countries and among colleagues in the U.S. and abroad.

- Community mobilization

While HOPE programs successfully promote community *participation*, HOPE recognizes the need to increase its capacity and practice of cutting edge methodologies in community *mobilization* which imply a greater decision-making role for communities (e.g., participatory rural appraisal, appreciative inquiry, training for transformation, etc.).

Processes used to gather baseline capacity data are to be determined as part of the new Strategic Planning process.

Sharing Lessons Learned with Other HOPE Programs. HOPE/Guatemala participates twice yearly in regional meetings with other HOPE projects in the region to share lessons learned. Lessons-learned are also shared at HOPE through special and quarterly reports and HOPE's annual leadership meeting. As part of its strategic plan, Project HOPE is actively seeking opportunities to develop health programs for high-risk groups with private employers and corporations. HOPE/Guatemala will play an active role in these discussions based on its experience through this CS project working with the coffee growing industry. As mentioned above, Project HOPE is a

subcontractor in the Pro-Redes Project which see to strengthen the organizational capacity of NGOs in Guatemala to carry out quality projects in Reproductive Health. Pro-Redes gives Project HOPE a unique opportunity to share its lessons learned directly with NGOs in the highlands of Guatemala, as well as throughout the country in conferences sponsored by Pro-Redes.

Finally, this project's workplan includes presentations to Ministry of Health, AID, other PVOs and NGOs, in May or June 2002 to present lessons learned form the first phase of the project.(September 1996 – September 2001) and other similar presentations in Year 4 with the focus on the extension (September 2001 – September 2005).

Strengthening the Local Partner. Approaches to build partner capacity include baseline self-assessments, joint project design, mentoring, development of training and supervision capacity, self-assessments, QI methodologies at the health facility level, OR activities, use of rapid assessment methodologies for monitoring and evaluation, regular progress reviews and use of data in decision-making, etc. As pointed out earlier, at the department and the municipal level, HOPE works through and with the health area councils, an interagency coordinating committee which HOPE promoted since the early 1990s under a BHR/PVC Matching Grant.

The capacity building objectives are listed in Table 1 and are further described in the respective technical sections. All levels, from the department to the community agents will be affected directly by project activities. In addition, HOPE Country Director will continue to advise the central MOH on health facility and community-IMCI and on HOPE's work with the agricultural sector. HOPE also supports JHPIEGO at the department level in the implementation of AMNE strategies. As specified earlier, the strong relationship with the project partners is maintained through a clear definition of roles and responsibilities in signed agreements, as well as frequent formal and informal meetings that serve to maintain clear communication lines and are centered on achieving joint objectives. There are no new constraints to building the capacity of the local partner. However, the project realizes the need to go beyond capacity building to integrating program activities in the routine activities of its partner agencies.

- Municipal health plan allocates increased resources during the coffee harvest;
- Municipal level staff supervise each health facility at least every other month using formal supervision tools;
- Municipality allocates resources for training and supervision of staff and community agents;
- Municipality monitors health facility data at least quarterly;
- Municipality participates in plantation network meetings.

Describe the types of final/baseline assessments, studies or surveys that will be carried out under the extended program. Include assessments of PVO and local partner capacity, qualitative assessments, and population-based assessments.

2. Strengthening the Local Partners

The project partners are the MOH, IGSS, ANACAFE, NGOS, and coffee plantations.

a. Ministry of Health

The MOH has the following facilities and human resources in the target area:

Table 3: MOH facilities

Department	Total Population	Population in the Intervention Area	Total # of Health facilities	# of Facilities in target area	# of MOH Staff in Target area
San Marcos	863,980	365,351	20 health centers 80 posts	11 health centers 24 posts	1 Dept. Director. 1 epidemiologist 11 physicians 13 nurses 57 auxiliary nurses 2 social workers 30 RHTs
Suchitepéquez	402,574	157,424	10 health centers 27 posts	4 health centers 6 posts	1 Dept. Director. 1 epidemiologist 4 physicians 5 nurses 18 auxiliary nurses 1 social workers 4 RHTs
Quetzaltenango	695,566	191,923	13 health centers 46 posts	6 health centers 16 posts	1 Dept. Director 2 epidemiologists 6 physicians 8 nurses 32 auxiliary nurses 1 social worker 10 RHTs
Retalhuleu		15,304		1 health post	1 auxiliary nurse
Santiago Atitlán		15,304		1 health center	1 physician 1 nurse 2 auxiliary nurses 1 RHT

HOPE has and will continue to work with the three health area offices (departmental level), based on formal written agreements. HOPE has assisted each health area to develop a team of master trainers with technical and training skills in case management, IMCI, and high risk maternal and newborn care. These teams (San Marcos: six physicians and four nurses; Quetzaltenango: five physicians and four nurses; Suchitepequez: five physicians and five nurses) are responsible to:

- Develop a training plan, based on identified training needs;
- Participate in the training activities conducted by HOPE and other agencies;
- Replicate the training for trainers at the municipal level;
- Post-training supervision and follow-up; and
- Monitoring of the performance of trained health providers.

At each MOH district office, a team of trainers has been established who are responsible to:

- Develop a municipal training plan based on identified training needs
- Participate in trainings conducted by the departmental master trainers
- Replicate the training activities for health center and health post staff, and the staff of SIAS NGOs supervising promoters and TBAs;

- Work with the health facility and community outreach staff to develop and implement trainings for promoters, TBAs, and *vigilantes de salud*
- Provide training follow-up and supervision
- Assist providers in training, follow-up, and supervision of community volunteers

In addition to training, the health area offices are committed to provide essential drugs on a regular basis to the plantation health units for plantation residents and an increased amount during the harvest season to also cover migrants. The medications are solicited monthly by the MOH district offices.

In addition, the districts have the following responsibilities:

- Participate in quarterly work meetings, particularly to plan services for the migrant population and health campaigns (vaccinations and prenatal care) on the plantations during the harvest season;
- Support monthly supervision meetings for the plantation promoters;
- Collect the health/service information from the promoters on a monthly basis and enter it into the MOH HIS; and
- Share information about activities conducted on the plantations (promoter services, prenatal care, vaccinations, etc.) with the MOH district director and HOPE

HOPE's primary approach to build a strong relationship with the MOH includes the following activities:

- Continue to work in a team approach;
- Formalize the roles and responsibilities through written agreements;
- Provide follow-up to the training and or activities;
- Provide technical, financial, and logistical support to the implementation of the joint activities.

Strengthening the MOH during the Project Extension

The following activities will receive increased support:

- Increased analysis and use of the data provided by the promoters for planning MOH supervision and outreach activities;
- Development of supervision plans and monitoring of supervision activities with the health area staff;
- Continued strengthening of the health area and district trainer/supervisor teams- training needs will be assessed through small targeted assessments of knowledge and on-the-job performance to determine the impact of the training activities;
- Strengthening of data analysis and use of data for decision-making at the district level;
- Strengthening of district offices in organized planning, taking into account available local resources;
- With the MOH and IGSS, develop scopes of work for plantation promoters and performance evaluation tools; and
- Support more effective follow-up and supervision for community volunteers, including plantation promoters, by supporting the MOH in developing guides for conducting these meetings (purpose, objectives, setting agendas, expected outcomes).

b. Guatemalan Institute of Social Security (IGSS)

From the onset of the CS-XIII project, HOPE has worked closely with the IGSS in the Department of Suchitepequez to develop a core of master trainers at two levels, the department offices (physicians, nurses, and health educators) and the IGSS community outreach staff (auxiliary nurses and rural health technicians) [RHIS.]. All IGSS staff in the department involved in preventive health care have been trained in standard case management and participatory IEC methodologies. Joint activities involved:

- Training of new staff;
- Training of community volunteers;
- Supervision of plantation promoters by physicians and rural health technicians.
- Implementation of plantation health campaigns for migrants;
- Health education talks for migrants and residents; and
- Sharing of relevant IGSS reports with HOPE.
- Providing translation for health campaigns.

Strengthening IGSS during the Project Extension

During the extension, HOPE will build the capacity of IGSS staff in facility and community-IMCI, IEC, RH (STIs and HIV/AIDS), and maternal care. The quality of the cascade training process (see section on training) will be monitored with checklists and strengthened based on obtained results. Supervision techniques and processes will be strengthened, using guidelines and checklists. IGSS staff will be involved in studies to assess the impact of training and other project activities. IGSS staff will be involved with the MOH in the development of scopes of work for the plantation promoters and performance based-assessment tools.

c. Coffee Plantations

Gaining the participation of the owners and administrators of private coffee plantations has been a major main challenge of the CS-XIII project. By project end, 150 coffee plantations had provided a physical locale for the plantation health unit and had identified promoters that were trained in case management and IEC. In the second half of the project, the promoters began to provide health services and health education to resident and migrant families. The plantations also allowed the promoters to participate in training activities and monthly meetings. Some plantations have provided furniture for the health units, salaries for the promoters, and in a few cases medications.

Strengthening the Participation of the Coffee Plantations during the Project Extension

The project will support the creation and strengthening of owner/administrator networks at the district level and the involvement of MOH/IGSS staff in their quarterly meetings to continue to motivate the participation of the plantations in the project (planning of activities, expectations, joint strategies, roles and responsibilities, support to achieve a degree of sustainability, using realistic approaches to promote financial sustainability – e.g., implement community revolving drug funds). Additional activities include:

- frequent communications and meetings;
- brief reports on services and health education provided on the plantations;
- reports on disease outbreaks; and

- information about medications and supplies that can be obtained form the MOH for the health unit.

In addition, the project (jointly with its partners and participations of the plantations) will develop a list of minimal requirements for each health units and a checklist rating the unit and the plantation according to compliance. Plantations receiving a rating of "A" will receive an award; plantations with lower ratings will receive information on how to upgrade their performance.

d. ANACAFE

ANACAFE staff were trained by the CS-XIII project in case management, IEC, and maternal care and subsequently trained promoters and TBAs. ANACAFE also provided education materials and shared information about activities with the project. Even though ANACAFE has its own information system, the organization is willing to contribute relevant data to the MOH HIS.

Strengthening ANACAFE during the Project Extension

ANACAFE has a signed agreement with HOPE. All its master trainers will be trained/updated during the extension in the project interventions (maternal care, STIs/HIV/AIDS, FP, facility and community IMCI, HIS). ANACAFE plans to use this training of its master trainers to train all of its health facility staff nationwide (70 clinics), as well as associated promoters and TBAs. ANACAFE will continue to share its information with HOPE and provide service information to the MOH HIS during this extension.

e. NGOS

NGO staff from ADISS, AASDIMA and other NGOS have been trained in standard case management, maternal care and IMCI during the CS-XIII project and have replicated this training for their health volunteers guardians and TBAs.

Strengthening NGOs during the Project Extension

NGO staff will be invited to participate in training in maternal care, STIs/HIV/AIDS, FP, IMCI, and HIS during this extension. In turn, HOPE requests that they inform the project about replications of these training activities, monitor their quality, and use the standard supervision checklists used by all the partner agencies. These NGO partner have coordinated well during the previous project and mainly need training and updating in the new project interventions. NGOs that do not require capacity-building (e.g., Insare/Care in the municipalities of Sipacapa, Concepción Tutuapa, Tejutla and Ixchigúan in San Marcos, an NGO assisting the MOH) will be involved in coordination at the health area and municipal level.

For capacity building objectives and capacity indicators, see the M & E Section.

HOPE plans to train NGO staff as part of the basic core facilitating teams. Those teams will conduct cascade training to the remaining staff. HOPE will also provide support with educational materials on IMCI and IEC. HOPE will coordinate technical assistance with ProRedes in order to avoid duplication of effort and share the cost of developing materials to promote child and maternal care.

3. Community Capacity/Other Community Organizations

The overall objective of the project is to strengthen the capacity of the community to prevent and manage common childhood illnesses and conditions related to pregnancy and reproductive health at the community level and increase demand and participation in formal health services. The emphasis is on promoting behavior changes at the household level to improve self-care, disease prevention, recognition of danger signs, and timely care seeking.

There are the following community agents in the target area:

Table 4: Community agents

Type of Volunteer	Responsibility	Number	Organizational Affiliation	Training Needed
Plantation health unit promoters	Provide health education and primary care services to resident and migrant families	150 promoters (and and replacement promoters) from the CS-XIII Project and 100 new promoters.	Some receive salaries/stipends from the plantations, others have jobs on the plantations in addition to managing the HU. A very small number manages the HU from their own home.	The CS-XIII promoters have been trined in standard case management and community IEC. All plantation promoters will be trained in community-IMCI and in AIN.
Community promoters	Community agents that provide health education and receive no remuneration	1,500 promoters	Agents of their community	Promoters were trained in IEC methodologies, based on the standard case management curriculum. However, they do not provide treatment, only referral. Need to be trained in new community IMCI approaches.
Extension promoters and health guardians	Community members contracted by NGOs for a Q50.00 monthly stipend to extend health education coverage through mothers' groups and other forms of community education.	1,300 health guardians in communities where the MOH is contracting NGOs to increase coverage	Contracted or affiliated with the following NGOs" -ADISS – HOPE -Centro Medico -ADI. -CEDEC -FUNRUAL -ANACAFE. -APROSAMI -ADIPO -CEIPAS -PCI	Will be trained in IEC and later on in AIN, as it becomes established in Guatemala.

a. Methodology

Training master trainers, providers, and community volunteers is the primary strategy of the extension project to build the capacity of the community and is described in more detail in the next section. During the first year the project will perform an inventory of active community health promoters to strengthen their training, recruiting of new volunteers will start in the second year.

4. Training

As mentioned in above sections, the project uses a "cascade approach" to training. HOPE has worked with the MOH to develop a core group of master trainers at the health area/department level. These master trainers are responsible and receive direct support from HOPE staff in the training of the district staff (a physician and nurse) responsible for the training of all the health facility and community outreach staff in their district (auxiliary nurses, rural health technicians, sanitary inspectors). These latter providers are responsible for training and supervising community volunteers. A similar strategy has been used with the other partners. The project extension will primarily provide training in the new interventions: facility IMCI, community IMCI, RH (maternal and newborn care, STIs/HIV/AIDS and FP. Training in AIN-C in Guatemala is considered to be part of a broader approach. Training in IMCI AIN focuses in monitoring child growth with community participation, in the assumption that "a child that is not growing well is a sick child", AIN's motto. The Guatemalan MOH regards AIN as a sub-strategy, part of IMCI. Community AIN, as well as the community IMCI are being developed in Guatemala and the methodology is not validated yet.

The following training activities are planned by the project:

Table 5: Training

Training Topic	Dura-tion	Content/Materials Used	Trainers	Trainees
Facility -IMCI	7 days	General danger signs, cough and difficult breathing, ear and throat infections, diarrhea, management of fever, nutrition problems and child feeding, and immunization. Each trainee receives a set of IMCI training materials for children < 2 months, and children 2 months to 5 years; an atlas of pictures (CDR/95.14); and the IMCI guidelines adapted for Guatemala by USAID, Population Council, BASICS, Calidad, PAHO, UNICEF, IGSS, MOH, HOPE, and others).	*Health area level*: facilitators from the national hospitals, health area, district, IGSS, ANACAFE, NGOs, and HOPE *District level*: District chief, nurse, and HOPE staff	103 physicians 86 nurses 160 auxiliary nurse 108 RHTs 60 other staff
Com-munity - IMCI	To be establi shed	To be developed	RHTs, auxiliary nurses and health educators	250 plantation HU promoters
Repro-ductive Health	8 days	Hospital level: Managing Complications in Pregnancy and Childbirth/IMPAC (WHO/RHR/00.7) ; Syndromic approach to STIS,; review of FP methods; infection control. Health center/post level: Complementary materials in process of being developed and approved by the MOH	Health area level: facilitators from national/department hospitals, health areas, districts, IGSS, ANACAFE, NGOs HOPE, and JHPIEGO. District level: Physician, nurse, auxiliary nurse. Health center/post level: Rural health technicians	103 physicians 86 nurses 160 auxiliary nurses 108 RHTs 60 other staff
IEC	3 days	Adult education: how to communicate effectively, basic messsages on ARI, diarrhea, nutrition. Materials: Guide for facilitators on participatory education. Kit of basic messages. Flipcharts (4 components). Guides to work in small groups.	Staff Hope Facilitator teams	103 physicians 86 nurses 160 auxiliary nurses 108 RHTs 60 other staff: sanitat inspectors, health educators
Mother/ newborn care (AMNE)	4 days	Components: pre-pregnancy, antenatal care, birth, post partum care, newborn care. Materials: Modules on New Clinic Skills (IMPAC in Spanish). Supervisory checklist	Staff Hope JHPIEGO MOH NGOs	103 physicians 86 nurses 160 auxiliary nurses
LQAS	7 days	LQAS methodology NGO Network Guide for facilitators	Epidemiology Division staff, Health areas	10 facilitators
CBDA	5 days	Components: Fertility awareness, FP methods, HIV/AIDS, FP counseling, screening, managing supplies, record keeping	HOPE and APROFAM staff	100 community agen
RH Refresher and Update	3 days	Hospital level: Managing Complications in Pregnancy and Childbirth/IMPAC (WHO/RHR/00.7) ; Syndromic approach to STIS; review of FP methods; infection control. *Emphasis will be on FP and HIV/AIDS/STIs.* Health center/post level: Complementary materials in process of being developed and approved by the MOH	Health area level: facilitators from national/department hospitals, health areas, districts, IGSS, ANACAFE, NGOs HOPE, and JHPIEGO. District level: Physician, nurse, auxiliary nurse. Health center/post level: Rural health technicians	103 physicians 86 nurses 160 auxiliary nurses 108 RHTs 60 other staff

Post-Training Follow-up and Supervision

Post-training follow-up and supervision will be conducted regularly starting within one month of training and then every three months using checklists to assess both knowledge and on-the-job performance. These instruments will be reviewed with the project partners and revised as needed with changes in MOH norms.

Refresher training will be provided based on weaknesses identified during these periodic performance assessments scheduled three to four times per year. HOPE and the master trainers will also develop tools to assess the quality of training at the municipal and community level and provide additional refresher training for municipal and community level trainers as needed.

Indicators to Monitor the Effectiveness and Impact of the Training

% of providers providing quality services -- Measured with supervision checklists/observation tools that assess knowledge and on-the-job performance (e.g., adherence to the IMCI classification and treatment guidelines). The project also plans to use exit interviews with mothers/caretakers.

% of trainers that provide high quality training – The project has drafted an instrument which still needs to be finalized with the project partners.

% of plantation HU promoters who correctly complete their health activities forms – To be assessed in monthly meetings and during supervision visits.

% of users satisfied with RH services provided – To be assessed through FGDs and exit interviews.

% of providers that use the "focused prenatal care visit", as defined by the MOH guidelines.

H. SUSTAINABILITY

1. Definitions of Sustainability

***HOPE Definition of Sustainability*.** The project defines sustainability primarily as the institutionalization of the project activities in the routine activities of the project partners, i.e., the MOH, IGSS, ANACAFE, NGOS, and plantations.

Partner Definition of Sustainability. Have the technical and administrative capacity to implement the CS and RH activities of the project, without assistance from HOPE.

Community-Level Sustainability. – Plantations: Commitment of plantation owners/administrators to the continued operations of the HUs and financial and in-kind support to their operations to the greatest extent feasible.

Promoters and beneficiaries: The community is able to identify and analyze its health problems and contributes actively to resolving them.

2. Sustainability Objectives

For levels or benchmarks of each of the objectives see the table in the M & E section.

- Health area and municipal health councils have strengthened service delivery policies for migrants.
- Health areas, municipalities and IGSS allocate sufficient human resources to training, supervision and follow-up of health facility staff and community agents in the target area.
- Data and health information inform decision-making of the partner agencies at all levels.
- Plantation HU data integrated into and used by MOH HIS.
- HU promoter supervision/refresher meetings conducted monthly at the closest health facility.
- MOH and other project partners conduct regular health campaigns and other preventive health activities on plantations during the coffee harvest to provide vaccinations, supplements, and prenatal care.
- Plantation HUs have a continuous supply of cotrimoxazole, ORS packets, vitamin A, and activities forms, from the MOH.
- Plantation owners/managers and municipal health directors/staff meet at least quarterly to address plantation health issues.
- Plantations include costs of maintaining promoter and HU health activities in annual budgets.
- Demand of migrant and resident families for HU and health center services increases.
- Revolving drug funds are operating in low-access plantations/communities in the target area.
- Trained promoters and TBAs are providing health education and basic preventive and curative services for the resident and migrant population.

2.1 Sustainability Strategies

- Establish and monitor the compliance with inter-institutional agreements of coordination and collaboration regularly
- Establish quarterly planning meetings with the health areas, IGSS, municipalities, plantation owners/administrators, and NGO representatives to program activities together and identify the necessary human and financial resources for training, supervision and follow-up of the CS activities.
- Training of partner agency staff in data collection, analysis, decision-making, and feedback to all levels.
- Training of partner agency staff in training needs-assessment, supervision, performance assessments and other monitoring techniques.

- A revision of the scope of work of the outreach staff of the partner agencies (RHTs, nurses, auxiliary nurses, and volunteers/promoters), responsible for the supervision and support of the community volunteers and the development of priorities and agenda for monthly volunteer supervision meetings.
- Strengthen the health facilities in their preventive activities and involve community agents and sanitary inspectors more fully in these activities.
- Reinforce the responsibility of the MOH to supply the plantation health units with essential drugs, as defined in existing agreements.
- Improve the system and it response to receive requests and deliver essential drugs to Hus through better planned and implemented monthly meetings.
- Coordination with the NGOs ADISS and PROAM to establish revolving community pharmacies in municipal capitals and coffee plantations.
- Support to quarterly meetings of owners/administrators, municipal authorities, and local health providers to discuss health problems and define responsibilities in addressing these. Maintain minutes of these meetings with a task list to monitor whether agreed-upon steps have been taken.
- Assist the project partners in negotiating salaries/stipends for HU promoters with the plantation owners and administrators. An effort will be made to see that these salaries/stipends are included in the annual plantation budget.
- Develop incentives and awards for the plantation owners/administrators with the partner agencies to publicly recognize their involvement in the project activities.
- Strengthen IEC capabilities of the partner agency staff to more fully involve the community.
- Increase the support of HOPE and partner agencies to the plantation HUs and their promotion through partner agency staff and the media (radio, posters, loudspeakers).

Table 6: Sustainability

	Program Component	**When achieved**
1	Technical assistance and training	Master trainers in the partner agencies have technical, planning, and monitoring/assessment skills
2	Staff responsible for program implementation	Project activities are institutionalized in the MOH and IGSS and are planned, implemented, and monitored by their staff
3	Availability of drugs, supplies, and activity records	The MOH assumes the complete responsibility to provide the plantation HUs with drugs, supplies, and activity records, with some supported from owners, administrators and local agencies.
4	Monitoring and supervision plans	Partner agency staff accept that their scope of work includes supervision and follow-up of health activities at the plantation and community level.
5	Infrastructure of the plantation HUs	Owners and administrators include support and maintenance of the HU in their routine activities and budget.
6	Training of promoters and TBAs.	Training plans for promoters and TBAs are part of partner agency annual training plans.
7	Department health councils that set migrant policies for the municipal and local level	As each departmental health council set policy, services for plantation residents and migrants receive the appropriate level of support.

	Program Component	When achieved
8	Municipal health councils involved in extending resident and migrant health services	Municipal health councils dedicate human resources and logistics to the resident and migrant population.
9	Functioning owner/administrator networks	Quarterly meetings take place involving MOH staff and plantation owner and administrator networks.
10	Monitoring and evaluation of activities	Partner agency staff collect and analyze data from monitoring and evaluation activities.

2. 2. How the Community Structures Created by the Project will continue to Function

The plantation HUs will continue to function with the support of the plantations and the partner agencies as follows:

- The plantation owners and administrators will continue to see value in the activities of the HUs;
- The plantation owners/administrators are involved in HU management issues and policies (promoter stipend/salary, space, furniture, maintenance, permission to attend monthly meetings, and transport);
- MOH/IGSS continue to provide support to the HUs (training, essential drugs, activity forms, supervision and monitoring, education materials);
- Resident and migrant demand for HU services continues at a high level;
- The SIAS continues to support community health guardians (paid by the MOH) that provide input from the community to the "sala situcional."
- TBAs continue to be renumerated by their clients and see value to their participation in supervision and follow-up meetings with MOH staff to maintain and improve the quality of their services.

2.3. How End-of-Project Coverage Levels will be Maintained

The MOH and other partner agencies are already responsible to provide the necessary incentives and motivation to increase coverage of high-risk populations at the health facility and community level. Their strengthened capacity to engage the community and work with community volunteers and leaders and the routine assignation of resources for the community, TBAs, agents and high-risk groups will contribute to high coverage levels. The implementation of facility and community-IMCI will also increase community attention to timely care-seeking, improve the nutritional status of the child, and reduce missed opportunities for vaccination. Health campaigns during the harvest season will continue to address coverage gaps for immunization and prenatal care of the migrant families.

2.4. How Local Decision-Making Systems will be Institutionalized

Existing and emerging local decision-making structures (department and municipal health councils, health facility staff, plantation owners and administrator networks, community committees) are continuously involved in the planning of activities, review and analysis of data and other relevant actvities of the project. Project staff are supporting these systems initially, but are reducing their involvement as these structures

become more and more institutionalized. The MOH national policy of the SIAS, which HOPE is strengthening with the CS project, also supports the institutionalization of the community, municipal, and departmental decision structures.

2.5. How Increased Technical Abilities will be Maintained

The master trainers at the departmental level and trainers at the municipal level will have the capacity and substantial past experience to replicate assessment, training, follow-up, and supervision activities at all levels. This increased capacity has/and will be applied not only ins the project area, but also other municipalities of the department.

2.6. The Role of Organizational Development and Training Plans in Sustainability

The project is attempting to change local attitudes and instill greater commitment to intersectoral coordination and collaboration at the health area and municipal level; greater responsibility for community outreach, community engagement, and follow-up; better collection of information and data and their use in evidence-based/informed decisions, and for maximization of available resources at all levels including means of communication..

3. How the PVO's Organizational Development Approach Supports the Achievement of the Sustainability Objectives

HOPE believes that the development of the capacity of its partners in training, coordination and collaboration, community-oriented IEC activities, and in the use of data is the most effective way to improve preventive and primary care services to women and young children. This is supported by positive changes HOPE observed in its partners during the CS-XIII project. Overall, HOPE will use the same strategies as in the past, but conduct brief targeted OR and impact assessments to fine-tune approaches and activities.

4. HOPE's Phase-Out Strategy

4.1 Graduation Criteria

HOPE has planned a "graduation strategy" for municipalities, MOH health facilities, and plantations. The graduation will be celebrated as a very positive event, demonstrating that a particular unit has achieved the capacity of competent self-management. In Year 2, HOPE plans to develop with its partners an annual monitoring tool for the units that have graduated. With this approach, HOPE transfers the responsibility for monitoring to the MOH and its partners.

Potential Monitoring Criteria – Promoters

- Regular attendance at monthly meetings;
- Regular submissions of monthly activity report;
- Ability to maintain adequate supplies at the health unit;
- Participation in continuous education opportunities;

- Competent case management and referral;
- Plantation owner/administrator supportive of HU activities.

Health Facilities

- At least 90% of childhood illnesses and reproductive health conditions managed according to established protocols;
- Health facility manages inventory forms correctly;
- Monthly meetings conducted with promoters and TBAs;
- Promoter health activities included in the health center/post HIS and in the request for drugs and essential supplies;
- Health facility staff is involved in regular QI methods to improve the quality of services;
- Health facility staff involve the community in problem analysis and development of solutions;
- Health facility has identified trainer/s that train and provide continuing education to promoters and other community agents.

Municipality

- Municipal health plan dedicates additional resources during the time of the coffee harvest;
- Municipal level staff supervise health facility staff at least once every three months, using designated supervision tools;
- The municipality assigns adequate resources for the training and supervision of staff and volunteers;
- The municipality monitors the data provided by its health facilities at least quarterly;
- Municipal staff participate in the meeting of plantation owner/administrator network/s.

4.2 Contributions to the Project Activities

HOPE is assisting its partner agencies to access diverse resources of funding for the project activities. These include:

Existing resources:

- USAID/ BHR/PVC: $1.25 million
- HOPE: $1.25 million
- US Foundation support
- MOH: Human resources for planning, training, supervision, treatment, essential drugs and supplies
- IGSS: Training, supervision, and transport
- Plantation owners/administrators: HU, furniture, promoter stipend/salary, travel/per diem support for promoter to attend monthly meetings, time to participate in quarterly meetings, and on occasion, hiring of additional health providers to support promoters during coffee harvest and drugs

- Municipalities: Increased financial resources during the coffee harvest for additional drugs, plantation health fairs, supervision and outreach staff
- Community: Purchase of essential drugs at revolving drug funds.
- ILO support to improve health and nutrition of migrant families in highland communities.

Potential Resources:

- FIS: financial support at local level to assist with plantation promoter stipends, essential drugs
- Pro-Redes: Training for SIAS and non-SIAS NGOs in the target area
- Increased contributions of the community through use of community revolving drug funds. "Sister" NGO ADISS is able to continue its low cost drug program.

4.3. Recurrent and Non-recurrent Costs

The project is supporting certain costs with are to a large degree non-recurrent, i.e., original training needs assessments, development of curricula and production of training materials, training of master trainers at the health area level and trainers and facilitators at the municipal level, formative research and OR, impact assessments, etc. However, given staff turn-over, changes in MOH policy (affecting curriculum content), etc., the project partners will have to make additional, but substantially lower investments when HOPE has completed this project. The same holds true for the plantation level. Owners/administrators provide/renovate space for the HU and basic equipment when they join the project activities. HU maintenance and promoter stipends and per diems constitute the recurrent costs. Most of the recurrent costs are already covered by the project partners who have determined the level of resources they are willing and capable of dedicating to the project activities (i.e., quantity of additional vaccines and medications during harvest season, additional human resources to conduct health fairs, etc.).

4.4 Diversification of Funding and Cost-Recovery

The strategy to diversify funding is as follows:

- Establish 5-10 new community/plantation revolving drug funds per year with assistance from ADISS and PROAM; to increase the community cost-share;
- Proposals to the FIS for promoter stipends and additional staff during harvest season;
- Involvement of municipalities to support promoter stipends, additional staff during harvest season, and other support to sustain project activities.

5. Assumptions and Constraints

- MOH continues to place priority on migrant health and on community outreach and involvement;

- Most plantations survive low coffee prices, the drought and other adversities, and continue to provide seasonal labor to migrant;
- Partner agencies and plantation owners and administrators see clear benefits to improve migrant and resident health;
- KPC, OR, and impact studies demonstrate health benefits of the project activities;
- Project activities are acceptable to the resident and migrant population;
- Partner agency staff and promoters are willing to improve their professional capacity;
- Cost-share of municipalities increases resources for resident and migrant health;
- IEC activities in Boca Costa and communities of origin improve health practices, HUI utilization rates and participation in preventive activities.
- The involvement of the municipalities will increase the resources available locally to improve preventive and primary care services for residents and migrants;
- Health education and promotion in the four municipalities of the communities of origin has a positive impact on the knowledge and practices of migrant families and increases care seeking and participation in plantation health campaigns.

Constraints

- Poor motivation and unfamiliarity by the MOH health facility staff; to coordinate with other agencies;
- Lack of drugs and supplies;
- Non-responsiveness of MOH staff to national policies and health priorities;
- Limited interest of the plantation administrators;
- Lack of involvement of health area directors and coordinators;
- Lack of follow-up of community-level activities by the MOH health facility staff;
- Low motivational levels of community volunteers;
- Lack of resources for vehicle maintenance and transport;
- Limited experience and institutional history of partner agencies to conduct and monitor staff performance on a regular basis;
- Low world market coffee prices reduce owners' willingness and resources to invest in resident and migrant health;
- Cultural, language and organizational barriers make it difficult to reach migrant population; and
- Precarious and unstable conditions of the migrant population during the coffee harvest season.

6. Scaling-up of Project Activities

The project represents a scaling up of project area from the CS-XIII project. In addition, the Boca Costa constitutes only a part of the three main departments involved in the project. The Master Trainers at the department level are providing training also to municipalities outside the Boca Costa. In addition, the MOH has plans to replicate the project approach in the Eastern part of Guatemala. ANACAFE will replicate the project activities through its team of master trainers trained by the project in other parts of the country, including potentially in a department in eastern Guatemala with the Eastern Association of Coffee Growers.

HOPE has plans to formally share lessons-learned from the CS-XIII and the design of the current project with interested agencies at the national level during the celebration of its 25th anniversary in 2002 to promote the scaling-up of its approach. In addition, HOPE's experience in working with migrants and in standard case management activities of community volunteers over the past seven years (including a previous CS project in a highland department) have provided input to the development of a national approach to community-IMCI.

7. Sharing of Innovations

HOPE has access to various mechanisms to share innovations over the course of the project:

- Participation in national taskforces (facility IMCI, community-IMCI, migrant taskforces);
- HOPE is one of the three agencies managing the Pro-Redes project for SIAS and Non-SIAS NGOs in a target area that covers and extends beyond the target area of the CS project.
- Many of the project partners are involved nationally (MOH, IGSS, ANACAFE);
- Participation in national and regional meetings;
- Organization of national level and local meetings; and
- Participation in taskforces, and in international networks/umbrellas, such as CORE.

In addition, HOPE continues to seek additional funds to replicate the project approach in other areas of Guatemala and other countries.

I. BEHAVIOR CHANGE STRATEGIES

***Formative research*:** The following table summarizes existing knowledge, research questions, tools, responsible and how new information will be put to use.

Table 7: Formative research

Research Question	Existing Information	Design and Instruments	Responsible	Use of Information
FORMATIVE RESEARCH TO ASSESS BEHAVIOR CHANGE				
Health messages by radio, loudspeaker, and in group sessions are effective to promote behavior in resident and migrant mothers.	Low literacy levels, poor access to printed materials.	- % of mothers that remember health messages (content, where heard) – interview; - Understanding of messages, resulting behavior change – rapid follow-up (FGDs) of migrants attending health education sessions.	Project staff under supervision of project Impact Assessment Specialist	Better selection of radio stations; adaptation of messages that are difficult to understand or that do not result in behavior change.
Are Mother Reminder Materials	There is no maternal reminder	Focus groups and interviews with mothers and	Project staff under supervision of	Improve reminder materials for mothers.

Research Question	Existing Information	Design and Instruments	Responsible	Use of Information
useful to improve care seeking behaviors?	materials	and all other caretakers, health providers.	project Impact Assessment Specialist	
Assessment of the quality of health messages and counseling provided by health workers and volunteers.	Advice given infrequently in a prescriptive manner, no follow-up whether advice has resulted in behavior change.	Supervision of providers and promoters; exit interviews or verbal case reviews with mothers that received services.	Ibid	Improve the training of providers in counseling skills.
What are the cultural barriers to behavior change?	Providers and mothers belong to different cultural groups	Focus groups	Ibid	The use of the information is to reach consensus on health improvements.

Some of the behaviors targeted for change have been identified by the final/baseline KPC survey. Facilitating and inhibiting factors will be assessed with participatory methods including interviews with key informants. Desired behaviors are identified through the comparison of actual practices with the recommended practices (TRM, Facts for Life, and other sources). The appropriateness of those desired behaviors for the local culture will be assessed through formative research, using focus group discussions.
HOPE has additional resources provided by GlaxoSmithKline to develop Mothers' Reminder Materials. To develop these materials, HOPE plans to conduct extensive formative research about local understanding of danger signs and care seeking, prevention and home management of common childhood diseases.
HOPE has trained its staff and staff of its partners in adult education methodologies to promote a culture of respect of the indigenous population. Health workers and promoters will learn how to more effectively negotiate with mothers new behaviors.

Behavior change model: The project uses a combination of models in the education for behavior change:

- Social learning: Peer-to-peer education happens in mothers groups discussing breastfeeding techniques. It also is being used during periodic meetings of plantation administrators. "Positive deviant" plantations –e.g. those improving sanitation or rations given to migrants- will share their experiences encouraging others to follow their model. Master trainers that constitute role models for facilitation skills and other desired behaviors will train health providers. Monthly meetings with HU promoters will also encourage friendly competition.
- Social marketing: The project will use mass media to promote participation in health campaigns, and other appropriate practices. HOPE may be working on a partnership with Procter and Gamble to provide education on hygienic practices.

Approach for providers:

HOPE uses a cascade training approach. TOTs are trained first, and are then responsible for replicating the training. TOTs/ master trainers have retained some negative traits from

conventional top-down education, but will continue to receive training to use participatory education methodologies, IEC. The planning of future training will emphasize competencies (behaviors, such as counseling) instead of knowledge as in past trainings. Through periodic supervision, HOPE and partners will verify that desired behaviors have been adopted. M&E, such as "sala situacional" is expected to provide feedback on improvements. By sharing the information on progress, increased motivation of project staff and partners is expected to reinforce the efforts.

Approach for Health Area managers:

Quarterly meetings to assess progress will provide the forum to reward and provide recognition to health facilities that are performing better. HFA data will be shared to identify "positive deviants", services with a good performance.

***Approach for Plantation Administrators*:**

Plantation administrators and owners will receive a leaflet with the highlights of the program, documenting plantations that have introduced improvements in housing, sanitation, rations, hours the HU is open and the quality of the services provided there. Initiatives such as networking to achieve "economy of scale" in purchases of medicines or equipment for the HU will be sought.

Approach for the General Population:

In spite of the heterogeneity of languages and cultural groups, and geographical barriers, the project will continue conducting IEC activities through several media using the most common Mayan languages and Spanish.

Local radios: Even poor migrant families listen to the radio, in Mayan languages. The project will continue its partnership with ten or more local radio stations. Because radio stations with a larger audience charge more for education messages, the project will continue looking for sponsors. Several radio stations –owned by the government, the church or affiliated with Mayan groups- do not charge for education messages, because these are considered a public service.

Loudspeakers: The project has 15 loudspeakers that are moved from plantation to plantation to increase exposure to education messages. Loudspeakers are located in a place where migrants spend time (for instance in the room or "patio" where picked coffee beans are weighed), so they will constitute a captive audience for the messages. Messages have been produced in Spanish and Mayan languages, and the quality of the messages is assessed on a continuous basis. Loudspeakers are also used during health campaigns on plantations.

Educational Sessions in Communities: Promoters facilitate educational sessions in communities; the MOH HIS is increasingly capturing this information. The fact that the Guatemalan government has contracted NGOs to conduct health promotion activities has created an new cadre of paid promoters in rural communities. Thus, the motivation of volunteer, unpaid promoters is decreasing, since they feel their efforts not receiving incentives or rewards. The project will help communities to identify mechanisms to provide recognition and non-monetary incentives to health promoters.

TBAs conduct limited person-to-person education. Because they are an important source of information for mothers, TBAs will continue receiving refresher training in IEC to improve their counseling skills.

J. QUALITY ASSURANCE

Technical performance, effectiveness of care: Assessed using IMCI standardized tools (see also M&E section). Training on IMCI will be hands-on and at the end of the training, the trainer will assess if individual participants have achieved the desired competences.

Dimensions of quality being considered include:

Access and Efficiency of service delivery: The number of visits to the HU and the people attending health campaigns will be a measure of the demand of those services. The coverage of GMP, immunization and related services involving also be monitored. The amount of resources invested will then be compared with the outputs. Rapid, mini-studies with migrants will allow us to learn if there is a proper utilization of the HUs. The continuity of services will be monitored during unannounced visits to HUs and health facilities. To reduced the amount of time health facilities are ustaffed, training will be on-site as much as possible.

Interpersonal relations: HUs and health facility staff will conduct a periodical self-assessment of their personal relations with customers and other stakeholders. Exit interviews with mothers will provide feedback on satisfaction.

Physical infrastructure: The HFA contains data on improvements made to the infrastructure. HFAs also contain relevant information on how well HUs are stocked with essential supplies and medicines. This tool will be applied during bimonthly supervisions by project staff.

How Quality is being Defined: Guatemala remains a divided society, where Mayan populations receive substandard health care. The project aims to increase quality of care provided to poor, rural mothers, particularly migrant mothers. The project will help to close the gap between providers –mostly mixed blood- and the general population –often indigenous- by allowing the latter have their voice heard in the planning, implementation and evaluation of project activities. By being responsive to the expectations of the customers, health providers will be able to understand their viewpoint and collaborate in finding solutions. Often, Mayan mothers feel poorly treated by providers, increasing resentment and withdrawal from services offered. By increasing the understanding of why migrant mothers act in a given way, providers will be able to provide arguments to negotiate improved practices.
Technical performance, as defined by the IMCI norms, assesses the compliance with a definite set of procedures that are expected to make a health service integrated and with enough quality.

Minimum Level of Quality Desired*:* Since AIN and comunity-IMCI are still under development in Guatemala, the process of incorporating these changes is gradual and thus the performance is

expected to change step-wise. The results of the HFAs summarized in one of the annexes show that demanding full compliance with IMCI norm to consider a service adequate may not be sensitive to identify dimensions of quality that are achieved progress. Thus, future HFAs will analyze different indicators to improve the ability to discriminate critical areas

Table 8: lists the assessment planned to improve the quality of services.

ASSESSMENT OF PROJECT STRATEGIES TO IMPROVE THE QUALITY OF HEALTH SERVICES				
Do migrants value the availability and quality of plantation health services to the point that it will influence their decision to return to a particular plantation?	Residents apperar satisfied with the HU services.	Interviews of migrants at arrival to determine why they selected a particular planation.	Ibid	To improve the marketing of the health services
Rate of plantation HU use.	In the last year, 43.5% of resident mothers stated that they had used HU services.	- Interviews with resident and migrant mothers; .- Estimate rate of used based on population estimates.	Ibid	Make changes in the services; market services more effectively.
Quality of care provided at the HU.	Quality of services needs improvement	- Facilitative supervision with checklist and feedback; - Consider use of simulated cases.	Ibid	Improve quality of services provided.

SECTION II. PROGRAM MANAGEMENT

A. MANAGEMENT APPROACH

Management Structure

CS programs are planned, administered, and monitored by staff within the Division of International Medical Operations at HOPE HQ, under the supervision of a Senior Vice President. Technical support is provided by appropriate consultants and full-time technical staff with expertise in MCH/RH and public health programming. Each of the technical staff have primary responsibility for backstopping a limited number of CS/RH Direct administrative support is provided by the Regional Director for the Americas, and Assistant Regional Directors of Operations and Finance.

In Guatemala, Project HOPE has an experienced team of country-national health and management professionals and support staff . The team is led by its Country Director, Dr. Victor Calderon, who reports the Regional Director. Day-to-day program management in Guatemala is the responsibility of the Sub-Director/Director of Programs, Dr. Anabela Aragon. Reporting to the Country Director, she is responsible for the provision of technical assistance and the facilitation of administrative support.

The HOPE staff work closely with its partner agencies, the MOH, IGSS, ANACAFE, local NGOs, and coffee plantations, and the roles and responsibilities of each partner is described in some detail in letters of agreements. With its partners, HOPE develops the plans for providing technical and management assistance in training, supervision, health information systems, and quality assurance/improvements. It is the responsibility of the partner agencies to make their staff available for participation, implementation of activities, and community outreach. The project uses monthly, quarterly, and annual meetings, and shares the information it collects at those meetings with all partner agencies and HOPE Center to assess progress and make joint decisions for improving processes that will make it more likely that shared objectives are achieved.

Project HOPE has been moving toward a more decentralized management style, with programmatic and financial decision-making and accountability increasingly resting with the country office. For example, in the financial area, country offices play a more proactive role in formulating and revising their budgets, making spending decisions, "owning" the accounting numbers, and seeking local sources of funding. The preparation of this DIP has been the most participative yet for HOPE/Guatemala, with more input and writing responsibilities from partners and HOPE staff at various levels of the hierarchy. This management style differs from the norm in many Guatemalan organizations. Staff are generally enthusiastic and recognize this style as consistent with HOPE's bottom-up development approach. It does however create delays and increased workload both in the field and headquarters as staff become accustomed to their new roles and responsibilities.

Organizational Chart: See **Attachment 6.**

HQ to Field Transfer of Skills, Information, TA, and Lessons Learned

Information and Technical Assistance are provided from HQ to field on an ongoing basis. The Regional Director and Country Director at the minimum have regularly scheduled bi-weekly phone calls to discuss a variety of management and technical issues. Technical and financial staff at HQ maintain a steady stream of ad hoc e-mail, phone calls, and fax communications with the field.

Regular financial and program reports are submitted by the field and discussed with appropriate HQ staff. Skills are transferred and TA is provided through site visits by a variety of HQ personnel and consultants. Additional information is transferred through "HOPEnet", Project HOPE's internal website.

Project HOPE encourages peer-to-peer transfer of skills and sharing of lessons learned. Quarterly field office reports from each country office are circulated throughout the region. Country Directors share experiences as a group twice a year, once in the region and once at HQ as part of an annual leadership conference. Lessons learned are shared both though formal sessions dedicated to this purpose, as well as through informal meetings that spontaneously form off-hours. HOPE recently carried out an innovative peer-to-peer evaluation in which technical staff from one country evaluated the Income Generation program of another under the supervision and TA of a master evaluator. Guatemala participated in this process. When appropriate, local staff with a particular expertise provide TA to another country. For example, the Guatemala Country Director made presentation in Nicaragua regarding working with local ministries and sustainability.

B. HUMAN RESOURCES

Table 9: Human resources

Position	Primary Responsibilities	Experience /Training
Bob Grabman, Regional Director, Americas (1 pm)	Overall administrative oversight, budget, organizational development support	9 years of program management experience, including field management of CS projects
Michele Worthing, Assist. Reg. Director, Americas (1 pm)	Day-to-day communication with the field, logistical support	More than 20 years of experience in providing administrative support to field offices
B. Schwethelm/L. Benavente (1.5 pm) Director/Assistant Director/MCH Programs HIV/AIDS/STI Specialist (.5 pm)	Technical oversight and support	M.P.H., Ph.D., M.D., more than 10 years experience in technical support to CS/MCH/HIV/AIDS projects
Victor Calderon Country Director (6 pm)	Overall project direction and oversight, coordinates with USAID, central MOH, local project partners, USAID CAs, accountable to HOPE and USAID	Public health physician with more than 30 years experience in public health
Anabela Aragón Sub Director (12 pm)	Overall project coordination, supervision of all training and supervision activities	Medical doctor with an ample knowledge of health conditions and services in the Guatemalan Highlands, with over 10 years experience with INCAP and the MOH.
Delia Urrutia Business Administrator	Responsible for the reviewing and reporting expenses vis-à-vis approved budgeted line items to the Country Director. Logistical support.	Business Administrator with 4 years of experience in Hope's programs administration.
Ronald Alvarado Child Health Specialist (12 pm)	Guide all planning, materials development, training, supervision, and monitoring activities for IMCI and child health	Child Health Specialist with extensive experience in training and supervision; IMCI facilitator
Edgar Lopez Reproductive Health Specialist (12 pm)	Guide all planning, materials development, training, supervision, and monitoring activities for maternal care, family planning, and HIV/AIDS/STIs	OB/GYN with experience in designing and implementing reproductive health activities, excellent training and supervision skills

Position	Primary Responsibilities	Experience /Training
Junio Robles Impact Assessment/Monitoring Specialist (12 pm)	Assist the project and partners in the design of OR, and qualitative and quantitative methods to monitor the effectiveness of project approaches	Medical doctor with MA in Educational Research with more than 10 years of experience in planning, implementation, monitoring, analysis and evaluation for research projects and community development
Karina Galvez, Brenda Yes, Rosario Marroquin, María Aguaré, Jeaneth Altamirano, Pedro Alvarado, Estuardo Ovalle, Javier Maldonado, Carlos de León, Carlos Gramajo; Child and RH Nurse Trainers/Community Educators (10) - (12 pm)	Training and supervision, development of training and education materials	Nurses/Rural Health Technicians with expertise in child/RH, excellent training and supervision skills, assist with the supervision of partner health facility staff and community mobilization outreach activities; supervision of HU promoters; knowledge of Mayan Indian dialect

Project HOPE field staff are all country nationals, on HOPE salary, and full-time, unless otherwise indicated.

HUMAN RESOURCES OF KEY PARTNERS

Table 10: Human Resources/Partners

Health Staff	Post	Agency	# of staff	Primary Responsibility	% with Project
A. MOH HEALTH AREA STAFF – ALL PAID					
Physician	Health Area Director	MOH	5	Planning, supervision, coordination and implementation	5%
Physician	Epidemiologist	MOH	7	Coordination, supervision	5%
Nurse	Health Area Nurse	MOH	9	Coordination, supervision	5%
RHT	RHT Coordinator	MOH	5	Coordination, supervision	15%
Social Worker	Social Promotion Specialist	MOH	5	Health promotion	15%
Physician	Departmental Director	IGSS	1	Planning, supervision, coordination and implementation	5%
Physician	Epidemiologist	IGSS	1	Coordination, supervision	10%
Psychologist	Level I Coordinator	IGSS	1	Planning, coordination, supervision	15%
Nurse	Departmental Nurse	IGSS	1	Coordination, supervision	10%
Physician (3)	Director/Coordinator	Anacafé/ Funrural	3	Coordination, supervision	5 – 10%
B. MUNICIPAL/HEALTH FACILITY LEVEL STAFF					
Physician	District Director	MOH	29	Coordination, planning, supervision, PHC	15%
Nurses	District Nurse	MOH	27	Coordination, planning, supervision, PHC	15%
RHT	RHT	MOH	29	Supervision, follow-up, education in the communities	50%
Auxiliary nurse	Auxiliary nurse	MOH	78	PHC, education	25%
Physician	Sector Coordinators	IGSS	2	Planning, education, coordination and supervision	15%
Nurses	Sector Nurse	IGSS	3	Planning, education, coordination, supervision	15%
Social Worker	Social Workers	IGSS	2	Education, coordination, supervision	10%

Health Staff	Post	Agency	# of staff	Primary Responsibility	% with Project
Teachers	Health educators	IGSS	50	Community health education	10%
Physician	Physician	Anacafé/ Funrural	2	Coordination, PHC, supervision	20%
COMMUNITY LEVEL STAFF – ALL PAID EXCEPT VOLUNTEERS, PROMOTERS, AND TBAS					
Auxilliary Nurses	Auxilliary Nurse	MOH	51	PHC, health education	20%
RHT	RHT	MOH	15	Community health education	50%
Physician	PHC physician	MOH/ SIAS	23	PHC, education	15%
Institutional Coordinators	institucional Coordinators	MOH/ SIAS	8	PHC, education	15%
Auxilliary nurses	Auxilliary nurses	IGSS	12	PHC, education	20%
Promoters	Health promoters	IGSS	50	Health education	30%
Guardians	Guardians	MOH	1,300	Health education	20%
Physician	Physician	Anacafé/ Funrural	1	Health education	20%
HU Promoters	HU Promoters	Coffee Estates	250	Direct care, health education	50%
Promoters	Promoters	Volunteers	1,500	Health education	20%
TBAs	TBAs	Volunteers	1,500	Direct care	20%

HUMAN RESOURCES OF NGOS COLLABORATING WITH THE PROJECT – ALL PAID

Table 11: Human resources/NGO

Health Staff	Post	Agency	# of staff	Primary Responsibility	% with Project
QUETZALTENANGO					
Physicians Auxiliary Nurses Promoters	Ambulatory care Ambulatory Care Community mobilization	ADISS/ SIAS	1 1 2	Direct services and community education	25% 25% 25%
Physician Auxiliary Nurses Promoters	Ambulatory care Ambulatory Care Community mobilization	CEDEC	1 2 4	Direct services and community education	15% 20% 10%
Physicians Auxiliary Nurses Promoters	Ambulatory care Ambulatory Care Community mobilization	ADECO	2 6 16	Direct services and community education	15% 10% 10%
SAN MARCOS					
Physician Auxiliary Nurses Promoters	Ambulatory care Ambulatory Care Community mobilization	ADISS / SIAS	1 1 2	Direct services and community education	25% 25% 25%
Physicians Auxiliary nurses Promoters	Ambulatory care Ambulatory Care Community mobilization	Diamantes	3 2 16	Direct services and community education	15% 10% 10%

Health Staff	Post	Agency	# of staff	Primary Responsibility	% with Project
Physicians Auxiliary nurses Promoters	Ambulatory care Ambulatory Care Community mobilization	Centro Médico	2 2 4	Ambulatory care Ambulatory Care Community Mob.	15% 15% 10%
Physicians	Trainers	CARE	3	Coordination, education, supervision	5%
Physicians	Trainers	Intervida	3	Coordination, education, supervision	5%
Physicians	Supervisors	Aprosami	3	Coordination, supervision	10%
Physician Nurse	General medical care	Church	1 4	Direct care/education and promotion	5% 10%
RHT	Community educator	ADIPO	3	Education and direct care	10%
RHT	Community edcuator	PCI	3	Education and direct care	10%
RHT	Community educator	Xolja	3	Education and direct care	10%
SUCHITEPÉQUEZ					
Physicians Promoters	Ambulatory care Community promotion	Anacafé/Funrural	3 16	Education and direct care	15% 10%
Physician	Physician	Ceipas	3	Coordination, supervision	10%

C. CONTINGENCY AND SECURITY PLAN

The Boca Costa, where the CS program of HOPE is conducted, is in Southwest Guatemala, an area at high risk for natural disasters and other emergencies such as: floods, landslides, earthquakes, washouts, overflowing rivers, fires, volcanic eruptions, seasonal storms during the rainy season, crime and political instability.

HOPE Guatemala, in conjunction with HOPE Headquarters, has implemented planning for risk management for emergencies and disasters, in order to protect the security and safety of the human resources and materials of the CS program, and their effective organization during times of such emergencies. The security plans that follow were developed by a HOPE Guatemala team headed by Dr. Victor Calderon, Country Director. He is responsible for security management at the country level and the project coordinators are responsible at the project level.

Security plans include:

- Maintain updated information on the areas at risk for natural or provoked disasters.
- Perform a situational diagnosis that identifies the threats, areas of vulnerability and prioritizes risks
- Have diagrams or maps of the areas of influence
- Maintain updated information on human, physical and material resources of the program.
- Constantly update inventories of human, physical and material resources of the program in case of disaster
  Lists of staff updated
  Lists of physical and material resources updated
  List of vehicles updated
- Establish a system of internal and external coordination for timely and effective crisis intervention in program areas.

- Strengthen the Departmental Health Advisors and support the health districts in forming municipal and local health boards for emergencies or disasters.

  Identify human resources of the program and other institutions as well as the community, and personnel of institutions who form the committees.
- Train program staff in handling risks, emergencies, disasters and accidents.
- Train personnel in First Aid, the care of large numbers of wounded, control of epidemic outbreaks, and for emergencies such as accidents, personal injury, mechanical breakdown of cars, robberies or assaults, floods, earthquakes, etc.; train them in what to do, who to go to, who to call, and where to look for help.

  Provide educational material and technical support.

  Instruct them to always carry the telephone number of the Insurance company.
- Communicate with all staff on the emergency/disaster plans.
- Have meetings with all staff to discuss the plans.

  Copies of plans distributed to all staff
- Establish a network for immediate and timely communication to use in case of emergencies.
- Develop current lists with exact addresses, home and cell phone numbers, phone numbers of health posts or homes to communicate with the municipalities and communities. Maintain timely information with the Director and administration of the program.

  Have a list in each vehicle, with each staff person and on the bulletin board of the office
- Maintain program services even if threats or an actual crisis occurs.
- Pre-evaluation of situations to decide on the continuity of program activities in the affected zones to guarantee security of staff

  Collect information regularly from the intervention areas

Social Instability: The crisis in coffee prices has caused tremendous unemployment in the Boca Costa, it is estimated that only 25 to 30% of the usual number of migrants came for the most recent harvest, and this unemployment also affects residents. A social stalemate, manifesting itself in the takeover of land, could escalate to extended and prolonged violence. In this context the project will scale back gradually according to the following plan:

- If social instability makes getting around on the rural roads to supervise the farm units and rural health posts difficult, the providers will be trained and their performance supervised in sessions at the health centers. The project will also establish a system of supervision in pairs, giving more responsibility to staff of the local MOH.

- If the farms have been taken over or a state of siege has been decreed or instability limits access, the project's support will be directed to the units that are outside the farms, providing more support to personnel based in the community, apart from support at the health centers as above.

- In the event that displacement from the land makes project staff in the area unsafe, HOPE will identify the least safe times and places and avoid going under those conditions. In the event that some municipalities are unacceptably dangerous to the lives of staff, these will be excluded from the program. If insecurity increases, the activities of the project will be limited to the district headquarters, suspending activities in the rural sphere. The project will identify methods to support personnel in rural health centers via various distance learning techniques (audio tapes, text, videos, radio, or Internet).

- If it is foreseen that an unsafe situation would continue for several months, HOPE maintains the right to revise the contracts of staff in charge of community work, with options including negotiation of contracts at half time and half pay. If it were a short term interruption, the director could ask staff to make use of their vacations for the needs of the program. On the other hand, a problem of very long term would allow for retaining only some of the field staff.

- Social instability occasionally manifests itself in the form of irrational conduct of the population, who lynch strangers based only on a mere suspicion, for example if they observe someone asking questions. To avoid this risk, the local authorities of both residents and migrants will always be informed of our activities, and field personnel will be appropriately identified with a photo ID and/or clothes with the logo of HOPE.

- Criminality: The increase in criminality, particularly violent crimes such as armed kidnappings, primarily affects the capital city. In the event that criminality increases in the project area, we would take the same precautions mentioned above. The offices of HOPE are secure, and have guards 24 hours a day, and the vehicles are insured against robbery. Given that the general population reacts with extreme violent in the event of an auto accident, always blaming the driver, all staff who drive a vehicle will be obliged to always obey traffic signals.

Bio-Security: One of the project outcomes is nutritional security involving hemoglobin, at least in the municipalities where CS will work in collaboration with a project sponsored by the ILO. The exposure of field staff to infection from Hepatitis B and AIDS will be minimized with standard measures of biosecurity. The staff in charge of taking blood samples will be vaccinated against Hepatitis B, and will employ hemocues, which reduce exposure to blood. HOPE has proposed to CORE to work with scientists from the Univ. of Massachusetts in adopting non-invasive methods of measuring hemoglobin, which will make blood samples unnecessary.

D. TECHNICAL ASSISTANCE PLAN

Project HOPE will provide technical assistance through a variety of internal and external sources. HOPE's HQ-based Maternal and Child Health Director and Assistant Director will continue to provide their expertise, as will the Specialist in Reproductive Health. A Director of HIV/AIDS will also soon be on board at HQ and will provide support to that component. As was the case during the original phase of the project, all will visit Guatemala during the course of the extension, in addition to ongoing support through e-mail and phone.

Project HOPE will make full use of resources and tools developed by CSTS (ISA, KPC 2000+), CORE and its working groups, by other CAs. HOPE is particularly interested in accessing TA from the new PHRII project to design a study to assess the cost-benefits of the plantation HUs; training and TA from the MNH project and the Population Council in RH; and from URC in the use of QI methods. Contacts at URC and Abt Associates have expressed a strong interest in exploring such TA with HOPE.

Project HOPE will take advantage of shared costs with other projects to leverage relevant TA support, especially in Reproductive Health, through its RH projects funded by private foundations and the "ProRedes" project (HOPE is a subcontractor to JSI) as well as in the development of culturally appropriate IMCI educational materials, also funded by a private donor.

Table 12 :Technical Assistance Plan

Level		Source of Assistance	Yr 1	Yr 2	Yr 3	Yr 4
Training and CE of HOPE staff	HIV/AIDS, FP/STIs	APROFAM CESIDA CONSIDA Physicians Without Borders	X	X		
	Maternal Care	JHPIEGO MOH	X	X		
	IMCI	Calidad (URC)	X	X		
	Epidemiology	Epidemiological Dept of the MOH				
Collection, data entry analysis, data for decision-making		HOPE Center		X	X	
		Population Council	X	X		
	Sustainability				X	X
Management, Leadership and Teamwork	Methods of Investigation: LQAS	HOPE Center		X	X	
	Rapid Assessments					
	Capacity Assessment	PACT	X			
IGSS, MOH, & ANACAFE staff Training	HIV/AIDS, STIs, FP	HOPE PROREDES APROFAM	X	X		
	Maternal CARE	HOPE, JHPIEGO	X	X		
	IMCI	HOPE and Calidad (URC)	X	X		
	HIS, Supervision and Monitoring	HOPE MSP MOH	X	X		
	Capacity Assessment	PACT	X			
	Qualitative and quantitative evaluations	HOPE			X	X
Community Level	IMCI, RH, IEC	HOPE, MOH, Calidad (URC) ProRedes	X	X		
	Maternal Care	JHPIEGO Midwives for Midwives	X	X		
				X	X	
	Community Mobilization and Participation	HOPE, MOH				X

E. INFORMATION MANAGEMENT

In Section II.A, we mentioned the ways information is exchanged between HQ and the field office and among the field offices. Additionally, technical staff at HQ forward information from the CORE working groups, the CSTS Bookmarks, and UN newswire. Synopses in Spanish are provided for particularly important information and technical updates on MCH-related topics.

The field office is connected to the Internet, and we are currently investigating an upgraded system in Guatemala. As previously mentioned, all HOPE field offices have access to HOPENET, Project HOPE's Intranet, which contains a variety of useful programmatic information, technical references, lessons learned, etc.

F. FINANCIAL MANAGEMENT

Each HOPE field office is staffed with an administrator/financial manager who is responsible for the reviewing and reporting expenses vis-a-vis approved budgeted line items to the Country Director. Once the monthly Profit and Loss statements and related documents are approved by the Country Director, this information is sent to HQ. The Assistant Regional Director for Finance reviews the financial reports, uploads the information into the General Ledger, and provides for imprest reimbursement to the field offices. The ARD-F also analyzes spending trends and identifies "red flags" in regular meetings with the regional Director and the Country Director. She also provides technical assistance to field office finance staff though phone and e-mail consultations, and periodic visits. The ARD-F, with support form the Director of Budget also requests payment from funders and provides them with the necessary reports as stipulated in the agreements.

G. LOGISTICAL MANAGEMENT

The Maternal and Child Health activities performed at the health units of the coffee plantations under this project do not depend on supplies purchased by the program. The essential medications are supplied by the MOH, but are supplemented by pharmaceutical donations obtained by Project HOPE in the United States from various pharmaceutical manufacturers and the rural drug revolving funds developed by the local NGO, ADISS. The pharmaceutical donations come in most cases to Project HOPE's International Headquarters in Virginia, where they are received, catalogued, and priced, whereupon the inventory is available on-line to all Project HOPE programs worldwide. Guatemala's Program Director and other MCH staff have the ability to check this inventory regularly and request the allocation of items that match MCH and plantation health post requirements. Examples are Vitamin A capsules, worming medications, antibiotics, pediatric cough syrups, pediatric painkillers, pediatric vitamins, lice shampoo, etc. Several times a year Project HOPE ships the selected items to the Guatemalan Order of the Knights of Malta, for customs clearance. The KOM receives a small portion, usually 10%, of the items as payment for its effort and cooperation in clearing the shipment. The KOM turns the items over to Project HOPE, which distributes them to the MOH Health Districts in each of the Departments where the program is active. Usually a portion is also given to the IGSS. The MOH at the District level is responsible for distributing the items to the Health Units, including those on the plantations.

Challenges include the difficulties of clearing shipments through the Guatemalan Customs regulations, and this is dealt with by using the KOM as our alternative consignee, since they have the ability to clear shipments. A more serious challenge is the possibility of deviation of shipments from the intended recipient after they are no longer under HOPE's control. This is dealt with by a multi-step

control system that requires signatures and the physical counting of all items and stock numbers each time items are transferred from one possession to another.

H. MONITORING AND EVALUATION

H.1 Program Goals and Objectives

See Goals and Strategic Objectives Table on page 55

H.2 Program Monitoring and Evaluation Plan

Program Approach to Monitoring and Evaluation

Project HOPE is acting primarily as a facilitator and will work with its partner agencies at all levels to improve the use of monitoring tools. All approaches used will be participatory and will include the "sala situacional": it is a wall or room in the facility, in which technical information is displayed as pictorial aids, such as thematic maps representing infant deaths as dolls the size of a quarter, immunization campaigns as tiny syringes. Since "sala situacional" it is user-friendly, it can facilitate communication with non-technical plantation managers and illiterate partners, including indigenous leaders, mothers and TBAs. ": Monthly, the Epidemiology Division in each Health Area will process monitoring data (see below, Current HIS). HOPE and partners will negotiate the indicators useful for program management (see Benchmarks list on page 54, to be included in "sala situacional". Besides the routine health statistics, the project will use LQAS on a periodic basis, to serve for both monitoring and evaluation purposes (see below). The benefits weighed by HOPE-G to switch from KPC to LQAS are: a) Less sample required. Previous KPC surveys have included almost a thousand subjects when strata (residents, plantation residents and migrants) and groups (women with children, women of reproductive age) are considered; b) Stratified data will allow the analysis of progress for each individual health area; and c) Information available for monitoring and evaluation, allowing the control for seasonality.

The project will meet at least quarterly with its partner agencies to review and analyze the collected information and workplan achievements, to develop a new quarterly workplan, and determine if the resources needed to implement the workplan are adequate and where additional resources need to be sought.

Monitoring and Evaluation Plan

To monitor the effectiveness of the project's activities and approaches with its partners and the community, HOPE will conduct small impact assessments and OR. Partner agency staff will be involved if and when feasible in the formulation of the problem or issue to be assessed, in the study design, data collection, and analysis. Given the large target area, this will however in the best scenario only involve a limited number of partner agency staff. HOPE's primary strategy will be to provide results from these studies to partner agency staff and community members during regularly scheduled meetings to review program results, integrate them into curricula, refresher training and other project adjustments. See table 13 with a synthesis of the OR planned.

Table 14 : Operational research

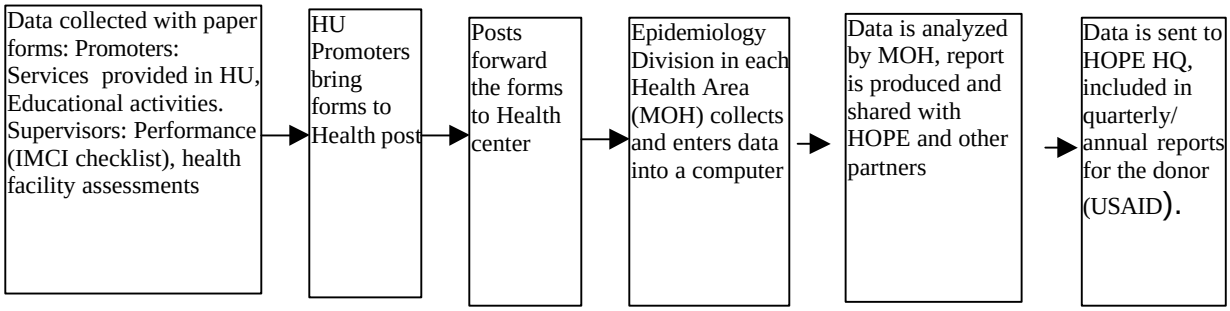
Research Question	Existing Information	Design and Instruments	Responsible	Use of Information

How costs of services are shared by employers, volunteers, MOH, IGSS, and HOPE.	Costs have not yet been calculated for each.	- Cost-analysis of HU services, health campaigns, health education; - Cost per beneficiary estimates.	Ibid	Provide partners with information, adjust planning strategies for sustainability, take into account impact of further reductions of coffee prices on contribution of plantations.
Quality and impact of health promotion activities at the community level.	Limited information about the quality and impact of IEC activities of community volunteers; there are forms volunteers should complete, but these are not used systematically.	- Supervision of volunteers and TBAs; - Meetings for collection and analysis of health information of community agents; - Assessment of quality of referral; - Assess changes in maternal behavior. Through verbal case review and exit interviews.	Ibid	Feed into model of community-IMCI under development at the national and local level.
Impact of an improved diet on weight gain and recovery from anemia.	During their stay on the plantations, the diet of mothers and young children is very deficient in nutrients.	Measure changes in hemoglobin and weight gain in children that receive an improved food ration, iron, and Vitamin	Ibid, with support from INCAP	Counsel and advise mothers on how to improve the diet with locally available foods.
Is the community participating actively in the health activities.	There is no good information about the level of community participation.	FGDs and interviews with community officials, leaders, promoters, TBAs, and beneficiaries.	Ibid	Improve community involvement for sustainability.
Use of the health information generated by the HU promoters for decision-making by facility/district staff.	Some districts use HU data in their sala situacional, but the data are not analyzed.	- Regular follow-up to training about data analysis and use of data for decision-making in partner agencies; - Facilitative supervision; - Checklist for sala situacional at the institutional and community level.	Ibid with master trainers	Strengthen the use of locally produced health information to inform the allocation of resources at the municipal and local level and influence other aspects of program management.

The project will treat resident population and migrant population as separate groups. Residents live regularly in the project area, although the crisis in coffee prices is increasing migration rates to Mexico and Guatemala City. In contrast, migrants are a changing, unstable population, making it difficult to select a representative sample. Follow-up surveys cannot ensure that the migrants selected have been exposed to project interventions during the previous harvest seasons. For this reason, periodical households surveys will be performed only in residents. The project will continue to conduct short (up to 4 weeks) follow-up surveys of a cohort of migrant families to assess changes in maternal behaviors and coverage levels during their stay in the coffee estate. Given that there is a narrow window of opportunity, the project will emphasize a few key practices such as immunization, child feeding, vitamin A supplementation and proper management of common illnesses.

Current Project Information System :

The current HIS combines routine health data and surveys. The following chart shows the flux of routine data for residents:



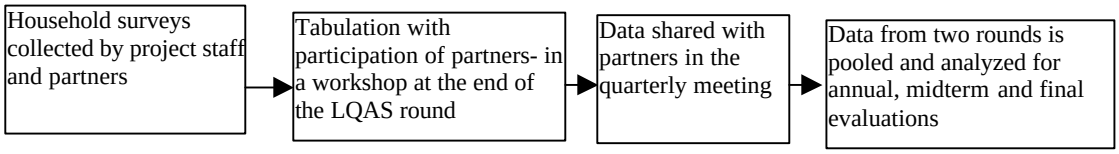
Promoters in HUs record the number of children assessed and treated for common childhood illnesses. They bring their monthly summary reports to the closest health post or center to their monthly's supervision meeting. As they hand in their report, they receive a new lot of medicines provided by the MOH. The main limitation of these reports is the fact that the MOH is mainly interested in services provided to children, and particularly services that involve the delivery of a drug provided by the MOH to the promoters. This fact has lead to under-registration of other services provided by the promoter (e.g., nutrition assessment).

Monitoring and Evaluation Tools:

The extension will use the same approach described in the proposal. New tools will be included to reflect new interventions such as FP/STIs/HIV/AIDS. The KPC survey questionnaire is shown as an attachment.
Access to and utilization of basic health services will be estimated from the number of functioning HU in coffee estates and nearby communities. Utilization rate will be measured with surveys and estimated on basis of routine data. In addition, the project will monitor the use of supervision and HFA tools by its partners and develop / adapt new tools for maternal and newborn care, as needed.

How the data will be collected

Household survey (LQAS) in residents. Two strata, women with children <2y and women of reproductive age. Frequency: twice a year. Sample size: 19 per supervision area (SAs), 3 SAs. Utilization rate (% that sought help in the HU when the child was sick) will have as much as 114 as the denominator in each strata, since this rate will be calculated pooling two monitoring rounds. LQAS will be planned, conducted and analyzed with partners to allow the development of ownership. LQAS will replace KPC surveys both at mid term and final evaluations. Training of field staff will use the Manual developed by PVO Networks, already translated into Spanish. After an introductory workshop including field exercises of sampling, the data is collected within a week or two. The data is manually tallied in a workshop with partners. Once two rounds are completed the data is entered into a computer and rates (adjusted, weighted) are calculated with spreadsheets already available.



Routine data: HU utilization rate: The numerator is comprised by the number of children and mothers seen in the HUs. The population of residents comprises the denominator. Rounds conducted during the harvest season will have this denominator adjusted, adding the estimate of migrants. We are currently assessing a simplified approach to estimate the number of migrant families exposed to the project interventions: when a bus or truck with migrants arrives to the coffee estate, the promoter makes a quick toll of adult males, women of reproductive health and children, learning the ratio of women or children per adult male. Later, using the payroll as a source of information -in most plantations, the payroll is already computerized- the promoter can estimate the number of woman and children and how long they stayed in the plantation.
Example: in plantation XX arrives the first bus with migrant, the promoter tally 10 adult males, 8 adult females, and 10 children under 5. According to the payroll, migrants in that harvest season were 100 adult males, staying an average of 4 weeks. That will be counted as 80 women-months and 100 children-months.

Health facility assessments: Health Facility assessments will use a standardized tool developed as part of the IMCI initiative. Key variables include the availability of essential drugs, provider performance in case management, timely monthly reports, and community outreach activities.

Since the project aims to improve case management at the plantation HUs and partner health facilities where cases are referred, there will be two strata for HFAs: Health centers/posts and HUs. Approximately 10 facilities and 10 HUs will be selected in each supervision area (department or health area). In health facilities the provider that sees most children will be selected and between 3 and 10 cases per provider will be supervised. Because HUs have a lower demand fewer cases will be supervised.

Since the project is spending a large proportion of the effort on training, supervision activities will include: a) an abridged checklist to assess the quality of the training and if desired competences were achieved, and b) an interview with the person facilitating the session. The former (activity a) was developed as part of the final evaluation of the previous CS project, replacing a cumbersome (four pages) tool used before.

Health promotion conducted at the community level is recorded in a tool that is collected by supervisors (project and MOH staff).

Data management:
HOPE has provided, as part of CS-XIII, computer equipment and training to health area divisions in charge of processing the data. This has helped to develop ownership. A side effect might be a delay in receiving reports from the health area –because the desire to share only final, edited reports without flaws- , however timely reports will be required for the quarterly meetings with partners. HOPE staff retrieves limited information from visits to communities. As much as possible, all visits by project staff will use a protocol to collect consistent data, and the information will be entered by the HOPE-G IS for immediate use by the project manager.

Provider Performance, Quality of Services:
As described in other sections, the project will assist partners in revising scopes of work, develop Job Aids, use consistent supervision tools and conduct periodic HFAs.

Utilization of data:
Besides the use of this information in the "sala situacional", a table with benchmarks will be compiled every year (see attachment) and analyzed with project partners. The main objective is to improve the

quality of the data and the regular utilization of data in evidence-based decision-making, aimed to increase the impact of project activities.

Data on the quality of services provider is not aimed to individual providers but to assess improvements in the health system. Tools will be developed/ adapted and the resulting data used to compare facilities. Positive peer-pressure will be applied to increase provider motivation to upgrade performance. By analyzing how a facility can perform well even under the same limiting factors, other facilities are expected to follow path, due to peer-pressure, desire to catch up or genuine motivation to do their best.

Other information that might be collected: MOH sanitary inspectors are expected to perform periodic visits and record sanitary conditions, including water and sanitation of the plantations. While the project is not directly involved in improvements in sanitation, this was an unanticipated benefit observed in the previous CS project, related to greater concern of plantation owners / administrators with migrant health.

Quality assurance:
There is an increased emphasis during the extension on improving quality of M&E activities.
The project is hiring an Impact Assessment Specialist, a new position. The Project Manager, Dr. Anabela Aragon, is a trained epidemiologist with extensive experience in the use of data in improving the quality of programs. HOPE has experienced staff in Nicaragua trained by NGO Networks and HOPE HQ in the use and interpretation of LQAS, to provide assistance during the first LQAS round in Guatemala.
A representative of HOPE HQ participates in the Midterm evaluation to learn first hand the nature of challenges identified and assist in problem-solving.

Sustainability of The M&E System:
The "Sala situacional", supervision checklists, and improvements in the MOH HIS are already institutionalized and stable. LQAS is a low-cost tool that can be conducted during routine visits to communities, and may be a tool that could be sustained by the MOH for M&E. Most communities can be reached from health facilities, but transportation is a limitation.

H.3. Evaluation plan

Surveys with LQAS will use the same questionnaires developed for the baseline. The number of surveys by supervision area and strata in each round is shown in the following table:

Table 14: LQAS Rounds

Department ->	San Marcos		Quetzaltenango		Suchitepequez	
Strata -> LQAS round	Mother+ child	Women of reproductive age	Mother +child	Women of reproductive age	Mother +child	Women of reproductive age
1st, 7- 8/02	19	19	19	19	19	19
2nd, 1-3/03	19	19	19	19	19	19
3rd, 7-8 /03	19	19	19	19	19	19
4th, 1-3/04	19	19	19	19	19	19
5th, 7-8/04	19	19	19	19	19	19
6th, 1-3/05	19	19	19	19	19	19
7th, 7-8/05	19	19	19	19	19	19

The mid term evaluation, MTE, has been set for October 2003. It will be a participatory evaluation that will review existing data from LQAS rounds, HFAs and routine data collected from facilities and supervisions and collect qualitative information. USAID Guidelines for MTE will be used.

The final evaluation has been scheduled for July 2005. As per the midterm evaluation, it will be a participatory evaluation. USAID Guidelines for Final evaluations will be used.

The Annual reports, midterm and final evaluations will use a table of benchmarks to assess progress towards the project goals.

Table 15: Benchmarks

Indicator	**Goal, LOP**	**To be Achieved in Year 1**
Number of health workers trained (child health and nutrition, community IMCI, AIN-C, reproductive, maternal health)	450	150
TBAs trained in child health, maternal and reproductive health Promoters trained in child health, maternal and reproductive health CBDAs trained in child spacing	1000 1000 100	200 200 100
Number of trainers active in 29 municipalities	132	45
Number of quarterly meetings held with partners to analyze data for decision-making using "sala situacional" , LQAS information to adjust project work plan	12	3
Number of Coffee Growers Networks involved in health initiatives	8	2
Number of planning meetings with coffee estate administrators	96	24
Number of Basic Health Units (HUs) that are active, provide services in a convenient hour : a) HUs inside Coffee estates, b) HUs in communities close to coffee estates	250	170 (20 new)
Number of visits to Health Units per year by children and mothers during a) Coffee harvest season (includes migrants) b) Remaining of the year (only resident population)	 12000 TBD	 5000 TBD
Number of outreach campaigns including one or more of the following activities: growth monitoring and promotion, MN supplementation, immunization, deworming, antenatal care, treatment of acute conditions in coffee plantations	600	200
HUs with adequate inventories of essential supplies (%, based in supervisions)	80	50
% of resident mothers satisfied with the services provided by HUs [exit interviews]	70%	50%
% of migrant mothers satisfied with the services provided by HUs [exit interviews]	70%	50%
Number of supervisions made by MOH staff to HU based providers Percent of monthly meetings at health facilities HU providers attend	6,000 80%	1,000 40%
% of institutional providers performing accordance with IMCI norm[critical areas] % of community-based providers performing accordance with IMCI norm [same]	60% 70%	40% 50%
Number of municipalities conducting FHA	TBD	TBD
Number of radio stations broadcasting messages in Mayan languages	15	5 new
Number of resident children under 2y participating in GMP sessions in selected highland/ Boca Costa communities/plantations where AIN is being implemented % of children gaining weight according to the norm in (mini-study)	TBD 70%	TBD 50%
Number of mothers groups receiving health education in coffee plantations	200	50
% of TBAs using clean birth kits, number (mini-study)	75	25
Number of coffee estates with emergency transportation	250	30
Number of coffee estates providing transportation for health campaigns	250	50
LQAS monitoring rounds conducted	2/year	2/ year
Number of municipalities where HOPE/partners overlap CS interventions with related activities: sanitation, micro credit, food security, low-cost drugs, other	15	3
Number of plantations allocating financial resources to HUs during that year	150	25
New funding sources identified for project activities	3	1

TABLE 16: Goal/SO: Better Health for Women and Children Residing on or Migrating to Coffee Plantations in the Boca Costa of Guatemala – Project HOPE

OBJECTIVES	**INDICATORS** (Process and outcomes)	**MEASUREMENT METHODS**	**MAJOR PLANNED ACTIVITIES**
Capacity-Building Objectives – Guatemala			
Increase RH and impact assessment expertise of Project HOPE Guatemala	RH and impact assessment specialists on staff; Training and updates provided to HOPE technical staff based on assessed needs	Training needs assessments; Training pre- and post tests.	Hiring of RH and impact assessment specialists; training/CE for project staff, TA from CAs (MNH, Pop Council, APROFAM, URC) and HQ
Partners			
MOH and IGSS assess and improve backstopping capacity.	SWOC with partners Baseline self-assessment completed during first project year. Capacity-building activities implemented as planned.	Baseline self-assessment; Project reports; Performance assessments of health facility staff; External evaluations.	Regular meetings with partners to strengthen planning and follow-up to activities for residents and migrants; Visioning workshops; Development/adaptation of self-assessment tool, TA solicited from project, activities to strengthen areas of weakness implemented.
Health area and municipal health councils allocate human and material resources to plantation resident and migrant health.	MOH quarterly/annual planning and monitoring meetings involve IGSS, NGOs, and plantations; 80% HU promoters trained and supervised monthly. 80% HUs stocked regularly with antibiotics, supplements, ORS packets, and plantation health services reporting forms. MOH conducts monthly health campaigns on plantations during the harvest season during convenient hours for the migrants	Minutes of meetings, Key informant interviews, HU promoter activity data; Health facility data; Provider and volunteer reporting forms; Guide to plan plantation health campaigns.	Meetings, meetings, meetings; Mobilizing and energizing partner agency staff; Assisting partner agencies at all levels to plan for promoter training and supervision, and increased drug and supply needs during harvest season; Joint planning of plantation health campaigns; Involvement of plantation promoters in plantation health campaigns and other activities of MOH/IGSS on the plantations.
The MOH/IGSS will maintain and support a core of CH, RH and QI master trainers for health providers and for community agents at the health area level	12 of master trainers per health area available to conduct training and supervision; 90% of providers of partner agencies are trained as appropriate in IMCI and RH management protocols, education, and counseling	Training registers of Project HOPE, MOH and IGSS.	Training needs assessments conducted with master trainers; trainers trained in technical content, teaching methodologies, supervision, and tools to monitor quality of case management with feedback to partner agency staff.
Partner agencies have increased capacity to collect and use quantitative and qualitative data	Use of information from the sala situacional at the health area and district level; Data and progress review are a routine agenda item for	Sala situacional (see definition in text on page 49) Meeting minutes;	Training of partner agency staff at all levels to use data to inform decision-making; training and involvement of

OBJECTIVES	**INDICATORS** (Process and outcomes)	**MEASUREMENT METHODS**	**MAJOR PLANNED ACTIVITIES**
for management and decision-making, including data generated and submitted by community agents.	quarterly health area/municipal/health center meetings; Partner agency staff participate in project's monitoring activities (KPC, HFA, VCRs, OR, FGDs, etc.); At project end, municipal and health area key informants can provide at least one example of how jointly collected data have improved management or quality of services; Activities report of HU promoters, community promoters, and TBAs integrated into MOH HIS.	Quarterly progress reports based on HIS data; Final evaluation report; Special reports of mini-studies; Revised MOH HIS forms;	partner agency staff in the design, implementation, and interpretation of rapid qualitative/quantitative data collection methods and mini-studies (e.g., OR, QI exercises, VCRs); Presentation of reports.
Formal health services (MOH, IGSS, and NGOs) will demonstrate increased commitment to quality health care and community participation.	80% of facilities will have/use management manuals. 40% of plantation health units will have and use operating manuals. 80% of trained providers will meet case management quality standards 80% of health centers have conducted at least two QA/QI exercises and made documented changes in their management practices and quality of care. 50% of health centers will involve the community in the problem analysis and development of solutions.	Health facility assessments, QI reports, MOH and HOPE HIS forms Sala situacional at the district level.	MOH/IGSS staff trained in various QI methods; Partner agency staff involved in OR, mini-studies and problem-solving; Storyboards developed to share QI activity with community and health center supervisors; Health facility manuals developed and implemented; Improvements at health facility level monitored and documented; Plantation promoters trained in community outreach methodologies.
Participating plantations improve health infrastructure.	80% of participating plantations have implemented a satisfactory incentive structure for the HU promoter. 20% plantations improve latrines/ safe water/housing. 20% of plantations contract additional trained providers (physician, nurse, auxiliary nurse) to support to the HU promoter during the harvest season.	HOPE HIS, Minutes of plantation networks' meetings, MOH/IGSS HIS, HU supervision tools	Promote increased coordination of MOH/IGSS with plantation owners and administrators; Quarterly meetings with owners/administrators; Periodic visits by the sanitary inspector of the MOH; Negotiations with large plantations to hire additional providers to support work of promoters during harvest season.
Increased availability of basic child and RH messages in Spanish and common Mayan languages through radio stations in the Boca Costa and communities of origin.	15 radio stations in Boca Costa/highlands broadcast daily child and RH health messages in Spanish and Mayan languages during peak listening hours; 60% of resident and 30% of migrant women can recall at least two child/RH messages. # of plantations broadcasting health messages by loudspeaker during the harvest season.	Project HIS, Migrant and resident surveys, agreements with radio stations, Instrument to monitor audience listening patterns	Negotiations with radio stations in the Boca Costa and communities of origin; Development of new and improved scripts, development of high quality recordings; Periodic interviews with resident and migrant mothers (FGDs) about the radio and loudspeaker messages;

OBJECTIVES	**INDICATORS** (Process and outcomes)	**MEASUREMENT METHODS**	**MAJOR PLANNED ACTIVITIES**
			Negotiations with the MOH to benefit from MOH radio airtime to disseminate CS and RH messages.
Community Agents			
Common child illnesses are managed according to IMCI protocols at the plantation HU level.	At least 80% of HU promoters will meet IMCI case management standards. 80% of HU promoters report activities at least every other month to the closest health facility and collect replacement medicines and supplies.	MOH/IGSS HIS; Supervision checklists of promoter knowledge and performance, Verbal case reviews, Exit interviews, OR	Training/refresher trainings of promoters in IMCI; Supervision by MOH/IGSS staff; Feedback from VCRs; Monitoring and supervision of promoters to strengthen weak areas of performance.
TBAs conduct cleaner and safer births.	679 trained TBAs will receive refresher training; 821 untrained TBAs will be trained At least 50% of TBAs report using a clean birth kit or cutting the cord with a new razor blade.	TBA reports (TBA booklet) MOH/IGSS HIS	Training of master trainers in clean and safe deliveries and TBA training; Monthly supervision and technical updates for TBAs conducted by health facility staff.
Promoters/volunteers are more effective in their community mobilization/ health education efforts.	80% of trained promoters conduct health education and mobilization using participatory adult learning methods. 80% of promoters use simple, clear and correct health messages in their education efforts.	MOH/IGSS HIS; Supervision checklists; Observations HOPE HIS (form 4)	Master trainers supported in training and supervising promoters in child/RH health and adult learning/ communication methodologies; Monthly refresher trainings for promoters by health facility staff.
Community-based distribution agents promote FP and condoms	100% CBAs will be trained	CBDA reports CYPs	Monthly updates with local health facility staff
Household-Level Objectives (abbreviated)			
Knowledge and practices will be improved at the household level.	70% of resident children 12-23 months will be completely immunized. Number of immunization doses given to migrant children 12-23 months will increase by 10% during their stay on the plantation 50% of resident/ migrant children 6-23 months will have received a vitamin A supplement in the six months preceding the final KPC 75% of resident infants were breastfed within the first hour after birth. 70% of resident mothers will breastfeed exclusively for the first six months; The % of resident children under two years with weight-for-age < 2SD will decrease by 10% over baseline. The % of children gaining weight adequately in plantations where AIN is being implemented	KPC survey, FGDs, Exit interviews, Verbal case reviews	Health education through partner agency staff and community agents; Training of health workers, HU promoters, promoters, and TBAs; Radio messages in Spanish and Mayan languages; Distribution of child and maternal health cards; Plantation health campaigns for migrants (vaccinations, provision of Vit. A to children 6 – 60 months and iron to pregnant women, prenatal care, health education); Mothers' groups; Increase FP delivery and counseling

OBJECTIVES	**INDICATORS** (Process and outcomes)	**MEASUREMENT METHODS**	**MAJOR PLANNED ACTIVITIES**
	The % of caretakers that can name at least two of the signs of illness that warrant care-seeking from a trained provider will increase by 50% over baseline. The % of caretakers offering the same or more to breastmilk, liquids, and/or food during a child's illness episode increases by 60 % over baseline for residents. % of caretakers that sought care for ill child from trained provider (including HU promoter). 60% of residents and 50% of migrants can mention at least two health messages on child or RH they have heard on the radio in the month preceding the final KPC. 60% percent of resident and will receive at lease two TTV before the birth of the youngest child less than 24 months. 50% percent of resident mothers will have at least three prenatal visits for last pregnancy. 50% percent of resident and 20% percent of migrant mothers will be able to report at least two maternal danger signs of pregnancy and post-partum period. 40% percent of resident mothers will have at least one postpartum visit. 40% percent of resident and 15% percent of migrant mothers who are not pregnant/desire no more children in the next two years, or are not sure, will use a method of child spacing 50% percent of resident and 30% percent of migrant mothers will be able to identify at least two signs or symptoms of a possible STI in a man/woman 70% percent of resident and 30% percent of migrant mothers of children aged 0-23 months will be able to identify at least two ways to avoid becoming infected with HIV/AIDS		points and outlets for prepackaged STI treatments for men.
Resident and migrant demand for health services increases.	By project end, use of trained providers, including HU promoters will have doubled in the 150CSXIII HUs and reach a similar level in the 100 new HUs	HU activity reports	Training and supervision of HU promoters; Regular restocking of essential drugs and supplies; Promotion of HUs with residents and migrants.
Capacity-Building Objectives HOPE/U.S.			
HOPE capacity increased for	Baseline assessment conducted	Annual reports, midterm and final	Baseline assessment planned and

OBJECTIVES	**INDICATORS** (Process and outcomes)	**MEASUREMENT METHODS**	**MAJOR PLANNED ACTIVITIES**
CS/RH programming	Objectives, indicators, and capacity plan developed and included in the first Annual Report Achievement towards objectives tracked	evaluations	implemented; Planning workshop; Allocation of resources; Implementation of capacity building activities; M & E activities.
Sustainability Objectives			
Health areas / municipal health councils have strengthened service delivery policies for migrants.	Additional human/material resources allocated by all three health areas and at least 20 municipalities for migrant activities. Written policy statement at each health area.	MOH budget reviews, written policy statements.	Coordination and negotiation sharing of health status and impact data with MOH; work at national level.
Revolving drug funds operating on low-access plantation and municipalities	Number of new revolving drug funds providing essential drugs.	MOH and project HIS	Coordination with MOH and ADISS to develop funds; promote funds with community.
Health areas/municipalities/IGSS allocate sufficient resources to training, supervision, and follow-up of health facility staff and community agents.	12 -20 trainers available in each health area; Resources allocated to achieve targets of training plans.	Project HIS, adapted MOH forms	Planning meetings with health areas and municipalities; training of master trainers, technical support to planning trainings and monitoring quality
Data inform decision-making at all levels	Review of health data integral component of all routine meetings.	MOH and project HIS, key informant interviews	Training of partner agency staff in the collection and use of data at all levels.
Plantation HU data integrated into and used in MOH HIS.	MOH at health area/municipal/health facility level can provide data-based information about work of community agents.	MOH HIS forms	Adaptation of MOH HIS; assistance to partner agency staff in use of activity data of community agents.
HU promoter supervision/ refresher meetings conducted monthly at closest MOH facility.	At least 80% of promoters supervised monthly at health facility.	MOH HIS forms, key informant interviews.	Training of partner agency staff in supportive supervision and training needs assessments.
MOH health campaigns and preventive activities on plantations during harvest.	All larger plantations receive at least one MOH health campaign per harvest season.	Promoter activity report, MOH HIS; key informant interviews.	Training and motivation of MOH staff to conduct outreach activities.
Plantation HUs have continuous supply of essential drugs and supplies.	90% of HUs report no stockouts during the harvest season.	Promoter activity report; key informant interviews.	Establishing supply responsibility with MOH and plantations; promote importance of regular resupply with HU promoters and health facility staff.
Plantation owners and municipal directors meet at least quarterly to address plantation health issues.	8 plantation owner networks meeting quarterly with municipal level MOH/IGSS staff.	Minutes of meetings; key informant interviews.	Promote the development of plantation owner networks; facilitate coordination of networks with municipal level staff; establish guidelines for contributions of MOH/IGSS/plantations to developing

OBJECTIVES	**INDICATORS** (Process and outcomes)	**MEASUREMENT METHODS**	**MAJOR PLANNED ACTIVITIES**
			the plantation health infrastructure.
Plantations include cost of maintaining promoter and HU in annual budget	60% of plantations can report line item for plantation health activities. Plantation networks provide guidance on level of contribution to health.	Key informant interviews during final evaluation.	Promote development of plantation networks; promote development of guidance to allocation of resources to health infrastructure.
Increase demand for HU and health facility services.	80% of resident mothers and 60% of migrant mothers have sought care or participated in health education activities at the HU.	KPC survey, exit interviews, VCRs	Promotion of HUs through radio; monitoring of quality of care and supply.
Implement 100 new HU in plantations	20 new units in year 1; 30 in year 2; 40 in year 3 and 10 in year 4	Project HIS	Negotiation with plantation administrators, training of new promoters, strengthening supervision
Health councils at department and municipality level, promoting health services for migrants	3 department health councils; 15 municipality health councils, planning health activities for migrant and resident workers	Project HIS	Monthly meetings with health councils

I. BUDGET

Attached please find a revised budget and notes in **Attachment 7**. The revision is due primarily to a change in Project HOPE's approved NICRA rate, which has resulted in an increase in direct costs and decrease in indirect costs. The bottom line total budget, federal share, and non-federal share remain the same as presented with the original proposal.

Increased direct costs have allowed HOPE to add staff to implement the project in Guatemala. In addition, under the new NICRA rate certain support staff who were previously paid out of overhead are now direct expenses. Therefore the revised budget includes support staff at Hope Center and in Guatemala.

There are no changes in program site, location, selection of interventions, number of beneficiaries, international training costs, international travel, or procurement.

J. WORK PLAN

1. Annual Workplans

The detailed workplans for Years 1 and 2, and the broad workplans for the remaining two years can be found on the subsequent pages.

2. Role of Partners in the Development of the Workplan

The MOH and IGSS participated very actively in workshops to develop this DIP. The partners focused predominantly on new training activities (i.e., reproductive health), supervision and monitoring, the strengthening of the HIS at all levels, particularly the community, outreach activities to the plantations, and greater involvement of the plantation owners/administrators through quarterly meetings to gain their support for the Hus. The availability of essential drugs and supplies also was an important topic of discussion, and the promotion of increasing migrant unitization of health facilities in the communities of origin.

3. Use of Workplan

The workplan achievements will be analyzed with the partners during quarterly meetings and plans for the subsequent quarter refined and detailed more clearly. In addition, workplan meetings will be conducted twice per month at the district and health facility level during the harvest system to coordinate outreach services for the migrants**.**

Table 17: Work Plan for Year 1 **MAJOR ACTIVITIES – YEAR ONE (September 30, 2001-September 29, 2002)**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
GENERAL OPERATIONS												
Hiring new staff	X											
Procurement of vehicles, equipment and supplies	X											
Headquarters visits		X			X							
Quarterly technical reports to headquarters				X			X			X		
COORDINATION												
Coordination, planning and monitoring meetings with MOH/IGSS/NGOs, and plantations				X			X					X
Project orientation meeting with partners (MOH / IGSS / NGOs)	X				X	X	X	X	X			
Identification and enrollment of new plantations							X	X	X	X	X	X
MAJOR ACTIVITIES –YEAR ONE												
Health Area Council meetings	X	X	X	X	X	X	X	X	X	X	X	X
Meetings with plantation owners/administrators	X	X	X	X	X	X	X	X	X	X	X	X
Meetings with MOH and NGOs in highland communities of origin							X	X	X	X	X	X
BASELINE ASSESSMENTS												
Identification of training needs in new staff, technical assistance needed		X	X									
Detailed implementation plan (DIP)					X	X						
Partner Capacity Assessment									X	X		
TRAINING												
Training of Hope Staff in FP and HIV/AIDS/STIs		X		X	X							
Development / adaptation of training and IEC materials on reproductive health				X	X	X	X					
Conduct training needs assessments with master trainers on IMCI, FP, HIV / AIDS /STIs and Boca Costa and origin.					X	X	X					
MOH/IGSS master trainers trained in IMCI, FP, HIV/AIDS/STIs, and adult participatory education methodologies (Boca Costa and highland communities)					X	X	X	X	X	X		
Conduct training needs assessment of health providers							X	X				
Support master trainers in training of MOH/IGSS/NGO staff in Boca Costa in IMCI, FP, maternal care, HIV/AIDS/STIs, and adult participatory education methodologies							X	X	X	X	X	X
Conduct training needs assessments of community agents							X	X	X			
Support master trainers in training community promoters								X	X	X	X	X
Support master trainers in training TBAs/comadronas							X	X	X	X	X	X
Training of CBDAs (HOPE/APROFAM)							X	X	X	X		

	1	2	3	4	5	6	7	8	9	10	11	12
Support trainers in training 30 new HU promoters in IMCI								X	X	X	X	
Refresher training and technical updates for MOH, IGSS and NGO staff in IMCI								X	X	X	X	
Refresher trainings of trained TBAs in maternal care and orientation in FP and HIV/AIDS/STIs								X	X	X	X	
Refresher trainings and follow-up of trained community promoters in CS interventions, maternal care, FP, HIV/AIDS, STDs							X	X	X	X	X	X
Development of educational materials on reproductive health							X	X	X	X	X	
Supervision and follow-up of existing and new HU promoters							X	X	X	X	X	X
ACTIVITIES												
Child diseases and simple injuries managed at the HU		X	X	X	X	X	X	X	X	X	X	X
Strengthening health information system in the Boca Costa								X	X	X		
Monitoring of provision of essential medicines to plantation HUs						X	X	X	X	X	X	X
Implementation of new 20 Hus on coffee plantations							X	X	X	X	X	
Formative research to develop and test messages and scripts for radio broadcasts				X	X							
Radios broadcasting basic health messages in Mayan languages									X	X	X	X
Monitoring of health services and health education on existing and new plantations							X	X	X	X	X	X
OR (HU quality of services, HU promoters support by plantations and level of satisfaction / commitment to work)							X	X	X	X	X	X

Table 18: Year 2 **MAJOR ACTIVITIES – YEAR TWO (September 30, 2002 – September 29, 2003)**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
COORDINATION												
Health Area Council Meeting	X	X	X	X	X	X	X	X	X	X	X	X
Coordination, planning and monitoring meetings with MOH/IGSS/NGOs, and plantations				X	X	X	X	X	X	X	X	X
Development of graduation criteria with partner agencies				X	X	X	X					
Coordinate information exchange with MOH in communities of origin							X	X	X	X		
TRAINING AND SUPERVISION												
Trainings/refreshers for master trainers from Boca Costa and communities of origin								X	X	X	X	X
Training of health facility staff in project interventions								X	X			
Training of health facility staff in QI methods							X	X	X	X	X	
Training of HU promoters								X	X	X	X	
Training of HU promoters in first aid							X	X	X	X		
Training of promoters					X	X	X	X	X			
Training of TBAs					X	X	X	X	X			
Refresher trainings for health facility staff					X	X	X	X				
Refresher trainings for HU promoters					X	X	X	X				
Refresher trainings for promoters and TBAs					X	X	X	X				
Monitoring and supervision of health facility staff and community agents					X	X	X	X	X	X	X	X
ACTIVITIES												
Child diseases and simple injuries managed at the HU		X	X	X	X	X	X	X	X	X	X	X
Health education of resident and migrant mothers on plantations	X	X	X		X	X	X	X	X	X	X	X
Implementation of QI exercises at health facility level					X	X	X	X	X			
Development of new radio messages								X	X	X	X	
Broadcasting of basic health messages						X	X	X	X	X	X	
Lessons-learned workshop in for stakeholders and donors Guatemala									X			
Lessons-learned workshop in the US for donors and PVOs									X			
Recruitment of new plantations	X	X	X	X	X	X	X	X	X			
Establishments of new Hus (40)	X	X	X			X	X	X	X			
OPERATIONS RESEARCH												
Test methods to improve migrant and resident utilization of HUs	X	X	X			X	X	X	X			
Plan and implement various mini-studies	X	X	X			X	X	X	X			
Assess adherence to FP/STI service provision & counseling protocols at health facility & community level		X	X	X	X							

	1	2	3	4	5	6	7	8	9	10	11	12
Assess impact of verbal case review and exit interviews on health facility and HU promoter practices					X	X	X	X	X			
HU cost and cost-benefits analysis				X	X	X	X					
MONITORING AND EVALUATION												
Strengthening MOH health information system				X	X	X	X	X	X			
Conduct regular exit interviews and verbal case reviews and provide feedback to providers												
Conduct quarterly data reviews and data-based planning with partners				X	X	X	X	X	X			
Graduate well-functioning health facilities and HUs					X	X	X	X	X			
Quarterly technical reports to headquarters			X			X			X			X
Annual progress reviews												
Annual workplans				X	X	X						
Midterm evaluation												
Final surveys												
Final evaluation												

Table 19: Years 3-4 **MAJOR ACTIVITIES YEAR 3-4 (September 30, 2003 – September 29, 2004)**	**A. YEAR**				**YEAR 4**			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**
COORDINATION								
Health Area Council Meeting	X	X	X	X	X	X	X	X
Coordination, planning and monitoring meetings with MOH/IGSS/NGOs, and plantations		X	X	X		X	X	X
Development of graduation criteria with partner agencies			X	X			X	
Coordinate information exchange with MOH in communities of origin	X		X		X		X	
TRAINING AND SUPERVISION								
Trainings / refreshers for master trainers from Boca Costa and communities of origin		X	X			X	X	
Training of health facility staff in project interventions		X	X	X		X		
Training of health facility staff in Q1 methods		X	X					
Training of HU promoters			X	X		X		
Training of HU promoters in first aid			X	X				
Training of promoters			X			X		
Training of TBAs		X	X			X		
Refresher trainings for health facility staff		X	X			X		
Refresher trainings for HU promoters		X	X			X	X	
Refresher trainings for promoters and TBAs				X		X		
Monitoring and supervision of health facility staff and community agents	X	X	X	X	X	X	X	X
ACTIVITIES								
Child diseases and simple injuries managed at the HU		X	X	X		X	X	X
Health education of resident and migrant mothers on plantations		X	X	X		X	X	X
Implementation of QI exercises at health facility level		X	X	X		X		
Development of new radio messages		X	X	X				
Broadcasting of basic health messages		X	X	X		X		
Lessons-learned workshop in the US for donors and PVOs								
Recruitment of new plantations			X	X		X	X	
Establishments of new HUs (40)			X	X		X	X	
OPERATION RESEARCH								
Test methods to improve migrant and resident utilization of HUs	X		X		X		X	
Plan and implement various mini-studies	X		X	X		X	X	
Assess impact of verbal case review and exit interviews on health facility and HU promoter practices			X			X	X	

	YEAR 3				YEAR 4			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
HU cost and cost-benefit analysis		X				X		
MONITORING AND EVALUATION								
Strengthening MOH health information system		X	X			X	X	
Conduct regular exit interviews and verbal case reviews and provide feedback to providers			X				X	
Conduct quarterly data reviews and data-based planning with partners		X	X	X		X	X	X
Graduate well-functioning health facilities and HUs		X	X	X		X	X	X
Quarterly technical reports to headquarters		X	X	X		X	X	X
Annual progress reviews		X				X		
Annual workplans		X				X		
Midterm evaluation	X							
Final surveys							X	
Final evaluation							X	

SECTION III: DETAILED PLANS BY INTERVENTION

A. IMMUNIZATION

1. Current Status/Coverage Prevalence

Coverage Estimates.

Vaccine	National Rate **(2001)**	CS-XIII Target Area (KPC 2001)	New Target Area (KPC 2001)
OPV	80%	35.6%	41%
DPT	80%	33.0%	50%
BCG	80%	67.6%	64%
SPR	75%	---	---
MMR	88%	---	26%
TT2 (WRA) ***	96%	43.9%	52.5%
TTV (pregnant women)	18%	N/A	N/A

***Evaluation of the Nation Immunization Program (MOH, 2001)**
****Includes women with children under two years**
*****Two to three years of cumulative coverage rates.**

The national and local coverage rates are difficult to compare. The national rates are calculated by dividing the population programmed to be vaccinated by the number of vaccines applied. For the KPC, the project determined the coverage rates for the CS-XIII target area and the expansion area by identifying the percent of children 12 – 23 months with health cards that had received the required number of vaccines in its KPC survey. The TTV vaccination rate was determined by calculating the percent of women with children less than two years with a health card that had at least two doses of TTV. During the project, the MOH rates will be used for monitoring purposes, but HOPE will report coverage rates based on verification with health cards as done by international donors and aid agencies.

Comparison of National and District-Level Coverage

Vaccine	National Coverage Rate*	Rate for Quetzaltenango**
OPV3	80.0%	88.3%
DPT3	90%	88.2%
BCG	80.0%	86.2%
Measles	88.0%	35.3%
MMR	75.0%	83.0%
TTV2 (reproductive age)	96.0%	4.3%
TTV2) pregnant)	18.0%	3.9%

*Evaluation of the National Immunization Program – 2001 (MOH and PAHO)
** Annual statistics of the Department of Epidemiological Surveillance, Health Area Quetzaltenango, 2001).

The table above is presented to provide a better understanding about the national and local vaccination efforts. The following points need to be taken into account:

Measles coverage rates in Quetzaltenango are low. This is probably due to the recent introduction of MMR vaccine at 12 months, which includes a vaccine against measles. The very low coverage rate of non-pregnant and pregnant women with TTV2 may be due to the fact that many of the providers of prenatal care (including TBAs) are not trained and authorized to apply TTV and that providers do not take advantage of contacts women have with the health care system, resulting in many missed. Also, record-keeping of vaccines applied is poor at the national and local level, and many pregnant women are afraid that the vaccine might damage their unborn child.

Disease Surveillance. The target area has a epidemiological surveillance system and conducts vaccination activities following national guidelines. Intensive campaigns – health weeks, local campaigns, national immunization days; emergency campaigns – mop-up campaigns, house-to-house, mobile teams; and routine activities – vaccination during routine health services, regular community outreach activities. In cases of disease outbreaks, the local authorities follow MOH guidelines. In addition, local outreach activities (e.g., NGOs) contribute to the vaccination coverage rates.

Disease Outbreaks. No polio cases have been reported in this region since 1990, no measles case since 1995, and no diphtheria case since 1998. However, there have been selected outbreaks of pertussis in various regions of Guatemala. Cases of neonatal tetanus have decreased with increasing coverage rates for pregnant women.

Access. It is estimated that only about 60% of the population in reality have access to vaccination activities. This is also true for the target area and confirmed by the project KPC survey.

Travel Time, Cost, and Other Constraints. The target population lives on the average 1-2 hours by foot from health facilities, and many of these facilities lack the staff, supplies, and vaccines. At the same time, families would lose income for a day's work. Other barriers to participation in vaccination services include the poor treatment by the health workers, the limited trust the population has in the existing health services, limited knowledge and understanding of the reasons for vaccination, and different cultural and religious beliefs.

For health facility staff to provide vaccinations in the resident communities or the plantations takes Q20-60 for transport. They also give less importance to migrant families who are in their catchment area only temporarily, and often do not bring the child's health card, so the health worker can check what vaccines have already been provided.

Access needed. To improve access, factors such as the language barrier, customs, beliefs, distance, and available hours need to be taken into account. Therefore, HOPE's emphasis has been on getting the partner agencies to provide vaccinations directly on the plantations. Based on final evaluation findings, health fairs will continue to be conducted

at the HU during the harvest season in the evening and on weekends, and will involve the HU promoter more actively, as well as resident and migrant leaders and volunteers.

2. Cause, Current Belief, Knowledge and Practices, and Care-Seeking Behavior

Immediate and Underlying Causes. The immediate and underlying causes can be found at all levels of the MOH and in the community itself. Lack of human and material resources; logistics, planning, and coordination; and staff motivation at the institutional level are countered by lack of information, lack of education and ignorance, cultural and linguistics barriers, and conflicting priorities at the community and household level.

Maternal knowledge and practices. Over the four years of the CS-XIII projects, there have been no improvements in the percent of mothers knowing when the measles vaccine should be given (21%). Given the introduction of new vaccines in Guatemala and elsewhere in the Americas (MMR, Penta, Hepatitis B), the project will focus more on educating mothers about the importance to complete the child's immunization card on a timely basis; that most vaccines should be given during the first year of life, when the child is most vulnerable; and that more than one dose is needed for full protection. The project noted significant changes in complete vaccination coverage levels from 53.1% to 71.5% in the resident population, but still short of the desired rate of at least 80%.

Cultural Beliefs. There are no gender biases with respect to taking boys and girls for immunization activities. However, while the mother generally brings the children for vaccinations, it is the husband and the paternal grandmother that influence the decision of the mother to do so.

Social, Economic, and Cultural Barriers. Factors negatively influencing the decisions of families to participate in vaccination activities include

- Poor treatment by the health facility staff;
- Health facility open during restricted and inconvenient hours;
- Distance from health facility;
- Cultural beliefs about vaccines (makes children sick, affects the unborn child negatively);
- Little knowledge about to-be-expected side effects;
- Limited importance given to immunization;
- Negative experiences with past reactions of the child to the vaccine or the application of the vaccine;
- Limited trust in the health services;
- Religious beliefs;
- Lack of education and ignorance;
- Precarious economic situation; and
- Number of languages spoken and the inability of the health workers to communicate in languages other than Spanish.

3. MOH Policies/Strategies and/or Case Management Policies/Current Services

The MOH have five main policies that govern its Integrated National Health Plan (2000 – 2004):

- Integrated family health services – Integrated services for women, children, and adolescents (includes National Immunization Program);
- Migrant health – Policy to assure integrated services to migrants in their place of temporary work and the communities of origin;
- Development and strengthening of integrated health services to other groups;
- Reproductive health, using a life-span approach from childhood through adulthood; and
- Intra- and inter-sectoral coordination.

Four of these policies relate directly to the extension project and to the immunization component. To implement its priorities, the MOH proposes the following strategies:

- Engagement of all human resources at the national and local level to promote development,
- Use of the concept of primary health care at all levels of care,
- Integrated services for women and children,
- Institutional strengthening of the MOH, and
- Extension of services to the more removed and poorer communities.

Differences between MOH and WHO/PAHO Policies. The National Immunization Program uses the following vaccines: BCG, DPT, OPV, measles, MMR), and TTV. The MOH has not yet accepted the recommendation of the WHO/PAHO and UNICEF to add vaccines for hepatitis A and B, hemophilus influenza, and chicken pox, primarily for economic reasons. The project will support MOH guidelines and assist with the introduction of new vaccines, as needed.

Quality of Existing Services. Three main factors affect the quality of vaccination services, (1) the use of inappropriate conditions as counterindication to vaccination; (2) low motivation of health facility staff to provide vaccines and to open a vial for one or only a few children; and (3) poor logistics, organization, and planning: limited hours of operations, certain vaccines only given on limited days, lack of supplies, and families that don't bring their child's vaccination card.

Training and Supervision of Health Workers. HOPE will strengthen the knowledge and practices of the master trainers who, in turn, will train the providers at the district and health facility level. Vaccinations are included as an integral component of facility-IMCI which includes the checking of the immunization status of every child presenting at the health facility, updating vaccines, and counseling of the mother. Periodic performance assessments of skills and practices will be conducted with the partner agency master trainers and facilitators to improve the quality of services provided.

4. Intervention-Specific Approach

Target Group. Children under five (primarily children 0 – 12 months) and women of reproductive age (particularly pregnant women) in the resident and migrant population.

Intervention Approach

- Training of master trainers at health area and district level;
- Support to training of health facility providers and outreach staff conducting plantation health fairs;
- Radio messages promoting vaccination activities and the need to always bring the child's health card when accessing health facilities or when migrating with children for seasonal labor;
- Development of health fair planning tools for plantation health fairs with partner agency staff;
- Work with partner agencies to adjust health facility schedules, particularly during the harvest season;
- Motivate providers to reduce missed opportunities;
- Strengthen partner agency supervision, monitoring, and surveillance skills, and use this information actively for training and follow-up activities.

Coordination with Other Activities. Vaccination activities are usually integrated with other services (e.g., IMCI, maternal care). For example, during a plantation health fair, several providers (often representing more than one institution) may provide the following services to migrants: vaccinations for women and children, deworming, prenatal checks, diagnosis and treatment of common illnesses, and referral for more complex conditions. HOPE will support its partners in this integrated approach.

Increasing the Current Level of Access. Partner agency staff will conduct health fairs on the participating plantations at least once during the harvest season to increase coverage levels of migrant children and women. The project assist its partners by jointly developing a planning tool for these fairs, in facilitating coordination with plantation owners and administrators, and with strengthening IEC activities (radio messages, megaphones). The project will also assists its partners in the training of community agents who promote vaccinations with mothers' groups and other community members. The process of the "sala situacional" will be used to problem-solve with the community in areas of low coverage rates or disease outbreaks.

Plans to Improve and Monitor Case Management. Knowledge and skills-building activities for the immunization component are included in the facility-IMCI training curriculum of providers. Management practices will be improved by more regular on-the-job supervision, at least every three months, and the utilization of nationally and locally accepted supervision tools. The training plan is included in the training section.

Training Curriculum/Materials

The project will use the nationally adapted IMCI training materials for various levels of health workers elaborated by the MOH, PAHO, CAs, and PVOs, and NGOs (see Training section).

Surveillance and Referral There is no established system for notifying autyhorities about disease outbreaks. Often promoters of TBAs report cases to the closest health facility, who then contact the Health Area Epidemiologist. The latter plans the response with district level staff (i.e., taking of samples, treatment of cases and contacts, vaccination, case-finding, and community mobilization for surveillance).

Improvements in the Quality of Care. The project will assist in the following activities:

- Training of master trainers and facilitators at the health area and district level;
- Assistance with training activities;
- Planning tools and coordination of health fairs at participating plantations;
- Logistics and staff support where needed.
- Performance monitoring of providers; and
- Impact studies with the community.

Feasibility of Referral. Plantation promoters assessing and treating common childhood illnesses will identify children with incomplete immunizations schemes and refer these to the existing health services or plantation health fairs. TBAs are also being trained to refer women with missing TTV coverage. Promoters that notice that they are seeing many children lacking vaccines will be asked to bring up this issues during their monthly meetings with health facility staff to jointly plan a health fair at their HU.

Definition of Successful Intervention. Increases in coverage rates and reduction of missed opportunities, as determined by MOH vaccination forms and project KPC surveys will be used as indicators of success.

5. Behavior Change Communication

Use of Local Beliefs and Practices. The project has developed clear messages in Spanish and the main Mayan languages in the target area (Mam and Quiché) about immunizations based on the norms of the national MOH. These are disseminated via popular radio stations in the target area and communities of origin, during health education talks with mothers, and at interactions with providers. They focus on the need to bring along the child's health card, when signaling the importance of vaccinations, the diseases that are being prevented, and side effects of vaccination.

The project uses information obtained by the project KPCs and by the formative research to be conducted in 2002 in the target area about mothers' understanding of danger signs, care seeking, and preventive actions. The findings of the formative research is being used to develop "Reminder Tools" for mothers to be kept in the home for reference and to stimulate appropriate care-seeking. One of the reasons why mothers don't take their children for vaccinations is that they receive nothing for fever, which is something that will be addressed with the project partners.

Target Audiences. Immunization messages are targeted to mothers of children under five, women of reproductive age and pregnant women that come to the health facilities or attend health fairs, as well as to the decision-makers in the family – husbands and mothers-in-laws. Mothers will be expected to bring along their vaccination cards and to seek opportunities to complete their child's and their own vaccination scheme on a timely basis. The fact that MOH staff will come to the plantations during the harvest season at night and weekend hours, will make it easier for migrants to participate on vaccinations activities.

In addition, the project targets the behaviors of health workers through training and supervision, as well as motivation to conduct vaccination activities for migrants on the plantations during the coffee harvest, in line with MOH priorities for migrant health.

6. Quality Assurance

HOPE has and will continue to work with its partners to monitor and assess the performance of staff trained, including in the area of immunization. On-the-job orientation and refresher trainings will be based on these assessments. Exit interviews will be employed periodically with mothers of children under five and pregnant women to assess their perception of the quality of care they are receiving. At the community level, the project will conduct FGDs and other rapid assessments to assess the impact of the health messages disseminated by radio, at the health facilities, by promoters and other community volunteers, and via loudspeakers on the plantations on the behavior of the population.

7. Availability of Vaccines and Supplies

Availability of Essential Vaccines and Supplies. The vaccines and supplies (syringes, cotton, alcohol, containers for the disposables, including the sharps) are essential to the success of this intervention. This, as well as the monitoring of the quality of this activity and the maintenance of the cold-chain is the responsibility of the MOH. HOPE will only provide technical support to training and assist with inter and intra-sectoral coordination of the planning and implementation of these activities.

8. New, Innovative Activities or Strategies

The innovative approach used in the CS-XIII project of having MOH, IGGS and other partner agency staff conduct health fairs on the plantation during the coffee harvest will be continued and extended to the new target area. This approach increases access, particularly for the migrants, who have difficulty using health facilities due to lack of transport, time, linguistic and cultural barriers. An innovation for the current project will be to set clearer standards and expectations for the health fairs (which plantations should be targeted for health fairs, given geographical access, number of migrant families, etc; who will cover logistics and transport; what services will be provided; the level of involvement of the plantation promoter; the promotion of the services among the migrants) to increase efficiencies and effectiveness. These standards and protocols will be shared with the national MOH and IGSS, as well as with other organizations interested in developing similar activities on other agricultural plantations.

B. NUTRITION AND MICRONUTRIENTS; AND
C. BREASTFEEDING

1. Current status/coverage/ prevalence

Nutrition statistics

At a national level, global malnutrition rates (weight-for-age < -2Z) in children under 5 years is 24.2 % and stunting rate (height-for-age<-2Z) corresponds 46.4%, according to the statistics provided in the human development report in Guatemala, 2001.

In the CS XIII target area, according to the final KPC results, the percentage of children under 2 years of age with stunting was 32%, and global malnutrition affected 25%. Malnutrition and stunting rates vary with the age of the child, peaking in the second year of life (Guatemala DHS 1998-99). The sample of the KPC 2001 has a larger contribution of children in its first year of age, not yet affected by poor nutritional intake and disease episodes.

The prevalence of malnutrition in Guatemala remains high. It is expected that during the years 2001-2002 the prevalence of malnutrition will increase significantly because of an overall deterioration of the economic conditions (low world market prices for coffee, devaluation of the national currency, unemployment, etc) and natural disasters (flooding and droughts). The Boca Costa has not been affected as much by the drought as some other regions of Guatemala.

50.7% of aboriginal mothers (DHS 98-99) is shorter than 145cm, a proxy for maternal nutrition.

Surveillance information

In the CS target area, there is no information about the prevalence and/or epidemics of malnutrition because health services only record disease episodes, and do not attend to the nutritional status of their patients, unless the malnutrition is severe. Many health workers also doubt that counseling alone, without being accompanied by donated foods, are ineffective in preventing or treating malnutrition. Programs based on the prevention of growth failure, such as AIN, are still under development.

Access

Many health facilities do not provide growth monitoring and promotion service. Providers are not updated in nutrition counseling, spreading old concepts such as promoting green leaves as important sources of micronutrients. Health facilities use different tools to assess nutrition status: some use weight-for-age, others weight-for height. There are few nutritional rehabilitation centers, although bi-national initiatives with technical support from Mexico are increasing in San Marcos. Other limiting factors are the lack of materials, training and farmland necessary for subsistence farming. There

are no specific programs to educate the population about nutrition. It is estimated that approximately 60% of the population in the target area has access to nutritional services at health posts, but the actual utilization rate of those services (e.g. GMP, MN supplementation) is very low.

During the past years the CS XIII target area had the support from international organizations (eg CARE) with nutrition rehabilitation services, including the delivery of Title II food to severe cases of malnutrition. Because of the lack of documentation of the program impact and evidence of misuse of resources by the beneficiaries, those programs were moved to the Highlands.

Coffee estates provide food rations to workers during the coffee harvest season. Interviews with migrant families conducted in late 2001 showed that the ration distributed in the evening consisted in corn tortillas and coffee, in some instances boiled beans were distributed in the same meal, but in other instances the beans were saved for the next breakfast. Sugared coffee is readily available; unfortunately coffee interferes with the absorption of iron and other nutrients. Families must complement the diet with green leaves they collect in the coffee fields. On selected days they purchase avocados, bananas, eggs and other treats to offer their children. Migrant workers complain that in the Mexican frontier they could get a better balanced food, from their view a Mexican soup has more quality than the monotonous ration given in Guatemala. Coffee estate administrator, in contrast, said that changes in the ration –eg replacing tortillas for bread- have been rejected by the migrants.

2. Causes, Current Beliefs, Knowledge and Practices and Care-Seeking behaviors

Immediate and underlying causes

Distance, time availability and economical factors can also interfere with the access the population has to services.
Poor food security related to lack of land and steady employment, a high disease burden, and lack of knowledge about food and nutrition practices, are primary causes of the poor nutrition status of Guatemalan children. The most important factors that may influence the nutritional status are (DHS):

- living in the countryside, rural residency. This is associated with subsistence agriculture.
- being a member of an aboriginal group. Most aboriginal families lack enough land to sustain themselves.
- mother lacking formal education, schooling.

New factors include job insecurity due to the crisis of coffee. Many laborers are crossing the border with Mexico or migrating to Guatemala City.
Cultural factors: in many communities the custom of feeding the father first is very unfavorable for the normal growth of young children, because they are fed the least nutritive ingredients that are left in the plate. Mothers give watery preparations such as coffee, broths to small children.
High prevalence of diarrhea is likely to contribute to deterioration in nutrition status.

Current Knowledge and Practices (see also KPC report)

Nutrition status at birth: There is no reliable data on birth weight.

Breastfeeding: 96% of one-year-olds or younger are breastfed, 34% start complementary foods after 5.9 months.

Complementary feeding: Around 75% give cereals and legumes to their kids as their main food staple. This mostly vegetarian diet can impair growth, because of the low ingestion of proteins with high biological value present in animal products.

Dietary management of infections: The KPC 2001 showed that only 15% of mothers gave more food to their children during disease episodes, which can be related to the common local belief that food can delay the recovery of a sick child. Some mothers also think it is unsafe to feed solid food to their children before the first birthday.

3. MOH Policies regarding Nutrition

Because of the country's situation (droughts, flooding, unemployment and coffee crisis), the Guatemalan MOH has implemented an emergency plan in eight departments of the country, including Quetzaltenango and San Marcos. Part of the plan is a door-to-door census in the priority municipalities, to establish the actual prevalence of malnutrition. However, a census, when not achieving a high coverage, is less representative than a good sample. A census – attempting to reach all children- also requires much higher effort than a survey using a sample. The MOH might also be tempted to see the malnutrition rate as stable, static. Rapid changes could be measured more effectively through a time series, such as data coming from measurements conducted routinely as part of GMP sessions, or carefully selected surveillance sites.
Types of providers, knowledge and practices of providers: see access
Quality of services: In Guatemala, food and nutrition programs have been implemented as "patches" during peak malnutrition times and during crises. The possibility of locals producing their own food and following a good diet on their own has frequently/ often not been taken into consideration. MOH officials still regard a vegetable processed mix developed locally, Incaparina, as a magic bullet to treat and prevent malnutrition.

Three of the Guatemalan national health policies are related to child health and nutrition: health of the migrant population, reproductive health and integrated health for other groups. Nutrition services include Growth monitoring and promotion (GMP); and nutrition counseling and follow-ups within the facility-IMCI guidelines. The AIN-C and community IMCI strategies are being revised by the MOH to make them consistent and are expected to have a strong focus on promotion. According to IMCI norms, children's weight should be measured regularly.

Dietary counseling, following the AIN model, will use a flipchart that has been developed by the inter-agency group of IEC-AIN. Project HOPE staff participates in this interagency group. Rather than being prescriptive in their counseling, providers will negotiate with the mother one or two improved behaviors that she is

follow-up meeting (next monthly visit, or before) the provider will verify that the desired new behavior was adopted. After this, another improved behavior is presented to the mother. The MOH asked for a formal process of adaptation, validation and official approval before introducing this flipchart for local implementation. The CS project will continue using the existing IEC materials –e.g., assessment of nutritional status- until the flipchart and AIN guides or training materials are officially approved.

The AIN model is based on detection, through monthly visits, of children under two who are not gaining weight adequately, to prevent growth failure. This model is more useful when the proportion of infants who are experiencing clinical ("acute") malnutrition is relatively low. But if the coffee crisis increases the prevalence of malnourished children, the program must also strengthen nutrition rehabilitation.
The CS project will integrate prevention and rehabilitation (see annex I). In order to do this, we will implement AIN (see below) in all the HUs and we will start a pilot plan of home-based nutritional rehabilitation in municipalities intervened by a project supported by ILO. This is part of the matching funds already obtained by Project HOPE.
Training and Supervision. Training and supervision in community AIN will start once the MOH will release guidelines. Until that time the project will be using IEC guidelines.

4. Approach of Food and Nutrition Interventions

Breastfeeding

The project will support integrated services, including the provision of breastfeeding counseling in each contact between the mothers and providers, both institutional and community-based. See RH section about the promotion of LAM.
Breastfeeding after 24 months (continued breastfeeding) can reduce the risk of nutrition deficiencies, in the context overall low food security. Because of this, the project will produce radio messages supporting prolonged breastfeeding at least for 2 years, and more than 2 years where it is socially acceptable.

HOPE will continue working with the institutional level, including "maternity homes" to insure that they promote adequate practices of breastfeeding. There are only three maternity homes.
There are no formal breastfeeding support groups, nonetheless groups of women in communities gather with the promoter to discuss breastfeeding. Promoters facilitate the discussion and uses testimonies of experienced mothers to persuade young mothers to adopt enhanced breastfeeding practices.

Groups of TBAs will continue to receive refreshing training on breastfeeding techniques. Because TBAs communicate well with mothers, they can help establish exclusive breastfeeding and prevent the early introduction of fluids or non-human milk.

Infant Nutrition and GMP

HOPE will contribute to the health services of MOH and partners by strengthening nutritional management with active technical support consistent with the local norms. In intervention areas of the program, HOPE current community-focused IEC approach will be used, until the community AIN and community IMCI are approved by the MOH and

implemented.

In collaboration with the MOH and other local partners, HOPE will assess the effectiveness of home-based nutrition rehabilitation using locally available produce. In the health area of San Marcos, there is experience in evaluating the acceptability of nourishing local foods, like "colored tortillas". These contain corn and soy flour, and an item that gives color like green leafs, pumpkin, or carrots, providing vitamin A. Possible complements are beans, a traditional staple. The OR section includes the proposed investigation to evaluate the efficacy of these preparations, with support from ILO. San Marcos's Mexican MOH counterparts are providing TA on colored tortillas. HOPE will also seek TA from INCAP, the Central American Nutrition Institute based in Guatemala City.

The cultural barriers to the adoption of more nutritious practices (i.e., the addition of oils to foods) will be explored to find a way to overcome them. For example, through AIN alternative practices, like the use of foods with high fat content (peanuts, soy), Guatemalan mothers regard oil as a deworming treatment, not as a way to increase energy density of foods.

The monitoring of this intervention will include the percent of children that gain weight adequately. Every three months, the consolidated information at the district level and area will be shared with the partners to make decisions, adjust plans. The monitoring rounds with LQAS will not include anthropometric measurements to avoid duplication, but they will gather information of the percentage of kids weighed in the last months, and changes in feeding practices. The quality of counseling will be evaluated with checklists, as part of health facility assessments. The coverage of GMP will be assessed with LQAS rounds twice a year in representative sample of residents.

Children who fail repeatedly to gain weight will be enrolled in a more intensive follow-up, as part of the home-based nutrition rehabilitation protocol supervised by a health worker.

Many plantation HUs had acquired bathroom scales because of the lower cost, but these lack the adequate precision to measure monthly increments in weight in young children. The project will seek partners willing to share the cost of replacing bathroom scales for Salter scales.

The project and its partners will train the promoter in AIN, assuming he or she already has already been trained in clinical IMCI. In "extended coverage" communities –where the MOH has contracted a local NGO to conduct health promotion and increase access to basic services- with trained volunteers, HOPE will strengthen components of IEC emphasizing nutrition.

This project assumes that MOH health staff could cover about 25% of the GMP services for children under two in the target area. As an example, if there were 23,000 residents children under two, 6,000 could have GMP in a health post. If there were 90 institutional providers, the average load will be 67 children per provider per month, less than 3 a day. The project and its partners will address providers' attitudes, considering it a waste of

time to weigh children, when there are no donated food items to reverse poor weight gain. Clear messages on what mothers actually can do will be provided.

Community level - In "extended coverage" communities (see above) the project will support MOH and NGOs that are training and supervising community-based providers so they can train and support monitoring groups and mothers who take an active role in GPM. Peer-to-peer counseling will include community members, as in the case of groups of mothers.

Institutional level – The project's main effort will be to have institutional providers including nutritional deficiencies and failure to thrive among the diagnosis and problems to address. Providers will be trained to give quality counseling and how to manage common problems such as passive feeding and monotonous, nutrient-poor diets. Health workers will be trained to refer cases to nutritional rehabilitation centers and hospitals (although mothers do not like to have their children as in-patients for a prolonged period of time). Health personnel will be also trained in home-based nutritional rehabilitation and will also participate to develop initiatives with the local government. Food security initiatives to be funded through the local government -with some pressure from grassroots organizations to ensure health and nutrition are part of the agenda of local governments-, will help to make stakeholders accountable for nutritional status of children. The process of preparing the DIP helped health workers to discover that there were funds they could tap if they helped the local government to submit proposals to increase food security.

Since infections reduce the biological utilization of foods, the project will also work on promoting the reduction of diarrhea on coffee plantations and nearby communities. Some plantations have already improved sanitation, on their own (see also Diarrhea section.

Nutrition rehabilitation

Severely malnourished children detected in GMP sessions will be referred to existing nutritional rehabilitation center only if the mothers have no other children to take care of at home and if those centers are ready to give quality services: they have rehabilitation protocols, trained workers, proper food and counseling. According to MOH officials demand for institutional rehabilitation is low and dropout rates very high.

Micronutrients – Vitamin A

Supplementation with vitamin A. In Quetzaltenango a third of children 1-6 years of age received vitamin A supplements during 2001 (MOH HIS). The KPC survey performed in 2001 found that about one sixth of children between 6 and 23 months have taken a vitamin A supplement.

HOPE will continue supporting the MOH in procuring a regular supply of vitamin A supplements from Sight and Life. To date, 70,000 capsules have been committed. Although the MOH has a budget for supplements, cuts in public spending –caused in turn by less taxes paid by coffee exporters- are reducing purchases of essential medicaments.

Because supplements of vitamin A are given during immunization campaigns, HOPE will promote the conservation of vaccination cards to avoid lost opportunities.

Other micronutrients

Iron - Corn flour, the main staple in Guatemala, is not being fortified with iron. The MOH provides supplements to children. However, the coverage seems to be low, since IMCI norms limit the provision of iron supplements to pale children. Only children with severe anemia are pale. According to a recent (2001) assessment of provider practices, a small minority of providers looks for signs of anemia.
According to the IMCI norm, pale children are also given anti-parasitic treatment, if they have not received one in the past 6 months. However, this only helps cases with severe anemia. Currently, there are no population-based studies of prevalence of anemia using hemoglobin levels.
Solola is an endemic area for parasitic infections and anemia. The Solola Health Area provides antiparasitic treatment, either Albendazol or Mebendazol, during vaccination campaigns to children under two. Hookworm prevalence rates are expected to increase with age.

The transmission of parasitic agents –such as hookworm- in coffee plantations might be easier than in highland communities, because of the warmer climate in the Boca-Costa, overcrowding, and lack of sanitation. HOPE will help procure deworming treatments to improve iron status and growth. Deworming treatments will continue be given by the project partners as part of health campaigns on the plantations.

Maternal anemia: Currently MOH services provide iron and folate acid to pregnant women. HOPE will support the MOH in planning for adequate amounts of micronutrients.

5. Behavior Change Communication

According to the final KPC survey, mothers did not increase the number of feedings per day from baseline. Nonetheless, there was in significant increase in the proportion of mothers who gave complementary food after 5 months (from 33.8% to 57.8% in final KPC). Exclusive breastfeeding rates remained stable (from 74% to 79%). Vitamin A supplementation rates in the same period multiplied by four, from 4 to 16%. These results have been discussed with partners to jointly adjust project approaches. The main audience is the mother or caretaker of children under five, pregnant women and women in a fertile age. Communication channels: see behavior change section.

Some of the factors that can negatively influence behavior change are:

- Under the current crisis of low world market prices for coffee, health services might not be perceived as a primary need for poor families trying in survive.
- Most adult women are illiterate.
- Limited resources available to put in practice new knowledge, such as dietary diversification.
- Language barriers, providers talking in technical jargon

- Lack of available time (migrant mothers are busy picking coffee beans).

Key messages

Target	Target Behaviors	Influencing factors	Activities
Mothers and other caretakes	Give only BF to the child until he/she is 6mo old	Working mothers, lack of refrigeration to store milk	Educate mothers groups
	Put the newborn to the breast within one hour of birth	Institutional policies	TBA training
	After 6mo, give five meals a day in addition to breast milk. Breastfeeding should continue through the child's second year and beyond	Some providers believe breast milk losses quality after 2y	Training of institutional and plantation based providers
	Give the child [foods rich in vitamin A, such as colored tortillas] combined with and oily ingredient Give the child [foods rich in iron, such as beans, animal liver] Demand vitamin and iron supplements for your child	Cultural preferences, poverty, distribution of food inside the family group. Supplies of micronutrient supplements is nor reliable	Training of providers to improve nutrition education during all contacts
	Take your child for growth monitoring every month. If a child has not gained weight for about two months, you need to either rehabilitate him at home or take the child to a child feeding center (CFC)	GMP sessions not available in all communities. Some provi- ders perceive GM as useless in absence of donated foods. Mothers prefer home-based nutrition rehabilitation. There are few CFC functioning.	GMP every month Improve referral to CFC, and train providers in home-based nutrition rehabilitation
	Use exclusive breastfeeding to protect yourself from unwanted pregnancies. This would work [98% success] only if a) menses have not returned, b) your child has less than 6mo and c) the baby is given only breast milk, day and night	Liquids are given to the child at an early age, reducing the stimulus and increasing the risk of failure	See RH section

6. Quality improvement/ quality assurance

Anthropometric measurements: training and supervision protocols will include calibration of scales, standardization of measurements, verifying the correct use of growth tables and charts. Unreliable scales will be replaced.
Nutrition education: the quality of education will be measured by its ability to change practices, competences.
Regular meetings with partners will constitute "quality circles" to address issues.

7. Availability of nutrients

The project will provide a limited number of food rations, mostly through cooking demonstrations in the communities and coffee estates. Mothers and employers might

provide the basic staples such as tortillas and beans, while the project will contribute oil and ingredients from animal sources such as eggs. Those supplies will be purchased with matching funds.

In the project target area, HOPE plans to facilitate the procurement of donated vitamin A supplements and deworming treatments. Shipments will be sent sporadically, less than one per year, allowing the MOH to continue with the regular chain of planning and procurement. Procurement of supplements and deworming treatments will prioritize migrant families.

Supplementation and other interventions are conceptualized as complementary rather than mutually exclusive. HOPE will focus on strengthening the skills of facility providers in counseling to the population in the utilization of resources available in the community. This is consistent with the IEC and AIN-C to be implemented at the national level. As part of the last CS project, HOPE trained institutional personnel in the appropriate use of supplements, and dietary counseling. Recommended foods rich in Vitamin A included ayote/pumpkin, carrots, yellow and orange fruits like melons, etc. The project will not facilitate or implement vegetable gardens.

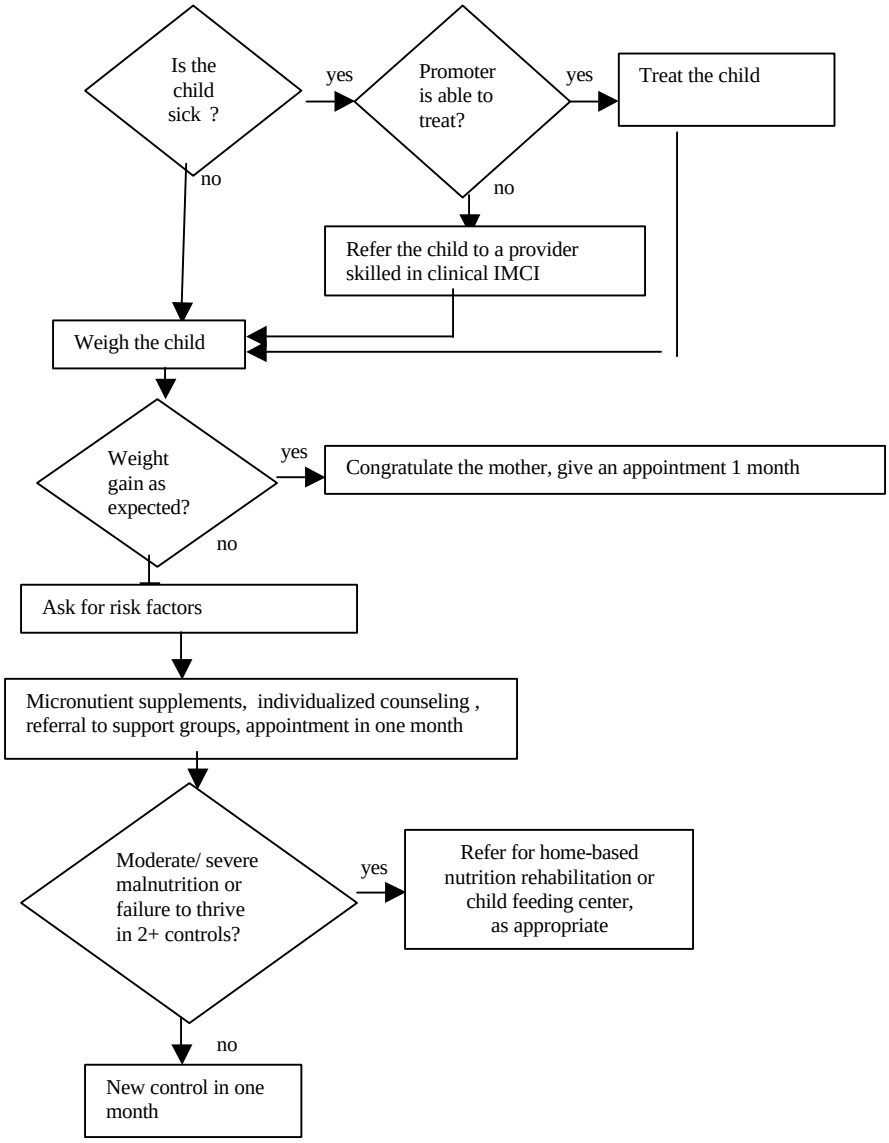
8. New, Innovative Activities or Strategies

In this extension, HOPE will partner with the International Labor Organization (ILO) to increase the availability of essential nutrients and reduce the need for child labor. Rather than using processed foods, the project will assess the nutritional value of local preparations, identifying ways to improve them by adding one or two ingredients. See above example of "colored tortillas".
This project will also contribute to nutrition education in highland villages where migrating families come from. Besides radio messages in Mayan languages, the project will train health providers and local NGOs in IEC. Project HOPE has been using the new AIN approach in Nicaragua and staff will share lessons learned with the staff of HOPE Guatemala.

9. Others

See flowcharts on next page

Flowchart for case management – community provider



D. CONTROL OF DIARRHEAL DISEASE

a. Current Status/ Coverage/ Prevalence

Estimates: According to MOH health statistics, the incidence of diarrhea in Guatemala – national level- was 35 cases per 1000 population in 1999, but this figure includes only reported cases. Case-fatality ratio is 1.5- 2% and the trend is downwards, perhaps reflecting better case management and/ or changes in care seeking behaviors.

Comparison of national and regional rates: The departments with higher reported incidence of diarrhea include Retalhuleu. In San Marcos, diarrhea contributes 43% of total morbidity in children reported by the MOH HIS.

According to the KPC conducted by HOPE in the Boca Costa in 2001, 28.8% of the children under two years in intervened areas had been with diarrhea in the two weeks prior to the survey. This is similar to the DHS 98-99, which found that 22% of children under one and 25.5% of children 12-23 months had diarrhea in the same time period. The same source shows a relative homogeneous prevalence of diarrhea among the different geographical areas of Guatemala.

Seasonality: Rates are higher during the rainy season (Apr-June), when untreated superficial waters used as drinking water become contaminated with feces.

Outbreaks: Being hyperendemic / highly endemic, diarrhea has not manifested as outbreaks in the project area, according to the Epidemiology Divisions of the Health Areas.

Surveillance: There is no active surveillance for diarrhea outbreaks. The number of reported cases is affected by help-seeking behaviors, which in turn are affected by income.

Access: The main limitation is economic. Transportation to the nearest heath facility can cost Q. 30 (over two dollars, higher than the daily wage earned by a coffee picker). Only about 60% of the population is assumed to have nominal access to a health facility within one hour of travel. Migrants and residents in remote coffee plantations can sometimes have free emergency transportation provided by administrators, however recent cost-containment measures are reducing emergency transportation.

Levels of Access Deemed Necessary: Mothers are capable of preventing dehydration with home fluids in most episodes of diarrhea, not accompanied with dehydration. Mothers should take only children with danger signs (less than 10% of all episodes) to a trained provider (HU or health centers).

2. Cause, Current beliefs, Knowledge and Practices and Care-Seeking Behaviors

Immediate and underlying causes: According to the DHS 98-99, diarrhea rates peak in the second year of life, when the protection conferred by breastfeeding starts to fade, the child eats contaminated food, and interacts more with his/her environment. Prevalence of diarrhea is higher in children living in rural homes, with poor sanitation.

Current knowledge and practices: The KPC 2001 survey (intervened areas) showed that 57.1% of children with diarrhea had been taken to a trained provider. There was a shift from paid to free services. ORT use rate increased from 8% (in 1997) to 38.8% (in 2001). The proportion of mothers who maintained or increased feeding during diarrhea increased from 21% to 36.5% .

Beliefs: Infant feces are regarded harmless, thus less than one fourth of the mothers say that they wash their hands after handling baby feces (KPC 2001). Domestic animals are valued as in-kind savings, almost considered family members, and roam freely inside and around the home contaminating the floors and ground with their droppings.

Local words: Severe diarrhea is locally named "salidera", "cursera", "pujadera", or "escurridera". Mild episodes of diarrhea are called "chorillo", "pringa pie", "mal de mayo", or "cagazon".

Home management of diarrhea: A third of the mothers in CS XIII area reduce the amount of liquids offered to the child during diarrhea (KPC 2001), one fifth reduce the amount of breastmilk and 62% reduce the amount of food during diarrhea. 56% of the mothers give the child some sort of medication, frequently without a prescription. Only 14% used ORS. All these behaviors can increase the risk of dehydration and nutritional deterioration during diarrhea -solid food increases water absorption and prevents child malnutrition.

Care-seeking behavior: Frequently, mothers wait until the father is back after work to decide if the child will be taken to a health facility. Mothers have a clear preference for drugs, and in many cases they go to the pharmacy first. Health promoters are sought for help in cases of diarrhea, but mothers press the promoter to prescribe a medication for the child. Mothers feel cheated/ unsatisfied if the provider does not give any medication to the child experiencing diarrhea.

Main barriers for adequate management of diarrhea:

- Mothers unable to recognize danger signs,
- Language barriers for IEC, particularly for migrant groups
- Rural homes with limited access to health facilities, poor roads, lack of transportation and money
- Health facilities without medicines,
- Health center staff do not treat Mayan women well; and
- Some false beliefs are shared with some of the health providers (e.g. solid food can worsen a diarrhea).

3. MOH Policies/Strategies and Case Management Policies/ Current Services

Strategy on standard treatment guidelines: As per the WHO protocol, there are Plan A (no dehydration, home treatment), Plan B (mild dehydration treated with ORS) and Plan C (severe dehydration treated with intravenous solutions). The MOH adopted IMCI only last year and is now in process of training providers to convert from Standard Case Management to IMCI.

Overlapping presentation: Persistent /chronic diarrhea are assumed to be associated with subclinical vitamin A deficiency.

Protocols: Assessment for diarrhea is an integral component of the IMCI/AIN approach and protocol. Regardless of the reason that motivates the visit to the health service or campaign (GMP, immunization, other) mothers are asked if the child has signs, or symptoms of diarrhea. The child is classified using the IMCI guidelines and given the appropriate treatment. If stools are bloody, the children are given cotrimoxazole, based on the presumption that the agent is a Shigella.

Training for plantation promoters uses the IMCI guidelines, containing five modules, a flowchart/ procedure chart and a photographic album with cases.
Community volunteers that work with the MOH are not allowed to prescribe antibiotics, however antibiotics are readily available at most shops.

Types of providers and their performance: All paid health workers and HU promoters are trained to treat diarrhea, using Standard case Management/ IMCI, and provide antibiotics for dysentery. In addition, shops and pharmacies freely promote antidiarrheals and antibiotics. Monitoring of health providers in 2001 has shown a gap between knowledge (80% had proper knowledge of management of diarrhea) and practices (27% put in practice IMCI norms to manage diarrhea cases). The availability of drugs is discussed in item 7.

4. Intervention-Specific Approach

Target group: Since diarrhea morbidity rates are higher among children in their second year of life, this will receive special attention for case management and prevention education. Helping families change their hygiene practices is expected to reduce transmission of diarrhea and benefit all age groups.

Intervention approach:

- Training master trainers in IMCI
- Strengthen health facilities to provide integrated care, including counseling on prevention of diarrhea
- Support health facilities conducting health fairs in plantations
- Support supervisions by MOH sanitation technicians of sanitation on plantations
- Develop intrinsic incentive systems for plantations that make improvements in water, latrines and housing

- Develop and print mothers reminder materials on danger signs to increase care seeking, when needed and support good home management.
- Radio messages on danger signs, care seeking, home management of diarrhea, and prevention
- Logistics (e.g., antibiotics for dysentery) and staff support if needed

Coordination with other activities: Breastfeeding promotion has an impact on the reduction of diarrhea well beyond the time when breastfeeding should be exclusive, thus education sessions will emphasize this benefit. Vitamin A seems to reduce mortality and perhaps morbidity, thus campaigns and routine services will attempt to reduce the missed opportunities for supplementation, particularly in the case of malnourished children and children with chronic diarrhea. Measles immunization can also reduce specific mortality rates for diarrhea and the project will work with its partners on monitoring measles immunization coverage rates and diarrhea rates. The project itself will not conduct direct activities to promote sanitation (except for encouragement of owners during meetings), but as part of the monitoring activities will document if plantation administrators and owners have introduced improvements on their own. While most of diarrhea cases are not caused by intestinal parasites, deworming campaigns are well accepted and can be an opportunity to spread messages on the prevention of intestinal infections.

Case management: case management and IMCI protocols adapted for the material developed by WHO, UNICEF, other international donors.

Referrals, Access for Severe Cases: before plantations had HUs, many cases of mild diarrhea in resident children were taken to health facilities increasing the workload for providers and the cost of transportation. Current procedures have created a layer of community-based providers that can treat even dehydrated children. Only severe cases need to be referred to health facilities. Health facilities are pleased that screening of cases is now allowing health centers to concentrate on patients requiring intravenous fluids and prescription drugs.

Counter-referrals, Follow-up of Cases: This has been a weakness, frequently institutional providers neglected to send back information to the HU. To increase compliance with the norm for counter-referrals, quarterly meetings with partners will review the number of referrals and the number of counter- referrals in the previous months. In addition, the health facility staff are meeting on a monthly basis with the HU promoters. This topic will be part of the monthy agenda.

Plans to Improve and Monitor Case Management: See also M&E section. Providers will be supervised at least every three months to verify compliance with the norms. Monthly meetings with the promoters will also reinforce following the IMCI guidelines.

Strategies to Reduce Antibiotic Abuse: Some HU promoters already have at home a small stock of medicines and sell them to mothers whose children have diarrhea. This might be the only /main financial incentive the promoter receives, and partner agency staff will focus on the appropriate use of these drugs and encourage promoters to see

additional products such as Incaparina (fortified weaning food), pain relievers, etc. The danger of overprescribing antibiotics will be explained repeatedly during training curricula and refresher trainings of all types of providers. The project has no control on drugs being sold in drug outlets, neither on the work of traditional healers.

Drug resistance: No data available.

Definition of successful treatment: Mothers and many providers still use a symptomatic definition, if the diarrhea stops then the treatment has worked. For cases with dehydration, the correction of dehydration is main the criteria. A treatment failure will be a case of diarrhea with dehydration, the latter not being corrected immediately. Those cases will be referred to a health facility.
Persistent/ chronic diarrhea will not be regarded as a treatment failure but treated as a separate condition, requiring special measures such as micronutrient supplements and dietary recommendations, under the supervision of a professional provider in a health facility.
Children with poor weight gain after a diarrhea bout will be regarded as a treatment failure. If failure to thrive continues, they will be referred for nutrition rehabilitation (see nutrition section).

5. Behavior Change Communication

Use of information: The project is conducting formative research (see BC strategy) to that ensure health education is culturally appropriate and the materials produced -such as mother's reminder materials- are useful to increase recognition of danger signs and care seeking.
Interviews with mothers –with both residents and migrants- will make it possible to understand if they can recall messages spread through loudspeakers.

A main challenge (see KPC survey results) is the difficulty to get mothers to continue feeding the child during the diarrhea. This seems to be based on the outdated concept to "rest the gut", shared by some providers. If this is the case, cascade training with evidence-based information is needed to convince providers at all levels that continued feeding shortens the diarrhea episode and prevents malnutrition. Trials of nutritious preparations (see nutrition section) can also include the development of special preparations (paps, gruels to be compared with Incaparina) aimed for children with diarrhea.

Key messages

Target	Behavior	Factors influencing	Activities
Mothers and Caretakers	As soon as diarrhea starts, give the child extra fluids as well as regular foods and fluids	Food withheld during disease, "resting the gut"	Radio, loudspeakers, inter-personal communication
	If there is blood in the child feces, seek immediate help from a trained provider	Children defecate in open field, mothers can not see	MRM including bloody stools among danger signs
	Continue breastfeeding, it can reduce severity and duration of diarrhea	Beliefs: if mother wash clothes, breast milk becomes cold, unfit.	BF promotion (all channels) including this benefit of breast milk
	While recovering from diarrhea, give the child an extra meal every day for at least two weeks	Food insecurity	Nutrition education in all contacts with mothers
	If the child has severe/persistent diarrhea, use only medicines given by a trained provider. Self-medication with diarrhea medicine is usually ineffective and can be harmful.	Preference for self-medication; Mothers expect HUs to provide free medicine	Negotiate with mothers to take ORS instead of antibiotics.
	To prevent diarrhea, child feces should be disposed in a latrine or buried,	Baby feces regarded as innocuous	Loudspeakers promoting latrines in plantations
	Mothers should wash their hand after handling baby feces, before touching food and before feeding children	Same as above	Same as above

6. Quality assurance

Refresher training will focus on training needs identified by the assessment of provider performance. Maternal behaviors that have proven difficult to change, such as dietary management of diarrhea, will receive also emphasis. Exit interviews will help to document gaps between maternal expectations (do not leave the HU without a medicine) and management protocols (rational use of antibiotics).

7. Availability of drugs

The project will monitor the availability of essential supplies such as ORS, vitamin A supplements and cotrimoxazole.

8. New, Innovative Activities or Strategies

Maternal Reminder Materials will be developed using a rigorous approach, including formative research and repeated cycles of pilot testing and validation with focus groups. The partnership with the private for profit sector – an innovative approach pioneered by HOPE- now includes Procter and Gamble. P&G is conducting studies in Guatemala to document the impact of their new water purification products, which they plan to sell in the target area. HOPE will not be directly involved in the marketing of those products, but will develop parallel education on hygiene and sanitation, funded also by P&G, looking for synergy between the different partners and approaches.

E. PNEUMONIA CASE MANAGEMENT

1. Current Status/Coverage/Prevalence

Comparison of District and National Data. Pneumonia continues to be the primary cause of morbidity in Guatemala (21%), and pneumonia is the most important cause of death in children under five. Children under one had the highest incidence rate of pneumonia in 1999 (1627.1 per 10,000 inhabitants, followed by children 1-4 years (589.4 per 10,000). For 2001 Suchitepéquez reported a mortality rate of 6.7 per 1,000 in children under one and a rate of 13.02 per 1,000. The project's KPC noted that 38% - of children had a respiratory infection at project end (August 2001) compared to at the project baseline 52 % which was conducted in December 1997. However, the reduction was probably affected to some extent by the difference in season.

Disease Surveillance and Disease Outbreaks. The MOH HIS collects information about the number of patients presenting with ARIs and the number treated for pneumonia and other ARIs. The living conditions of the migrant families in the overcrowded galeras (barracks) with dirt floors, cooking smoke and limited ventilation provide the perfect conditions for transmitting ARIs and other infectious diseases.

Access, Travel Time, Cost, and Other Constraints. Access in the target area to MOH, IGSS or private health facilities is very poor and probably less than 60%. Access is more difficult for migrant than for resident families, given the limited transport options to health facilities and inconvenient hours; the fact that families do not feel that they can forgo a day's wages; significant cultural and linguistics barriers; and lack of knowledge about danger signs.

Access needed. To improve access, factors, such as the language, customs, beliefs, distance, and available hours need to be taken into account. Therefore, HOPE's emphasis has been on establishing HUs directly on the plantations with promoters that are trained in assessing and managing pneumonia in children, as well as in referring cases with severe disease.

2. Cause, Current Belief, Knowledge and Practices, and Care-Seeking Behavior

Immediate and Underlying Causes. The easy transmission of ARIs via airborne droplets, lack of ventilation in the galeras, overcrowding, and changes in season and temperature contribute to a high rate of ARIs, particularly in the migrant families. Underlying causes include the overall poor nutritional status of resident and migrant children and limited consumption of food rich in absorbable vitamin A and C.

Maternal knowledge and practices. While knowledge of pneumonia danger signs in resident mothers has improved from baseline to the end of the CS-XIII (23% to 42%), care-seeking dropped from 62% to 42%, most significantly care-seeking from pharmacies and private providers. It is not clear whether this is due to the fact than mothers have a better understanding of danger signs and use health services more appropriately, or

whether other factors (lack of drugs, poverty, opportunity costs, etc.) have affected care seeking

Cultural Beliefs. Mothers believe that children contract ARIs when getting wet, playing in cold water, walk barefoot, or when the chest is exposed to cold air. The population has several terms for pneumonia (pulmonia, bronchomonia, bronchitis) and have certain beliefs to prevent it and treat it at home (dressing the child warmly, giving tea of bouganville with honey, etc.).

Social, Economic, and Cultural Barriers. Factors negatively influencing the decisions of families to seek care for pneumonia are similar to those preventing them from participating in vaccinations activities**:**

- Poor treatment by the health facility staff;
- Health facility open during restricted and inconvenient hours;
- Distance from health facility;
- Lack of drugs:
- Cultural beliefs about the causation and treatment of diseases;
- Limited understanding and importance given to danger signs;
- Limited trust in the health services;
- Religious beliefs;
- Lack of education and ignorance;
- Precarious economic situation;
- Number of languages spoken and the inability of the health workers to communicate in languages other than Spanish.

3. MOH Policies/Strategies and/or Case Management Policies/Current Services

Standard Treatment Guidelines/Protocols

Until 2001, the MOH used international case management norms for ARIs. Then, the MOH decided to adopt the internationa; IMCI guidelines for assessment, treatment, counseling, and follow-up and has begun to implement them in eight departments of Guatemala. ARIs are divided into two main groups:

- Cold, pneumonia, and severe pneumonia;
- Ear and throat infections.

Guatemala's IMCI guidelines were adapted with PAHO, CAs, and NGOs/PVOs, and do not differ substantially from the international protocols and HOPE is working closely to assist the MOH in its implementation in the target area. There are specific guidelines for treating conditions with fever (pneumonia, malaria, and dengue).

Quality of Services. The quality of care provided in the target area is often affected by the lack of medications and supplies in the health facilities. Even when trained in IMCI, providers often do not use the guidelines, spend insufficient time with each patient, and do not provide adequate follow-up. This is partially due to an overall lack of motivation

in health workers and resistance to this newly introduced change in assessing and treating sick children.

In August 2001, HOPE conducted a performance assessment of providers in San Marcos and obtained the following results:

- 95% of the assessed providers knew how to correctly diagnose pneumonia and were able to classify the disease based on the child's respiratory rate for age and presence or absence of chest in-drawing;
- Half of the providers did not assess the child for ear or throat problems.

A similar study was conducted with HU promoters with the following results:

- Less than 20% of the promoters checked for general danger signs;
- 56% checked whether the child was coughing or had difficulty breathing;
- In 92% of cases, promoters counted the respiratory rate during a minute, but in only 46% of cases did promoters look for chest in-drawing as a danger sign;
- Overall, 70% of promoters classified children's respiratory problem correctly
- With respect to knowledge, 84% of promoters knew about chest in-drawing as a danger sign of pneumonia and the correct antibiotic for pneumonia (amoxicillin and Trimetroprim).

Providers that did not classify correctly were more likely to not give the correct treatment and follow-up. The project plans to conduct additional health worker and promoter performance assessments and to develop organized approaches with its partners to remediate gaps and weaknesses in performance.

Type of Provider who can Prescribe an Antibiotic. Currently, the prescription of antibiotics is primarily limited to trained health workers. However, the MOH supports the fact that the HU promoters have been trained in standard case management and provide first level access to antibiotics. The HU promoters are formally under the supervision of MOH health facility staff, report on their case management, and receive a resupply of antibiotics. Antibiotics are also relatively accessible to the population through private pharmacies.

*Training Materials Available for Various Types of Health Workers and Supervision***.** The MOH only recently initiated the training of health workers in IMCI, using the nationally accepted materials. For the HU promoters, HOPE adapted a training curriculum developed for a previous CS project that trained community promoters in the case management of diarrheas and ARIs.

4. Intervention-Specific Approach

Approach. The target group for this intervention are resident and migrant children under five. At the national level, HOPE is participating in the national IMCI taskforce and is involved in the planning and implementation of facility and community-IMCI. At the department and district level, HOPE is assisting its partners to have master trainers that can plan, conduct, and provide appropriate follow-up and supervision at least every three

months to facility-IMCI and community IEC training (the latter, until the MOH approves the national community IMCI approach). HOPE will provide limited support to training and supervision, as agreed upon with its partners, assist in the planning of supervision, and develop additional supervision tools for health workers and promoters with its partner agencies, as needed. At the health facility level, HOPE will design and implement with its partners health worker performance assessments to determine how knowledge and skills can be strengthened further to improve the quality of ARI services provided in the target area. To support existing plantation HU promoters to manage ARIs and to establish new HUs, HOPE will coordinate closely with its partners and the plantations. At the community level, HOPE is working on the development of "Mother Reminder Materials" supported by funding from GlaxoSmithKline. These materials for the household level include the danger signs for pneumonia that require care seeking, advice to follow the treatment protocol, home management advices, and relevant information about prevention (for ARI: child vaccinations, good nutrition, including breastfeeding).

Coordination with the Project Partners. Monthly and quarterly meetings at the municipal and health area level with its partner agencies will be continues as under the CS-XIII project. Training curricula and case management protocols have all been approved and are actively used by the master trainers and health workers of the project partners. They will be replaced with national facility- and community-IMCI curricula and guidelines in the target area jointly with the project partners.

Increasing Access. The project plans to establish an additional 100 plantation HUs where trained promoters will classify, treat, and refer children with ARIs. In addition, the project will work with its partners, including the plantation owners/administrators and the community to establish community pharmacies to increase access to essential antibiotics and other relevant medications and promote their correct use.

Plans to Monitor and Improve Case Management. Training and supervision play an important role in improving case management. Training is based on adult learning principles and includes ample opportunity for practical experience, including classification and treatment of actual cases, role play, etc.

Impact assessments are also given a center role in the extension project. The function of one of HOPE's key project staff, the Impact Assessment Specialist, is to design strategies to improve impact and quality of the project interventions. He/she will plan and implement studies, and analyze and share findings with project staff and staff of HOPE's partners about health worker and promoter performance, and client satisfaction and compliance. FGDs, verbal case reviews, observations, key informant interviews, surveys and other tools will be used to obtain this information. Findings will be discussed in quarterly meetings and integrated into curricula revisions, tool development, planning, and other relevant activities.

Access to Treatment for Severe Cases Particularly on the plantations, referral is often difficult due to lack of transport, the distance of the health facility, or inability of the migrant families to forego a day's of wages. For this reason, HOPE and its partners agree

that the plantation HUs play an central role, not only in initiating treatment, but often providing the only acceptable and feasible source of treatment for migrant families. The project's IEC approaches, including the Mother Reminder Tools, will educate families about danger signs that can be life-threatening, if family choose to forego treatment to increase willingness to comply with referrals. HOPE will continue to work with plantation owners/administrators to provide transport for emergency cases.
The project is not planning to improve ARI treatments given by traditional healers and drug vendors.

Drug Resistence and Alternative Drugs

The target population has always used traditional alternative drugs. The MOH has developed a policy for the use of such remedies and promotes these in community-IMCI, since they are usually easily accessible to the population. There is a list of such herbs and medications with scientific evidence of their effectiveness for use in pediatrics. Some of these remedies are available in the target area

Drugs resistance is monitored by the national IMCI program. The IMCI protocol also advises providers what drug to select when the drugs prescribed initially does not appear to be effective.

The main health outcome is more timely and effective management of pneumonias and prevention of complications.

5. Behavior Change Communication

Use Local Beliefs and Practices Aside from care-seeking behaviors, little is know about local beliefs and practices relating to ARI. This is currently being remediated by formative research that will provide the basis for mothers reminder tools about danger signs, home management and prevention. One known factor, i.e. 56.2% of mothers give less food to their child when ill, will also be addressed by this tool, provider training, and IEC approaches. The formative research findings will also be included in the training of providers and HU promoters, so that they area more aware of cultural beliefs and barriers to appropriate home management and care seeking and can address these in their IEC activities with the community. The Impact Assessment Specialist will design additional formative research and OR to improve the understanding of the knowledge and practices of the target population, as needed.

6. Quality Assurance

To implement quality pneumonia control services, the following components have to be in place:

- Equipment and supplies (timer, thermometer, weighing scale, IMCI guidelines, and records and forms) – HOPE will assist its partners (MOH, IGSS, plantations) in assessing equipment and supply needs and identify local resources to cover the costs. The project will assist with occasional shortfalls in equipping and supplying the HUs.

- Essential drugs (acetominophen, amoxycillin, trimetroprim) – this is the responsibility of the MOH; HOPE will assist the MOH to strengthen its requisition and supply systems;
- Training, supervision, and follow-up – Providers and plantation promoters will be trained in IMCI, using established curricula and effective training approaches. Follow-up and supervision will be conducted following planned procedures and utilizing tools that provide supportive feedback on each providers performance.
- Results of periodic performance assessments will be fed into the supervision process and refresher trainings. Results from exit interviews and verbal case reviews will be provided to the health workers to provide feedback from the community on their perceived quality of care.
- Motivation – HU provides stipends and incentives will be addressed with partners and plantations.

7. Availability of Drugs, Micronutrients, Equipment and Supplies

Availability and Constraints of Essential Commodities. The commodities essential to this intervention and quality of care have been listed in the section above and are predominantly the responsibility of the MOH. Supply of the HUs is still irregular, as are per diems for community outreach and campaigns. The project is working with the MOH to budget for the expenses in its annual budget. HOPE will continue to coordinate with all the project partners and assist them in seeking additional sources of funding (FIS, community pharmacies, municipalities). The major constraint to essential commodities are the limited resources of the MOH, which make it necessay to explore other options, including cost-sharing of the community. Since HOPE is only assisting with occasional supply gaps, no major dependency is created. Since the CS-XIII project has been able to attract new resources (plantations, revolving community pharmacies, municipalities), the pressure on the MOH to be the sole supply has actually decreased somewhat.

Safety Concerns. The safe disposal of sharps and contaminated materials, as well as the appropriate and responsible use of antibiotics is included in the new maternal and newborn care training curricula.

8. New Innovative Activities or Strategies

A major innovation in the CS-XIII project was the implementation of the plantation health units to manage common childhood diseases at the plantation level. A major innovation of this project will be the development of better standards for quality of care provided at these units (development of scopes of work for the promoters, standards for the HU, graduation criteria that specify what constitutes an HU that is operated well and supported adequately by the closest health facility, etc) and periodic targeted impact assessments.

Target Audience	Target Behavior	Major Factors to be Influenced	Activities (illustrative)
Provider/HU promoter	Quality integrated case management of pneumonia	Adherence to guidelines and protocols; Provider attitude (interaction with community members, motivation)	Training of master trainers and facilitators; Effective supervision approach with appropriate tools; Periodic performance assessments of providers; Exit interviews and verbal case reviews with caretakers.
Community agent	Effective community education about ARIs	Correct knowledge; effective use of adult learning and community mobilization methodologies; motivation	Training of master trainers and facilitators; periodic assessments of impact of IEC approaches.
Caretakers	Recognition of danger signs, timely care seeking, and compliance with provider's treatment regimen.	Maternal knowledge; reduction of cultural barriers and inhibitors; level of access; provider attitudes.	Formative research for better understanding of caretaker KPC; development of Reminder Tools; training of providers in counseling and advising mothers.

F. CONTROL OF MALARIA

1. Current Status, coverage, Prevalence

Incidence estimates: In Guatemala, 47% of the population (almost 5 million people) is at risk of acquiring malaria. Sixteen health areas contribute with 97% of reported cases of malaria. Only 31% of malaria cases have a confirmed diagnosis, the remaining are classified on clinical grounds as probable cases and are not included in the HIS. *Plasmodium vivax* is still the most common causing agent, with *Plasmodium falciparum* on the rise. Malaria incidence rates have been steadily increasing since 1997 (59.1 cases /10,000), to 80.6 in 1998 and 91/10,000 in 1999. Parasitic index has also grown in the same period from 3.6 to 6.4 per 1000 people. The main vector is *Anopheles albimanus*. The MOH has started integrated approaches that include biological control of breeding sites with *Bacillus sphaericus.*

Seasonal change: In the project area, many febrile cases resembling malaria are seen during the rainy season, April-September. However, there is no increase in the number of reported cases presumably because only confirmed cases are entered into the HIS.

Travel time, cost, access: The MOH and IGSS consider that 80% of the population living in the Boca Costa has reasonable access to health care in the case of malaria. The

remaining 20% is comprised by migrant groups and the rural population living too far from health facilities. There are also cultural barriers such as language and preferences for traditional medicine. Cloroquine can be purchased in many stores at a nominal price. Travel costs have been addressed above.

2. Cause, Current beliefs, Knowledge and Practices

Immediate and Underlying causes: Malaria transmission is associated with breeding sites near the home, a large number of people carrying the parasite, occupational exposure, and vector resistance to insecticides. Lack of participation of local leaders and community members in malaria control campaigns is another factor. Lack of compliance with prescriptions might also contribute because of the prolonged duration of parasite carrier state. Malaria control activities are still managed as a "vertical" program by technicians, with poor coordination with staff working in health facilities which are in direct contact with the patients. Bednets can be purchased locally at 40-90 Quetzals.

Language Used to Describe Malaria: Local words to name malaria are "paludismo" and "frios". A person with a severe malaria is said to be "arreciado", while a mild case is named "regular" or "entreverado".

Care-seeking behaviors: When locals experience fever, they look first for relief using traditional medicine. If they experience clear malaria signs, they self-medicate with Paludol (cloroquine) purchased at any store or pharmacy without a prescription. For women, the decision to seek help is usually taken by husbands, mother-in-law, and other in-laws. There are cultural constraints to seek help, including reluctance to allow blood to be drawn from the patient. Local beliefs include the perception that blood drawn can be sold, or that drawing blood can weaken a person.

The final KPC survey (2001) found that 51% of the mothers were not able to name a malaria sign, while 42% named fever. 43% said that they had a bednet at home. Overall reported use rate among children was 40%. It seems that mothers do not know how often nets must be impregnated, and that washing the nets remove the insecticide.

3. MOH Policies/ Strategies and/or case management Policies/ Current Services

MOH strategy: The Guatemalan MOH had until the late 80's a centralized Malaria Control Bureau. Since the 90's, the management of health programs has been decentralized, and health areas are now responsible to conduct malaria control activities. Health areas are expected to perform outreach activities, but most lack the resources to do, such as vehicles and supplies. The intensity and frequency of surveillance has decreased since the 80's due in part to reduced international cooperation.

Quality: The MOH has distributed detailed norms for case classification, proper laboratory procedures, management of chemicals to reduce vector population, and epidemiological surveillance. However, the fact that very few malaria cases are diagnosed among pregnant women is strongly suggestive that those norms are not been

applied. Febrile episodes among pregnant women and other age/sex groups are treated as other conditions –such as urinary tract infections- and a few thick blood smears are collected and examined. Pale or anemic women are assumed to be iron deficient, and malaria is frequently omitted from the differential diagnosis.

Current services: Health services have an adequate supply of malaria treatments. Both confirmed (thick blood smear positive) and presumptive case receive a 5-day course of chloroquine + primaquine. Pregnant women are expected to receive chloroquine for 3 days, followed by a weekly dose of the same drug until giving birth. After the birth, the mother receives primaquine for 5 days.

According to health workers, the MOH has the supplies to perform thick blood smears, but lack chemical products to impregnate bednets and spread insecticide on stagnant water and inside the homes, as well as fogging equipment. Physicians, nurses and sanitation technicians in charge of Malaria program activities are trained to perform thick blood smears. Community volunteers take blood samples to the lab and wait until the results are available and then bring them back to the person in charge of treating the patients.

4. Intervention- Specific Approach

The main approach is to improve case management. Target groups are:
Pregnant women: The proportion of women that has prenatal care, has her hemoglobin tested, and is screened for malaria will be increased by strengthening the capacity of health services including those based in coffee estates and communities. Training of providers in maternal health will include the proper procedures to manage a febrile case (see section on maternal health).

Children: IMCI training already includes a section on malaria prevention and management. Community based providers, particularly the HU promoter, will be given Job Aids for the management of febrile subjects, as part of the IMCI package of existing protocols. Maternal reminder materials to be developed locally will include messages on malaria danger signs and care seeking behaviors. The desired behavior is to seek help if the child is febrile, within one day.

Promoting the use of bednets and promoting initiatives to reduce the population of vectors will reduce the exposure to mosquito bites. Health promotion will used as vehicle mass media and interpersonal communication.

Coordination with other activities: The project will help close the gap between individual care and preventing malaria transmission:

- Patients with fevers are put under a bednet. A possible approach is to use the HU to distribute bednets to malaria presumptive cases. In this way, mosquitoes cannot feed on sick people laying passive most of the day, and later spreading the parasite to secondary cases

- Using the HIS as a way to provide early warning and calling malaria control crew to the communities/ coffee estates having an outbreak, to conduct mosquito control activities.
- By educating mothers using loudspeakers, local radios and mother reminder materials on malaria signs and proper timely help seeking behaviors
- By educating providers in improving the classification, management, referral and counseling
- By involving community members, leaders, employers and providers in the planning, conduction and evaluation of malaria control activities through IMCI training. Communities and employers will be responsible for reduction in breeding sites. The MOH will provide technicians trained in malaria control and supplies.

Since severe anemia contributes importantly to malaria-associated mortality, all malaria cases, either presumptive or confirmed, should receive iron supplements once the fever is controlled.
The project will improve the integration of malaria control activities into IMCI to overcome the current poor coordination. Health campaigns, for instance, will combine education, provision of services, supervision of providers in charge of febrile cases, supervision of the quality of counseling.

Increasing Current Level of Access: As already happening in most of the world, the project will put the community members in charge of taking care of their own health. For malaria, that means to have in all communities volunteers trained in performing thick blood smears and provide presumptive treatment.

Improvements in Quality of Care: see below

Plans to Improve and Monitor Case Management: Providers will be supervised on a regular basis, at least once every three months.

Training Curriculum/ Materials: Those used by the MOH.

Surveillance/ Referral/ Emergency transportation/ Counter-referral: Surveillance is passive, based in the HIS, capturing only confirmed cases. To increase the proportion of malaria cases captured by the HIS, HU promoters will be trained to collect thick blood smears. Relatives of the patient should help in taking blood smears to the nearest health facility with a lab. The patient will be given an appointment to verify that the medicine is working. If symptoms persist, the patient should be referred to a health facility or hospital.

Successful treatment: Defined as the disappearance of the symptoms, particularly fever and chills. Since malaria cases can experience relapses, the proportion of cases completing the prescribed number of doses will also be considered a measure of successful treatment.

Successful intervention: Reduction in parasitic index. The reported number of malaria cases is expected to increase during this project due to improved diagnosis and increased coverage of the MOH HIS, thus it will not be regarded as a measure of success or failure of specific interventions.

5. Behavior Change Communication

Key messages

Target	Behavior (areas endemic for malaria)	Factors influencing	Activities
Mothers	Make the child sleep under a bednet	Only 50% of homes have a bednet	VHB, community pharmacies selling bednets, IEC
	Treat the bednet with a recommended insecticide	Insecticide is not available	Partnership with other PVOs to achieve economy of scale
	If the child develops fever, take him/her to a trained provider	Preference for traditional medicine and self-medication	IEC, increase access to HUs
	If you are pregnant, take all the pills to prevent or treat malaria recommended by a health worker	Bitter pills are regarded as causes of miscarriage	IEC
	If your child sick or recovering from malaria, give him/her plenty of liquids and food	Passive feeding, fasting sick children	IEC
Others	Families, communities and employers can prevent malaria by reducing mosquito breeding sites	Reduced community involvement: MOH is perceived as the one& only in charge of public health initiatives	Social marketing, coordination between stakeholders. MRMs

6. Quality improvement:

The proportion of febrile cases that have a thick blood smear done will be monitored as part of the regular performance evaluation. The MOH and IGSS will be asked to share evidence that their laboratories are ensuring reliable microscopic examinations. QA methods include sending duplicate samples –coded differently- to the same laboratory to verify agreement between reports. A sample of positive and negative blood smears will be send to a reference laboratory for reexamination.

7. Availability of essential supplies:

HOPE has contacted Bayer through the CORE Group to learn if Village Health Banks (see map of integration of activities) could be a successful channel to sell and reimpregnate bednets. Rather than creating a dependence on donated goods, the

partnership with this -or any other pharmaceutical company- will look for increased access to bednets at a reasonable cost.

Most users of HUs expect those services to be free, but bednets could be sold in community pharmacies managed by ADISS, a sister NGO working in the same area. Whenever possible, HOPE will help HUs to maintain adequate supplies of glass slides – to perform thick blood smears-, malaria medication and iron supplements.

8. Innovation:

HOPE keeps regular contacts with Universidad del Valle/CDC which is conducting malaria surveillance using Geographical Information Systems. As the GIS software is becoming affordable for NGOs and the MOH, HOPE will consider co-facilitating a workshop in the use of GIS for epidemiological surveillance of malaria for MOH/IGSS epidemiologists. GIS can easily produce and update thematic maps for "sala situacional" at any level –municipality, health area, Boca Costa. Those maps will show the frequency and distribution of malaria, dengue or any other condition. Targeting malaria control efforts in geographical areas with high transmission is facilitated. Thematic maps are also a user-friendly way to share surveillance data with project partners –such as plantation administrators- that can hardly understand complex tables or charts. For instance, by showing in the quarterly meeting with plantation administrators that a given plantation has a large number of malaria cases, peer pressure will convince the administrator of that plantation to start malaria control activities immediately, otherwise the outbreak will extend to nearby plantations.

G. MATERNAL AND NEWBORN CARE

1. Current status/Coverage/Prevalence

Estimates of Maternal and Neonatal Mortality. In recent years, the MOH and partner organizations have placed greater emphasis on reducing maternal mortality in Guatemala. The most recent MMR for Guatemala is estimated to be 190 (ENSMI 98-99). The neonatal, infant, and maternal mortality rates for departments within the intervention area are shown below. These rates reflect the entire population in the department including urban areas that have more access to health services, and underreporting in the rural areas is known to exist. The most common causes of maternal mortality include anemia, eclampsia, hemorrhage, postpartum complications, and sepsis.

Department	**Mortality Rate**		
	Neonatal (per 1000)	Infant (per 1000)	Maternal (per 100,000)
Guatemala*	23	45	190
Quetzaltenango**	13	31	85
Suchitepéquez**	10	29	59
San Marcos**	ND	27	110

*ENSMI 1998-1999; ** Annual Health Areas statistics 2001

Prenatal Care Coverage. According to HOPE's final KPC Survey (2001), only 59% of women received prenatal care in the intervention areas: 35% received care from

physicians and 12% each from nurses and TBAs (traditional birth attendants). This compares poorly to the data from the entire country, where about half of the women received prenatal care from by physicians, about one quarter (27%) from TBAs, and 12% from nurses (ENSMI 98-99). Only 13%--compared to 41% in the target area—did not receive any prenatal care (ENSMI 98-99).

In the intervention area, HOPE found that 54% of women with children under two years had received two doses of tetanus toxoid (TTV) during pregnancy; 29% received one dose, and 17% did not receive any (Final HOPE KPC Survey 2001). The most recent Guatemala DHS (ENSMI 98-99) indicates that in the Southwest region (roughly corresponding to the target area), 43% of women received two doses, 15% received one, and 42% did not receive any. These data compare to all of Guatemala, where 40% of pregnant women received two doses of TTV, 16% received one dose, and 44% did not receive any (ENSMI 98-99).

***Perinatal Care Coverage and Service Providers*.** The MOH and IGSS estimate there are about 39,000 births annually in the intervention area. The final HOPE KPC survey (2001) reveals that 47.6% of recent births were attended by a skilled provider (a doctor or a nurse trained in obstetrics) and 55% was attended by a TBA. The HOPE KPC survey (2001) also suggests that in San Marcos and Quetzaltenago (a subsection of the target area), 60-70% of women give birth at home alone with a TBA or no one in attendance. These data compare to the entire country where 41% of births was attended by a skilled attendant (a doctor or an obstetric nurse) and 50% was attended by a TBA (ENSMI 98-99). In the Southwest region (roughly corresponding to the target area), 26% of births took place in a MOH facility and 59% took place at home (ENSMI 98-99).

At the community level, many TBAs (about 80%) have been trained, but they cannot manage complications. According to the Maternal and Neonatal Health Baseline Survey (2001), only 12% of the providers in the health area hospitals use the correct protocols for dealing with deliveries and complications.

Postpartum Care. In a recent study in Guatemala, 65% of women interviewed who had had a recent birth were able to show a MCH postpartum maternal care cards. Of these, 25% had a documented post-partum visit at a MOH health post, health center or hospital. HOPE's recent KPC suggested that only about 13% of women who had a child in the last two years had at least one postpartum visit. Some of the women may have had postpartum visits attended by other health care workers, including health promoters on the coffee estates or in the community, but this was not recorded (HOPE Final KPC 2001).

Roughly 80% of the TBAs in the intervention area (679) have received training by the MOH (Final HOPE KPC Survey 2001). In the current project, the training will continue to be strengthened in collaboration with JHPIEGO by reinforcing the provision of clean deliveries and infection control.

***Travel Time, Costs, and Access*.** One of the main challenges is for women to be able to access maternal and newborn care in a timely manner. The target area is in a rural, mountainous region, with poor road access and very limited transportation options. The coffee estates are 1- 2 ½ hours to the nearest health post by vehicle, and transportation, when available, is expensive and unreliable. Transportation at night is almost non-existent.

To gain better access to care, TBAs and family members must be aware of when it is necessary to seek health care, and not to delay initiating transport once it is determined that care is necessary. The project defines 'adequate access' as a woman's ability to seek, reach, and to receive quality health services without losing a day's wages or incurring unreasonable expenses. In this project, the level of basic health knowledge and care will be strengthened as well as the system for referrals when appropriate.

2. Cause, Current Beliefs, Knowledge and Practices and Care-Seeking Behavior

Cause. Several factors contribute to high maternal and infant newborn mortality/morbidity, including a lack of knowledge of when to seek health care, delays in seeking health care, low levels of care-seeking behavior, and limited quality of existing health care. Extreme poverty, poor nutritional status and limited decision-making power are underlying causes that directly contribute to women's poor health status. Women's educational status is also poor: almost one-third (29%) have never gone to school (ENSMI 98-99).

Current Knowledge and Practices. In the target area, only one-third (33%) of women were able to name at least two danger signs during pregnancy (edema in the face and hands and severe headache) and more than half (57%) could not name any. A full two-thirds (67%) were not able to name any danger signs in the post-partum period, which is reflected by very low utilization of health services by post-partum women (HOPE Final KPC Survey 2001). Women's knowledge in general about nutritional needs during pregnancy, awareness of pregnancy, delivery, and post-partum danger signs, and participation in prenatal and postpartum care are exceedingly low.

***Access to Health Care, Cultural Barriers and Gender Issues*.** The target region is primarily mountainous and rural with poor access roads and limited, relatively expensive, transportation. Health facilities are often located far from where women live, and it can take half a day to travel to a health post or center, or the hospital.

Women do not make decisions on their own: the decision to go to a health facility lies with her partner, mother-in-law or mother. If women do travel to a facility, they are often accompanied by many family members. Families must give up wages to be able to take the time to travel and be seen by a health care professional. Women who seek health care often have to bring their children with them, as there are few options for childcare. Women are given the responsibility for taking care of others, especially their children, and have few resources (time, money etc.) to make their own health a priority.

Many Mayan women are embarrassed to have strangers, especially men, examine them. Having a baby at a MOH facility requires women to give birth while lying on a table on their backs, which differs from traditional practices (that is, squatting to give birth). Often there is a lack of cultural awareness and respect among caregivers (mostly Ladino) towards the client population (primarily Mayan). Most health care providers speak Spanish and often do not speak any of the indigenous languages that are widely used in the target area.

Beliefs and Traditional Practices. Women do not always seek care from a health care facility because they prefer to receive care from TBAs within the context of their own community. TBAs provide care that may include the administration of herbal medicines, giving massage to the abdomen with oil, and instructing women to rest. Even if a TBA refers a woman to a health facility, the family does not often initiate transport, because facilities often lack skilled staff to provide emergency obstetric care.

Traditional practices that either harm a newborn or are neutral include placing a red garment on the baby to ward off the 'evil eye', giving the baby fluids (water, oil) other than breastmilk right after birth, and cutting the cord with contaminated instruments. Some women who live in the target region believe that taking prenatal medications, including iron and folic acid, will make a baby gain weight at the time of birth and may make it difficult for women to give birth.

Language Used to Describe Health. The words used most often to describe severe problems during pregnancy include sangrado (bleeding), hinchazón (edema), calentura (fever), salida de agua (leaking amniotic fluid), dolor de cabeza (headache), blurred vision (vision borrosa or vista nublada), no sale la compañera (retained placenta), salida de la tripa (cordón) (prolapsed cord), debilidad (weakness), ataques (seizures), arrojadera (frequent vomiting), pérdidas (abortions), los pies primero (breech birth), and niño atravesado (transverse position). Words used to describe non-severe illness include mal de orin (urinary tract infection).

Social, Economic, and Cultural Barriers. The most important barriers to providing and managing maternal and newborn care include: widespread poverty; poor educational status; language barriers; reliance on traditional care that is not evidenced-based; women's lack of power to make decisions about seeking health care; and women's lack of knowledge about fertility, pregnancy, and when it is necessary to seek health care.

3. MOH Policies/Strategies and/or Case Management Policies/Current Services

Current MOH Policies and Protocols. The government's new Reproductive Health Strategy—which includes maternal and newborn care—is found in a recent government publication of the *Official Daily Social Development Law* (October 2001). Much of the RH strategy reflects the National Standards of Care (Normas de Atencion MOH) that were published in 1999.

The current maternal and neonatal health policies of the MOH are influenced by WHO/UNICEF standards and norms. The national maternal health package includes tetanus toxoid immunization, family planning counseling and services, and prenatal care, delivery, and postnatal services.

The protocols currently in use are found in *Protocols for Managing Common Obstetric and Perinatal Emergencies for Health Centers and Posts* (*Protocolos de Manejo de las Prinipales Emergencias Obstetricas y Perinatales*), published in 1996. These standard protocols—for managing maternal care, encompassing obstetrical emergencies and perinatal care—are available at health centers and posts and hospitals. JHPIEGO's Maternal and Neonatal Helath (MNH) Project is currently providing TA to the MOH to update its protocols for facility-based emergency obstetric care and to address quality of care and infection control.

New Initiatives and Current Services in Target Area. Last year the MOH, with technical assistance from JHPIEGO, adopted a strategy and model for improving the quality of health services through performance improvement (*Modelo de la Mejoria de la Calidad y el Desempeno de los Servicos* (MMCDS). The MOH is also adopting policies being introduced by JHPIEGO's Maternal and Neonatal Health (MNH) Project that focuses on essential care and the management of maternal and neonatal complications. This effort, known as Essential Maternal and Neonatal Care (*Atencion Materna Neonatal Esencial* (AMNE)) is being introduced in priority areas (San Marcos, Quetzaltenango, Suchitepequez, Solola, Quiche, and Totonicapan). The program is introducing updated protocols and emphasizes 1) the need for a skilled provider to be with the mother during labor and 2) managing common obstetrical complications.

Components of Essential Maternal and Neonatal Care (AMNE)				
Pre-pregnancy	**Pregnancy**	**Birth**	**Neonatal Care**	**Postpartum**
✓ Nutrition ✓ Family Planning ✓ Screening and treating STIs	✓ Focused prenatal visits ✓ Nutrition ✓ Immunizations ✓ Promote effective practices (including traditional) ✓ Avoid ineffective practices	✓ Safe and clean delivery ✓ Use of partogram ✓ Prevention of infections ✓ Active management of labor during third phase	✓ Dry, stimulate, and keep the infant warm ✓ Breastfeeding early and exclusively	✓ Breastfeed early and exclusively ✓ Nutrition ✓ Link with FP services
Managing Complications				
Pre-pregnancy	**Pregnancy**	**Birth**	**Neonatal Care**	**Postpartum**
	✓ Anemia ✓ Pregnancy-induced hypertention ✓ Control of infections STIs (syphilis, HIV/AIDS, hepatitis)	✓ Hemorrhage ✓ Sepsis ✓ Obstructed labor ✓ Eclampsia ✓ Postpartum care	✓ Asphyxia ✓ Low Birth Weight ✓ Infection control ✓ TTV	✓ Hemorrhage ✓ Sepsis

AMNE represents a package of interventions (immunizations, prenatal, perinatal, postpartum and newborn care, and FP counseling). The AMNE strategy emphasizes a systems approach, including the formation of networks, involvement of the community, and participation by local government representatives. Most of the effort of the AMNE strategy implementation is going on at the facility level.

Project HOPE will not itself implement all the components of AMNE, but its work will be supportive and complementary to the AMNE strategy. At this time, MOH health facility staff in most areas are using the current MOH protocols for managing births at higher risk, but these interventions do not include providing blood transfusions, C-sections, etc. The protocols, outlined in the *Protocols for Managing Common Obstetric and Perinatal Emergencies for Health Centers and Posts* (*Protocolos de Manejo de las Prinipales Emergencias Obstetricas y Perinatales*), promote referral to the nearest hospital for most obstetrical emergencies and complications, but they also provide instructions for what to do if the family does not initiate transport. Protocols in the *Manual* include those for hemorrhage, sepsis, abortion, premature rupture of the membrane, mal-presentations, pre-eclampsia, prolonged labor as well as for prenatal, postpartum, and newborn care.

Project HOPE's policy is to use protocols approved by the MOH. As the MOH adopts new policies and protocols, they will be incorporated into HOPE's CS program. In some cases where the MOH does not have protocols or materials, Project HOPE has, in the past, developed them for specific interventions with MOH involvement and support.

Increasing Access. The focus of this project will be to increase demand and access to care and improve the performance of caregivers at all levels. The project is also focused on increasing access to care by increasing the number of health care workers—especially community agents—who are knowledgeable and skilled in maternal care. Efforts will focus on the indigenous migrant population that travels between the Boca Costa and the areas of origin even more remote in the highlands. Improving the reproductive health of the indigenous population is also a priority of the government as indicated in the National Health Plan (2001).

Existing Services, Current Practices and Proposed Training and Supervision. A recent study carried out by the MOH with TA from JHPIEGO (AMNE 2001) revealed that more than 90% of health facility staff (doctors, nurses, etc.) is not managing the care of pregnant women according to the national norms. The study demonstrated the need for interventions to improve the quality of care provided at health posts and centers. HOPE plans to build the technical capacity of MOH and partner organization staff by first training an elite group of Master Trainers in each department who will in turn train health facility staff. The health facility staff will in turn train community agents (promoters and TBAs). Training will focus on the importance of prenatal and postpartum services as routine preventive care for women, and the essential actions that providers must complete during each visit (examination, treatment, counseling about nutrition, danger signs, transport, etc.).

Improved supervision and performance improvement will also be a focus of the extension project. Project and partner agency staff will develop and use tools designed to assess performance and identify strengths and weaknesses in health care provision. The assessments will help to evaluate program interventions and track improvements in service delivery, including the timely and appropriate initiation of referrals.

4. Intervention-Specific Approach (cross-reference with Program Approach Section)

Target Group. The target group for this intervention are women of reproductive age, specifically those who are at risk for pregnancy, pregnant, giving birth, or postpartum. Newborns are also included as a target group for this intervention.

Overview of Intervention Approach. The main components of the approach will be increasing demand for maternal care by increasing awareness through IEC; increasing technical competence of health facility staff through training and refresher trainings using updated protocols; improving quality of care through quality assurance and performance improvement methodologies; and improving access to care by increasing the number of community agents (promoters and TBAs) who can provide education and care in the community.

Increasing Demand Through Health Education and IEC. To increase demand, women will be advised by community agents that prenatal/postpartum visits at a health center are essential for the diagnosis and treatment of infections, iron supplements, and risk assessment, even for women who plan to deliver at home with TBAs. Radio and group education messages will emphasize the essential services women should expect during care seeking visits.

Increasing Technical Competence of Providers Through Training. HOPE's approach to training is best described as a 'cascade' that involves training a cadre of master trainers, who train health facility staff, who train then community agents. The 'master trainers' consist of a multi-disciplinary team of experienced health professionals—from the MOH, IGSS and other organizations—at the Health Area level. The master trainers, along with HOPE program staff, will replicate training with municipal facilitators and health providers.

Improving Quality of Care Through Quality Assurance and Performance Improvement
Quality of care and performance improvement will be addressed through the creation and incorporation of supervision checklists and job aids to facilitate the execution of duties and make assessment of provided care and services easier. The project will use both WHO Health Facility Assessment (HFA) and monitoring approaches (VCR, exit interviews, direct observation) as well as tools developed by JHPIEGO.

Improving Access to Care. One of the main foci of the project is to 1) increase the number of health facility staff who are skilled and knowledgeable in maternal care, and 2) increase the number of community agents who provide maternal and neonatal care and refer to higher-level care. Master trainers will be available at the municipal level who

will train a total of 100 health facility staff and 821 TBAs in the target area. In addition, the promoters on the health units will be trained.

Obstetrical First Aid and Emergency Obstetric Care. In Guatemala, emergency obstetric care consists of managing hemorrhage, pre-eclampsia, and postpartum sepsis. Only 12% of health facility staff are equipped to deal with obstetrical emergencies (AMNE Baseline Survey 2001). There is no capacity at the community level to manage obstetrical emergencies, which are handled by physicians. Topics covered in the EOC course for those who do receive training include: anemia, pre-eclampsia, hemorrhage, mal presentations, prolonged labor, postpartum sepsis.

Maternal and Newborn Care in the Community. At the community level, TBAs will be trained and equipped with teaching materials (flip chart) to teach pregnant women about the danger signs during pregnancy, around the time of birth, and postpartum. The TBA will refer women to the nearest health post or center or hospital, as appropriate, if the mother or newborn appears to have a problem. The TBA will also conduct health education to mother's groups in the community.

Community agents (including 1,000 TBAs and 1,000 health promoters) will be trained to recognize and refer when appropriate. The following topics will be covered in the training for community agents: retained placenta, postpartum hemorrhage, asphyxia, premature infant, low birth weight infant, and neonatal sepsis.

Maternal and Newborn Care at the Health Facility Level. Both health centers and posts are equipped with protocols for managing the most common obstetrical and perinatal emergencies. Health facility staff will be trained in the new protocols to manage obstetric emergencies and in providing quality care services.

Coordination with MOH, Partner Organizations, and Other Existing Activities and MCH Activities.

National and Health Area Level. Each month, the Health Area Maternal Mortality Committee (MMC) meets to analyze the recent causes of maternal mortality. Health Area representatives as well as representatives from the community, including TBAs and community leaders, gather to review recent cases of maternal mortality.

Department, District Level and Municipal Level. Master trainers from the MOH, IGSS, CAs, and other organizations conduct training according to the 'cascade' approach. The MOH HIS also receives data from the health units on the coffee plantations, and in exchange the health promoters receive technical updates and supervision visits from MOH health facility staff.

Coordination with Other Existing Activities. Project HOPE is very active throughout the western region in several departments. Project HOPE is working with JSI and Manoff on developing and strengthening networks of local NGOs to improve RH service delivery. In the current CS project, HOPE is working very closely with JHPIEGO's MNH project

to improve service delivery through training, performance improvement, updating protocols, and increasing the number of health care workers with the knowledge and skills required to make an impact on MCH. Project HOPE is also working with URC in reviewing materials used for FP throughout Guatemala.

Community Links to Health Facilities and Emergency Transport

Referrals and Counter-Referrals. TBAs in the community who are trained to recognize danger signs before, around the time, and after birth will refer women to the nearest health facility for further treatment. Most times, the TBA will accompany the woman along with family members. At this time, only the department of Quetzaltenago has a system where the hospital sends a slip with the client for a referral to the community when a patient is discharged.

Emergency Transport. The project partners and project staff will work with plantation networks and individual plantation owners to develop an emergency transport plan for each of the plantations and assure that pregnant women, their partners, and the TBA are aware and ready to use this option when indicated by danger signs or complications.

Improving Drug Supply and Managing the Distribution and Use of Antibiotics and Other Medications . Project HOPE is working with the MOH, partner organizations (IGSS, ANACAFE, other NGOs) and its own spin-off NGO, ADISS, to improve the supply, availability, and affordability of essential maternal drugs and supplies. Project HOPE is actively involved in developing mechanisms to distribute supplies and medications.

5. Behavior Change Communication

Incorporating Local Beliefs into Behavior Change Interventions. The program will take into consideration known beliefs, practices, and local languages spoken when planning IEC activities and developing and/or modifying materials. HOPE plans to use radio spots in the communities of origin to promote behavior change aimed to improve the health of migrant mothers and infants. The radio spots will be tested at each stage of development with representatives of the target audience to ensure that the messages desired are the messages that are delivered. The project has compiled a list of local words to describe severe maternal health problems that will be used in IEC efforts.

Whenever possible, Project HOPE will use materials developed for the target population either by the MOH or one of its partner organizations. In the case of the radio spots, Project HOPE will be developing new scripts.

Desired Health Outcomes

Target Audience	Target Behavior	Influencing factors	Major activities
Pregnant and immediate postpartum mothers	Women will initiate breastfeeding within first hour	✓ Tradition/customs ✓ Supportive environment ✓ Technical competence of	✓ Training health workers at all levels—especially TBAs--to support early initiation of BF ✓ Radio messages broadcast in Spanish and indigenous languages

		caregivers	
Pregnant women	Women receive two doses of TTV prior to birth	✓ Awareness of need for TTV ✓ Availability of TTV ✓ Location of service provision	✓ IEC to increase knowledge of TTV diffused through TBAs, health promoters and mothers groups. ✓ Increase availability of TTV at health facilities through collaborative efforts
Pregnant and postpartum women	Women who have given birth have at least one postpartum visit	✓ Awareness of need for postpartum care ✓ Availability of skilled health worker	✓ Health education through MOH network and partner organizations

6. Quality Assurance

Project HOPE will work with its partners (MOH, IGSS and other local organizations) to strengthen the quality of child survival programming. The project will use several methodologies to assess and monitor quality, including direct observation, interviews, and assessments of clinic records. The project's baseline and final studies will quantify changes in behavior at the household level. Examples of how QA will be applied are as follows:

Supervisory capacity: QA techniques will be used to improve 1) the performance of TBAs rendering care to ensure that the births are clean and safe, and 2) the effectiveness of the MOH supervision of TBAs. The forum for applying QA will be the Maternal Mortality Committees (MMCs), consisting of TBAs, nurses from the closest health post or center, representatives from local NGOs and community groups, and local authorities and leaders. The emphasis will be on clean, safe births and supervision techniques. The methods will be simulation of birthing situations and competency-based training.

Quality of care will also be improved by strengthening the technical skills of NGOs and NGO networks in RH via the ProRedes project.

7. Availability of Drugs, Vaccines, Micronutrients, Equipment, etc.

Essential Commodities. For maternal health, Project HOPE in collaboration with the MOH and partner organizations at various levels will continue to work hard to increase the sustained availability of commodities required for prenatal and postpartum care throughout the target region. Essential commodities for maternal and newborn care at the community level include Vitamin A, folic acid, TTV vaccines, iron pills, and clean birth kits.

Logistics and Sustainability. Project HOPE and its local NGO, ADISS, have been leaders in the target area for developing local pharmacies that provide medications and supplies for a relatively low price. The drugs are purchased in bulk and the outlets are strategically located in areas where the need is greatest and where the site is relatively easy to access by many people. Project HOPE also is working with the MOH and GOG

to increase donor supplies of essential commodities and provides supplies through its GIK program.

Safety and Infection Control. In the current project, more TBAs will be trained to provide pre- and postnatal care, and ensure safe and clean deliveries. The TBAs will be taught to identify and refer women who need TTV injections or are suspected to have an STI.

8. New, Innovative Activities or Strategies

Working through Networks and TBAs. The program's emphasis will be on empowering the community members with information and health care workers with the skills needed to improve maternal and newborn outcomes. The project plans to increase coverage by disseminating information through networks (ProRedes), increasing demand for services by working more intensely with TBAs, including having them dispense iron folate and Vitamin A, and by a improving the skills of health care workers to manage maternal complications by working closely with JHPIEGO's MNH (AMNE) Project which includes infection control.

H. CHILD SPACING

1. Current Status/Coverage/Prevalence

Contraceptive Prevalence in Guatemala and Target Area. In Guatemala, 27% of women of reproductive age (WRA) and 38% of women in union use a method of family planning (FP) (ENSMI 98-99). The contraceptive prevalence rate is increasing: in 1987, 23% of WRA were using a method of FP, compare to 32% in 1995 and 38% in 1998-99. (1987, 1995 Guatemala DHS). Among women in union, sterilization is the most popular method (17%) followed by calendar rhythm (6%), pills (5%), and IUDs (2%) (ENMI 98-99). Contraceptive use increases with age, education, and number of children. FP use is more prevalent in urban areas compared to rural areas (54% compared to 28%).

In the Southwest region of Guatemala, which roughly corresponds to the target area, 30% of WRA use a child spacing method; of these, 23% used a 'modern' method. FP among the indigenous is very low compared to the Ladino population: 13% versus 50%.

The unmet need for family planning in Guatemala is estimated to be 23% of women (ENSMI 98-99). ('Unmet need' is defined as those women 1) who are not using a method, 2) not currently pregnant or amenorrheic, 3) fertile, and 4) do not want more children now or in the near future or who are currently pregnant or amenorrheic and did not wish to have a child). Among the indigenous the unmet need is higher, at 30%. In the Southwest region—roughly the target area—the unmet need for FP is estimated to be almost 60%.

HOPE's recent Final KPC Survey (2001) indicates that only about one-fifth of women in the target area (21%) are currently using FP. The most popular methods include

sterilization and norplant (at 36% each but this represents only 12 users for each method), followed by injectables and NFP (both 9%). Only 3% of the women reported using pills. Data on LAM (Lactational Amenorrhea Method) use is not available; however, the KPC survey indicated that more than 60% of mothers exclusively breastfeed during the first four months following birth (HOPE Final KPC Survey 2001).

Access to Child Spacing Methods. The target area is located in a rural, mountainous region where transport is erratic, expensive, and infrequent. In general, women have a difficult time obtaining FP methods, because they live relatively far from a health center or post. Women must get permission from their partners and must be accompanied, which means that if a woman travels to seek health care, the family must give up a day's wages. Language and cultural barriers also contribute to the lack of health-seeking behavior, especially among the Mayan population. Most providers are Ladino and do not speak any indigenous languages. In the target area, more than half of the women speak an indigenous language as their primary language and limited or no Spanish (HOPE KPC Final Survey 2001).

The MOH and other experts in the area estimate that roughly 30% of persons in the target area have access to FP services. Although most MOH health facility staff has taken a two-day course on FP/RH, only 10% have taken the more robust 8-day course that HOPE recently designed in collaboration with its partners. The course was piloted last year in two districts in Quetzaltenango.

In the target area there are relatively few clinics or outposts that offer family planning. The MOH health centers are located in the urban municipal centers, and the health posts are scattered in the larger towns. APROFAM (the IPPF affiliate in Guatemala) also offers FP but has a limited number of service delivery points in the target area, including 6 clinics. In addition, APOFAM has a cadre of community-based distribution agents who are active in some of the target area.

In addition to the MOH and APROFAM, IGSS in Suchitepequez also provides FP methods at their few service delivery points but these are only available to family members of employees whose employers pay into the Social Security system. IGSS also has 43 health facilitators who give talks about FP and distribute select methods (pills, injections (Depoprovera) and condoms) in the community. IGSS estimates that only 4% of WRA in its target population uses FP based on a survey of over 5,000 respondents.

The health units on the coffee plantations do not yet have trained providers or stock FP methods. In two districts in Quetzaltenango (El Palmar and Colomba), health promoters and community health educators have been trained to teach residents and migrants about FP methods, using key messages that were developed using results from formative research with the target population.

2. Causes, Beliefs, Knowledge, and Practices and Care-Seeking Behavior

Factors Influencing Use of Child Spacing Methods. Child spacing methods are not used widely throughout the target area due to lack of knowledge about fertility, pregnancy, and FP; poor access to services; lack of skilled FP providers who can counsel women effectively in their own language; and social and cultural barriers.

FP is unacceptable to many Mayans because many they fear possible side effects and distrust 'caregivers' who wish for them to take drugs or use devices that affect their fertility. There is fear that FP methods can cause permanent infertility and cancer, as well as other health problems, such as male impotence (HOPE's RH Focus Group Discussion Reports, June 2001).

Current Knowledge, Beliefs, and Practices. Among WRA in Guatemala, most (82%) have heard of at least one method of child spacing (ENSMI 98-99). For women in union, this figure is slightly higher (85%). 76% have heard about pills, 73% about sterilization, 68% about injections, 59% about condoms, 49% about IUDs, and 46% about periodic abstinence/rhythm.

Knowledge of at least one method of FP is markedly different between the Ladino and Mayan population. In Guatemala, 95% of Ladino women in union can name at least one method of child spacing, compared to only 63% among the indigenous. The majority of women in union who live in urban settings know about at least one method (95%) compared to 78% of women who live in rural areas (ENSMI 98-99). In the Southwest region of Guatemala—roughly where the target area is—84% of women know about at least one method of child spacing (ENSMI 98-99). HOPE's recent Final KPC revealed that fewer women know about FP in the target are (71%) (HOPE Final KPC survey 2001). The methods most widely recognized in the target area include pills (64%) and injectables (61%), followed by condoms (17%), female sterilization (15%), IUDs (14%), and calendar rhythm (9%).

In focus group discussions (FGDs) conducted last year in the target area by Project HOPE, the majority of women stated that they had not heard about methods to space children, although a few had heard about pills and injections (HOPE's RH Focus Group Discussion Reports, June 2001). Those who knew about FP learned about it primarily through APROFAM in the municipal centers. Most participants wanted to know more about family planning. A few stated that they were forbidden to talk about FP, while others stated that they were not interested in learning more because of their religion. Most were embarrassed to talk about FP and many were reluctant to discuss their opinions openly.

Care-Seeking Behavior. The health units of the coffee plantations provide an important link between workers and their families and service provision and referral. The health promoters also refer clients to health facilities or APROFAM outlets to obtain methods. About half of women in the target area have used the health units on the coffee plantations for health care, but mainly on behalf of their children (HOPE Final KPC Survey 2001).

Social, Economic and Cultural Barriers and Gender Issues. In addition to the physical, economic barriers and cultural barriers mentioned earlier (long distance to service delivery sites, expense and opportunity cost associated with travel to a health provider, and linguistic and cultural differences between the Ladino caregivers and mostly indigenous clients), there are other factors that contribute to low use of FP methods.

Among women in union in Guatemala, 38% have never discussed FP with their partner, and 36% had only discussed FP once or twice (ENSMI 98-99). Among indigenous women in Guatemala, more than half (57%) approve of family planning but state that their partner does not or that they do not know whether or not their partners approve.

In FGDs conducted by Project HOPE in the target area last year, many men seemed ambivalent about their partners using FP (HOPE's RH Focus Group Discussion Reports, June 2001). The men expressed the opinion that if women use FP, they may have a greater sexual appetite and take other partners. Some mentioned that FP is against their religion. Most stated that FP methods are expensive, and that the places where one could go to obtain a method were far from the coffee plantations. Most men would not want to use FP themselves: the majority believed that FP is a concern for women.

3. MOH Policies/Strategies and/or Case Management Policies/Current Services

Up until three years ago, FP was not actively promoted by the MOH and FP methods were not routinely available in health facilities. Policies for family planning and reproductive health were adopted by the government and published in 1999 (*Marco politico y Legal Para Salud Reproductiva y La Planificacion Familiar en Guatemala*) and standard practice guidelines for reproductive and sexual health (*Salud Reproductiva y Sexual: Manual de Referencia para la Aplicacion de las Normas de Atencion*) were published in the same year. The latter provides a definition of RH (based upon the WHO definition), lists the components of a RH programs, discusses the determinants of RH and associated risk factors, provides descriptions of the most common FP methods available in Guatemala, and provides guidelines for the diagnosis and treatment of STIs.

The MOH strategy features an integrated life-span approach to RH that encompasses maternal and newborn care, family planning, prevention and treatment of STIs, including HIV/AIDS, sexuality and illnesses associated with reproductive function (for example, breast cancer). The first National Plan for Reproductive Health 2000-2004 (*Plan Nacional de Salud Reproductiva*) was released in 2000. The current child survival project will use the guidelines and practice norms adopted by the MOH and promote the MOH-approved documents protocols for counseling clients on child spacing methods.

Available Methods and Service Delivery Points. Methods that are provided by the MOH include pills, condoms, Depoprovera and sterilization. Most health care workers are authorized to dispense FP methods, including doctors, nurses, auxiliary nurses, rural health technicians, and health promoters on the coffee plantations. FP methods are provided by the MOH and they are free of charge. APROFAM also distributes FP

methods but charges for them: 30 quetzales for Depoprovera, 90 cents for condoms, and 4 quetzales for pills.

Quality of Existing Services, Provider-Client Interaction, Training and Supervision. Although most health facility staff has received some orientation to FP in the past two years, many staff members are not versatile in FP counseling and provision. The current standard MOH-approved FP course lasts only two days and covers the following topics: client rights, screening for eligibility criteria, counseling using GATHER (greet, ask, tell, help, explain, and return for follow-up), FP methods and mechanisms, and referrals. Only about 10% of health facility staff have taken the newly designed MOH-approved RH course that lasts five days and was designed by Project HOPE in collaboration with project partners. The 5-day course was introduced last year as part of a pilot RH project in two districts in Quetzaltenago, within the target area.

Since community agents have not yet been trained in FP, there is no current supervision regarding this intervention between MOH staff and the health units on the plantations, however, there are already supervision systems in place for monitoring ongoing CS interventions (ICI, maternal care, etc.) Supervision is conducted once per month, when the promoters travel to the local health facility for technical updates. About one every three months MOH staff travel to the health units on the coffee plantations. When the community agents (including the health promoters on the coffee plantations) are trained in FP and HIV/AIDS/STIs, MOH personnel will begin to supervise the community agents for FP competency as well.

Materials. Project HOPE is part of a consortium of organizations that are reviewing materials being developed by URC that will be used throughout the target region. URC has developed excellent FP materials. The materials consist of a series of folded brochures—one for each FP method—printed on durable paper that feature colorful illustrations. The project is also using materials developed by the Population Council and APROFAM as reference materials for health facility staff.

4. Intervention-Specific Approach

Target Group

The main target group is women (and men) of reproductive age and their partners. In addition, Project HOPE will assist its partners to train health care providers at all levels in high quality service provision to promote the use of child spacing methods.

Intervention Approach. Emphasis in the current project will be placed on training master trainers and assist the partner agencies to train its facility staff and select community agents (promoters and TBAs) in quality counseling and service delivery.

Program Coordination, Level of Access, and Referrals. Project HOPE will work closely with its partners (MOH, IGSS, ANACAFE, NGOS, community groups, etc.) to fine tune strategies and objectives at the national, area, department, municipal, and community levels throughout project implementation. HOPE will also work closely with

other institutions, including APROFAM and the Population Council, to revise basic FP messages and create scripts for radio use.

One of the goals of the current project will be to increase the availability of FP methods, including NFP methods (LAM and the simplified Standard Days Method or Collar Method). Qualitative research that HOPE has done in the recent past suggests that natural methods are acceptable in Mayan communities.

The program reflects the MOH's integrated approach to RH, where programmatic activities are coordinated at all levels of the health care system. Every three months at the department level, the Analysis Committee meets to plan and problem solve major issues for program implementation.

To increase the use of child spacing methods, it is necessary to bring services closer to the target population, as current FP services are very limited and service delivery points for FP are almost non-existent. HOPE will coordinate with APROFAM, which has a network of female volunteer CBDAs in part of the target area, to expand its outreach to include at least some of the larger plantations. In addition, HOPE and its partners will train 100 health promoters and TBAs to be CBDAs. They will counsel clients and distribute select family planning methods on and in communities near the plantations.

By the end of the project, it is expected that FP methods will be available in 79 MOH service delivery points (29 health centers and 50 health posts), 100 health units on coffee plantations, and at 20 other locations (small shops, etc.).

Training and Supervision and Materials. Training and refresher training will be carried out during the current project at all levels. In addition to addressing technical knowledge and skills, emphasis will be placed on quality of FP counseling, including providing information to clients, assessing clients for eligibility criteria, offering clients a choice of methods, following clients, and making appropriate referrals. Job aids will be developed as reminder tools to facilitate job execution for health promoters in the health units, and for new CBDAs (select promoters and TBAs). We also plan to work closely with URC, APROFAM, and the Population Council to develop culturally appropriate materials for indigenous CBDAs.

The main materials that will be used include current MOH treatment guides and protocols, supervision guides designed by the Population Council for both clinics and for the community, and flipcharts and brochures designed by URC (Quality in Health Program). Select materials developed by APROFAM will also be used.

The MOH is currently revising some of its protocols and guidelines, taking into account increased emphasis on quality of care, infection control, and TA received from USAID CAs, including JHPIEGO and URC. The project will use the latest materials approved by the MOH. Usually Project HOPE is involved in the creation and/or review of new materials.

The main activities for this intervention are shown in the table below:

Activity	Responsible Agent	Content	Monitoring and Evaluation	Number to be Trained
Training of Health Area Master Trainers	HOPE in coordination with MOH, JHPIEGO, URC, APROFAM, Population Council	Two-day training covering the following topics: counseling, FP methods, selection/eligibility criteria, informed consent, practical component (role play, case scenarios, etc. Methodology: Participatory, adult learning techniques (role play, etc). Ratio of theory to practical components: 75:25.	Knowledge-based assessments, on-the-job follow-up and post-training assessments (using checklists) and performance improvement exercises.	MOH 15 IGSS 5 ANACAFE 10 NGOs 30
Training of Master Trainers (replication) for each district level.	MOH, IGSS, ANACAFE HOPE			MOH district personnel 90 (30 doctors and 60 nurses) IGSS: 50 ANACAFE: 32
Training of community agents	MOH, IGSS, ANACAFE HOPE			MOH Community agents 1500 Health Unit Promoters 200
Training in IEC	MOH IGSS ANACAFE HOPE	Two-day training on effective IEC strategies, including technical content, making presentations, key messages, using flipcharts, providing information and answering questions, making referrals Methodology: adult learning, participatory Ratio of theory to practical components: 50:50.	Performance/ Competency – based: Practice sessions, role play, checklists	Community promoters/health educators 800
Assistance with Health Area Planning	HOPE and MOH	TA from Project HOPE to MOH and partners to strengthen FP efforts and monitor FP strategy implementation and interventions	Verification of supplies and service provision; exit interviews and client satisfaction assessments.	Health areas 5 Districts 29
Promote the development of alternative sites for selling and dispensing of FP methods.	HOPE ADISS MOH APROFAM	Buy-in of local stakeholders in local governments, information orientation for plantation owners and administrators.		Year 1: one CBDAs in each Health Area. 5 Year 2: 10 Year 3: 15 Year 4: 20 (Total of 20 in 4 years)

Training of CBDAs	HOPE and APROFAM	FP counseling, screening and provision (eligibility criteria), record keeping	On-the-job supervision Review of supply reorder forms, CYPs distributed	100 new CBDAs in Suchitepéquez and Quetzaltenango.

5. Behavior Change Communication

Strategy. The goal of the BCC strategy for FP will be to increase the use of FP in the target area and increase the quality of care provided by health care workers. Using the results of recent surveys at the national and local level, including those carried out by Project HOPE (including HOPE's baseline survey and RH Focus Groups Discussion Reports from 2001) we have designed our interventions to impact behavior of both caregivers and clients.

Target Audience	Target Behavior	Major Factors to be Influenced	Activities
Provider/HU promoters/CBDAs	Promotion of FP use Effective client counseling	Communication skills Technical knowledge	Training Job aids (eligibility criteria, etc.) On-the-job supervision
Women of Reproductive Age (WRA)	FP acceptance and use	Correct knowledge	IEC Radio spots Health talks Community-based distribution agents Role models

6. Quality Assurance

Technical competence and quality of care will be monitored at the health facility level using QA tools developed by JHPIEGO. Service delivery at the community level will be assessed using techniques such as Community COPE (Client-oriented Provider Efficient) developed by EngenderHealth.

Assessments will also be periodically carried out using techniques including exit interviews and verbal case reviews. The numbers of new acceptors will be monitored as well as the number of referrals, and the reasons for the referrals. We will also track the CYPs being distributed by the new CBDAs.

7. Availability of Contraceptives and Related Supplies

Essential Commodities. Essential commodities for FP include contraceptives, teaching materials (flip charts, etc.), materials and supplies to teach NFP and LAM (including teaching materials and 'collars'), job aids, guidelines and protocols.
Existing Supply and Constraints. The number and proximity of service delivery points for contraceptives are very limited in the target area. The private sector is not a big

player in the provision of FP services, although condoms are available at some small local shops in a few places.

Monitoring and Sustainability. Project HOPE is providing leadership in improving the bulk purchase of supplies for child survival interventions through its own local NGO, ADISS, and through its work in developing revolving drug funds. Project HOPE is working very closely with the MOH to ensure adequate supply and sustainability, although Project HOPE itself will not be supplying contraceptives.

8. New, Innovative Activities or Strategies

The most important innovation for the child spacing intervention will be introducing CBDAs into select areas and using community participatory methods to assess quality of care of community-based distribution programs. In addition, Project HOPE and its partners will be promoting the use of the Standard Days Method—a simplified method of NFP—recently evaluated in Guatemala and found to be reasonably effective (about 90% among all users). Focus groups with indigenous women will be conducted to determine the best and cheapest ways to produce mnemonic devices to remember the fertile days. The SDM is has great potential due to its low cost and demonstrated acceptability among indigenous Mayans in five communities in the highlands (results of clinical trial published August 2000 in *International Family Planning Perspectives*).

I. STI/HIV/AIDS PREVENTION AND CARE

HIV/AIDS/STIs

1. Current Status/Coverage/Prevalence.

Estimates of STIs and HIV/AIDS. Sexually transmissible infections (STIs) including HIV/AIDS, are a growing concern in Guatemala. The incidence of HIV infection is growing at an alarming rate, and services to provide screening and care for persons with STIs are very limited. In 2001, the mortality rate from HIV/AIDS was estimated to be 37 per 100,000 for all of Guatemala, compared to only 14 per 100,000 in 1996 (MOH National STI/HIV/AIDS Program). The incidence rates for 2001 are higher in the target areas: 68 in Suchitepequez and 53 in Quetzaltenango, although the rate is lower in San Marcos, at 15 (all rates per 100,000). The vast majority (88%) of persons infected with HIV/AIDS are adults of reproductive age 15 to 49 years. Three-quarters of these cases were diagnosed in men.

It is widely believed that cases of STIs, including HIV/AIDS, are grossly underreported. The MOH routinely collects data on the following STIs: HIV/AIDS, Hepatitis B, chancroid, syphilis, papillomavirus (HPV), herpes, and trichomoniasis. The official rate for syphilis, for example, is 4.61 per 100,000 (Health Conditions in Guatemala, MOH Department of Epidemiology, 2000). This figure is most likely very low compared to the actual morbidity within the population. One study revealed that only less than 17% of pregnant women were screened for syphilis (Provider Study, 1997).

Services and Access to Care. Overall, services to diagnose and treat STIs in the target area are very limited and the quality poor. The MOH estimates that only about 15% of the population in Guatemala has access to a health facility where STIs can be according to MOH-approved protocols. This figure is most likely much lower in the target area. The Provider Survey (1997) revealed that only 5% of family planning clients were asked about STI symptoms, and only half of the health facilities had penicillin and metronidazole in stock to treat vaginal discharge, even though vaginitis is one of the most common causes of maternal morbidity. One of the biggest limiting factors of providing STI services will be the issue of keeping drugs stocked throughout the target area.

Quality care is lacking in many areas of the target region. The main provider of health services in the region is the MOH, and the majority of health facility staff (doctors, nurses, auxiliary nurses, etc.) is either not trained or fluent in the national protocols and standards of care. Community agents also lack the necessary training required for them to provide quality education and make appropriate referrals.

Most of the target population does not have easy access to health facilities, and until the health staff is able to provide acceptable services, there is little reason to seek care given the obstacles: distance to health facility, cost for transportation, discrimination on the part of health providers, and gender issues that dictate that women must be accompanied and have the permission of their partners to seek healthcare. The level of access necessary for the target population to be served efficiently would allow a client to be diagnosed and treated within the same day without giving up a day's wage.

2. Cause, Current Beliefs, Knowledge and Practices and Care-Seeking Behavior

Causes. The main immediate and underlying causes that contribute to HIV/AIDS/STIs in Guatemala include lack of knowledge about RH, lack of safe sex practices, and belated and often inadequate efforts on the part of the policy makers and providers, including the MOH and other entities, to provide effective IEC and multi-sectoral programs (education, job training, health care) to meet the needs of its mainly impoverished population. Cultural barriers also make it difficult to communicate effectively about matters relating to safer sex.

Knowledge, Cultural Beliefs, and Practices. In the 1995/96 ENMSI, only 36% of indigenous and 64% of all women living in the southwest region of Guatemala (where the target area is) had ever heard about AIDS. This compares to 71% of all women living in Guatemala overall. Among all women living in Guatemala, about three-quarters of women considered themselves at low risk for HIV/AIDS and less than 4% had used condoms at last intercourse. In the target area, more than 80% of women believed they were not at risk for HIV/AIDS, and only 2.4% had used a condom at last intercourse (ENMSI 1995/96).

Awareness about STIs and HIV/AIDS is generally very poor among the target population: residents and migrants in the Boca Costa region. In a recent study (2001)

among 410 women participating in HOPE's VHB program, 75% of the respondents did not know signs or symptoms of STIs in women and 84% did not know any for men. HOPE's Final KPC (2001) revealed that 71% could not name signs or symptoms associated with STIs. Only 15% of women of reproductive age realized that vaginal discharge was a sign that a woman may have a vaginal infection (HOPE Final KPC Survey 2001).

Almost one-quarter of respondents in the target area could not name any means to avoid becoming infected with HIV/AIDS (HOPE Final KPC Survey 2001). Less than 4% mentioned limiting the number of partners, and less than 5% mentioned not to share razors or blades. Only 16% mentioned abstinence, while 22% mentioned staying faithful to one's partner. A mere 14% mentioned that condoms could be used to avoid getting AIDS.

Many persons in the target area self-medicate when they suspect they might have an STI. Men tend to ask for advice from friends or from shopkeepers at the local pharmacy. Women tend to seek out care from TBAs (HOPE Final KPC Survey 2001). Most of the time, however, women are too embarrassed to talk about their problems or seek curative treatment.

Local Words. Works often used to describe STIs or the sign and symptoms associated with STIs: chaguitiadera, polyester, podrido, como regadera, desflorado, se le va caer, mal oriente, carritos locos, feicidad, granos, mal hecho, llaga, supurando, and saliendo materia.

Knowledge and Practice of Care Givers. As mentioned in the previous section, most health facility staff and not fluent in standard practices norms and national protocols relating to STIs. Many practitioners also discriminate against the indigenous.

Social, Economic, and Cultural Barriers. The most important barriers to the provision of high quality STI services and HIV/AIDS prevention efforts include: lack of knowledge; lack of health provider training; lack of diagnostic equipment; lack of a consistent supply of drugs to treat STIs; religious prohibitions, multiple languages used in the target area; and prejudice/stigmatization.

3. MOH Policies/Strategies and/or Case Management Policies/Current Services

MOH Policies, Strategies and Case Management Approaches. In recent years, the MOH has developed new policies, strategies, and standard practice norms for RH. The GOG has worked in close collaboration with multilateral entities and organizations to develop treatment protocols and training curricula for diagnosing and treating STIs. The most important documents include: *Social and Population Development Strategy* (2001), *National Plan for Reproductive Health 2000-2004* (2000), *Political and Legal Framework for Reproductive Health and Family Planning in Guatemala* (1999), *Reproductive and Sexual Health: Reference Manual for Standard Care* (1999), *Technical Manual for Prevention, Diagnosis, and Treatment of Sexually Transmitted Diseases*

(1998) and *Module 3: Sexually Transmitted Diseases and their Management Through the Syndromic Approach*.

Although the STI/HIV/AIDS developed in 1999 was meant to cover the years 1999-2003, the strategy has been recently revised with technical assistance of ONUSIDA (UNAIDS) and PASCA (Programa de Accion SIDA para Centro America). VCT services will be piloted in 6 clinics that serve the indigenous migrant population in the highlands.

Case management knowledge and practices. Case management of STIs is overall very poor throughout the target area, due to the lack of training and consistent adherence to protocols and standard treatment norms. The standard of care norms have been published, but the management of STIs will continue to be marginal until health facility staff are well trained in counseling, diagnosis, and treatment of STIs. Better adherence to infection control will also need to be encouraged. The Provider Survey found the hygienic practices of providers (hand washing, use of gloves, sterile equipment) was very marginal, with only 9-15% of providers performing basic actions related to infection control (Provider Survey 1997).

The MOH has adopted the syndromic approach to treating STIs due to the widespread lack of resources to confirm diagnoses based upon laboratory testing. Protocols with accompanying flowcharts have been standardized for the following syndromes: vaginal discharge, genital ulcer syndrome, lower abdominal pain (PID), and urethral discharge. Doctors, nurses, auxiliary nurses are all allowed to provide antibiotics, as well as the promoters in the health units on the estates.

The *National Plan for Reproductive Health 2000-2004* (2000) states that MTCT may be decreased if mothers exclusively breastfeed for the first 6 months, then wean quickly so as not to mix BF with other foods. (Research suggests that HIV transmission is increased if other sources of nutrition are combined with breastmilk, perhaps due to increased exposure of the baby's gut to exogenous pathogens). The MOH does not offer nevirapine to expectant mothers; rather AZT is offered instead. HIV prevention efforts include safer sex practices, but VCT is not widely available at this time in the target area.

4. Intervention-Specific Approach

Target Group. The target group for this intervention are women of reproductive age, both resident and migrants, and their partners.

Coordination. The project will work on all levels (national, area, department, district, municipal, and community) to participate in policy review, technical oversight, problem solving, supervision, and referrals. The main partners (MOH, ANACAFE, IGSS) are already providing maternal care and family planning services. They have begun to collaborate through quarterly Health Area Committee meetings, the program HIS, training, and other activities related to this project. During the extension, the Health Area Committees will begin to also review data relating to HIV/AIDS/STIs to address issues

relating to service delivery, quality of care, access, and supplies (primarily drugs to treat STIs and condoms).

Training. Project HOPE uses a 'cascade' approach to training. Master Trainers will be appointed in each Health Area, who will in turn train a cadre of master trainers in each department, who will in turn will train trainers at the municipal levels. These same trainers will be key in supervising those trained to ensure good case management and quality of care. Health facility staff will primarily be responsible for diagnosing and treating STIs according to standard treatment protocols using the syndromic approach, while community agents (promoters, TBAs, health educators) will be primarily responsible for health education. Health education will be provided to mothers and mothers groups at health units on the coffee plantations, and by TBAs and health educators in the communities on or near the plantations.

Training Curriculum and Materials. The master trainers will train with existing materials and will supervise and monitor of quality of care of their trainees through various QI methods. Job aids will be developed for both health facility staff and community agents (health promoters on coffee plantations, TBAs, health facilitators) to facilitate adherence to assessment and treatment protocols for STIs, and to make appropriate referrals.

HU promoters, other promoters, TBAs, and CBDAs, will be trained to recognize the signs and symptoms of STIs, counsel clients, and refer when appropriate. They will also be taught to teach clients how to use condoms. Basic infection control procedures will be also be a component of the training.

Results from FGDs, exit interviews and VCRs will be integrated into training curricula to make STI services more client-friendly.

Health Education. Health education on the plantations, and counseling and radio messages in Spanish and the Mayan dialects about STIs and HIV/AIDS will be the main activities to increase awareness among the population. The focus of health education efforts will be to 1) promote safer sex practices, 2) prevent MTCT through optimal BF practices, and 3) promote care-seeking behaviors of residents and migrants, including partner referrals. The project will review the experiences of other NGOs (e.g., AGES) and consult with the community on how to improve HIV/AIDS/STI education and how to promote safer sex and risk-reduction behaviors.

Syndromic Approach. HOPE will work with its partners to approve the use of the syndromic approach in facilities that lack lab capacity and reagents. STIs, will be treated using algorithms for the following syndromes:

- Urethritis in men as a way to protect women and children from contracting gonorrhea and chlamydia;
- Genital ulcer disease (in men and women) to treat syphilis or chancroid (and diagnose herpes);

- Lower abdominal pain in women to diagnose and treat pelvic inflammatory disease (PID).

One additional syndrome, vaginal discharge, will be used to diagnose and treat bacterial vaginosis and trichomoniasis vaginalis, which are common reproductive tract infections that are not sexually transmitted. Recent studies have shown that the syndrome is not sensitive or specific for gonorrhea and chlamydia in low-risk populations, therefore this syndrome will not be used to screen for STIs.

Quality of Care, Supervision, Follow-up, and Referrals. In the extension, emphasis will be placed on on-the-job supervision to improve case management and quality of care. Diagnosis and treatment for STIs will be done at health facilities using the syndromic approach and using drugs purchased in bulk by the MOH. Many of the medications needed to treat the STIs will be available at ADISS pharmacies, in addition to MOH facilities. ADISS is HOPE's local NGO that purchases drugs in large quantities and sell them at relatively low cost while maintaining enough of a 'profit' to sustain and expand the program in the target area.

Appropriate referrals will be made easier through the use of job aids. The health promoters on the coffee plantations will refer to the nearest health post or center where treatment for STIs is available.

Increasing Level of Access. Access to STI treatment will be increased by assisting each health post/center to become a functional site for educating, treating, and counseling clients about STI prevention, symptoms, treatment, and the need for partner referral. Project HOPE and its partners plan to increase level of access throughout the target area by 1) training health care workers at all levels in HIV/AIDS/STIs, 2) creating educational materials and job aids to assist health care workers to conduct health education and make appropriate diagnosis, treatment, and/or referrals, 3) increasing the number of places where condoms can be obtained or purchased, and 4) increasing the number of places where diagnosis and treatment can be managed. One innovative component of our program will be to introduce community-based distribution of condoms.

The project will work with its partners on improving availability of basic STI drugs at all facilities. Access to condoms will also be increased by making them available from the HU promoters and from CBDAs in select areas. Technical assistance will be solicited from NGOs that have relevant experience: AGES, Doctors Without Borders, CRESIDA, CONASIDA, and MSH.

5. Behavior Change Communication

BCC Strategy. The goal of BCC efforts will be to increase safer sex-related behaviors. Our objectives are to increase knowledge of risk factors of HIV/AIDS/STIs, increase the use of condoms, increase the ability of the target population to recognize signs and symptoms of a possible STI and seek treatment. We will also target health providers to diagnose and treat STIs according to the syndromic approach.

Project HOPE conducted focus groups with both resident and migrant men and women last year in two municipalities in the target area. The purpose of the focus groups was to explore knowledge, attitudes and behaviors relating to maternal care, FP, and HIV/AIDS/STIs. The results helped the project to create messages included in basic educational materials. The results will also be used to create messages for the radio in the departments of origin of the migrant population.

Target Audience	Target Behavior	Major Factors to be Influenced	Activities
Health Facility Staff	Correctly diagnose and treat STIs according to syndromic approach	✓ Case management and referrals	✓ Training master trainers and health facility staff
Residents and Migrants	Use condoms to help prevent HIV/AIDS/STIs	✓ Condom use ✓ Education more tailor-made to Mayan population	✓ IEC campaigns ✓ Health education in health facilities and units on plantations ✓ Materials identified or developed and field-testing
Residents and Migrants	Health seeking behavior	✓ Ability of resident and migrant women (and their partners) to recognize and identify signs and symptoms of a possible STI.	✓ IEC campaigns ✓ Health education in health facilities and units on plantations

Project HOPE will collaborate its partners to identify better materials specifically on HIV/AIDS/STIs. Some of the current materials that are available feature unqualified and misleading messages about breastfeeding and also about injections. Specifically, the messages existing in some materials in the region discourage BF altogether, no matter what alternatives are available. Another confusing message implies that one can get HIV through injections, without specifying that the risk factor is sharing contaminated needles and syringes that have been used by someone infected with HIV. The message as it stands now may discourage some from getting immunizations.

6. Quality Assurance

Job aids and checklists will be created to facilitate adherence to quality standards of care. QA assessments will be conducted to ensure high quality counseling, especially on safer sex practices.

The project HIS will collect information about the number of condoms distributed and the number of persons who are supplied. The program will document stock-outs of condoms and medications to treat STIs at the health facility level (health centers and posts) and at the community level (condoms distributed by CBDAs and by health units on coffee plantations). While it is not expected that every health unit will distribute condoms—partly due to cost and partly due to stigma—HOPE plans to document trends over the course of the project. The Project's goal is to have 100 health units (out of 250) supply FP methods on the coffee plantations.

7. Availability of Drugs, Equipment, and Related Supplies

Essential Commodities. The following items are essential to addressing HIV/AIDS/STIs in the target area: 1) Effective IEC and related educational materials (including dildos to demonstrate condom use), 2) drugs to treat STIs, 3) condoms, and 4) DAN (a disinfectant) for infection control use, primarily in the MOH and IGSS health facilities. Other related commodities for STI diagnosis and treatment include job aids, speculums, and infection control supplies (basins, soap, waste receptacles).

Although the project will not directly treat HIV/AIDS with anti-retrovirals, STIs will be diagnosed and treated using the syndromic approach. The MOH is responsible for supplying drugs—including penicillin and metronidazol—to treat STIs and for supplying condoms for FP and STI prevention.

Supply and Sustainability. Project HOPE is working in partnership with its associates (MOH, APRFAM, UNICEF) to improve the supply of essential drugs and condoms in the target area. Project HOPE started its own local NGO, ADISS, to address the issues of limited access and affordability of essential medications in the target area. At this time, ADISS has nine locations where clients can purchase medications at reasonable cost.

Monitoring and Safety. IEC will include messages that expressly state that condoms are to be used only once and then thrown away where children will not find them. Infection control will be addressed in training and on-the-job supervision at the health facilities to ensure compliance and adequate job performance.

8. New, Innovative Activities or Strategies

Syndromic Approach. The MOH has adopted the syndromic approach for diagnosing and treating STIs. In a pilot RH project funded by the Summit Foundation (which ended in January 2002) Project HOPE coordinated an integrated training in RH (maternal care, FP, and HIV/AIDS/STIs) for health facility personnel in two districts (El Palmar and Columba) in the Boca Costa region. Training was provided by a team consisting of HOPE/Guatemala's RH staff and associated from partner organizations and USAID CAs (including a trainer from JHPIEGO). The project will use the curricula and lessons learned from the pilot efforts to replicate the training to health facility staff throughout the target area. We also plan to mirror the training of the health facility staff by training community agents (promoters, TBAs, community health educators) to be able to instruct their clients to recognize the signs and symptoms of STIs.

Community-based Distribution of Condoms. One of the key elements of HIV/AIDS/STI prevention is the availability of condoms. The project will be training Community-based Distribution Agents (CBDAs) in select areas to distribute a few FP methods and condoms to help prevent HIV/AIDS/STIs. A total of 100 CBDAs will be trained in two departments (Suchitepequez and Quetzaltenago).

9. Other

Key Factors that Facilitate Spread of HIV infection. Key factors that contribute to the spread of HIV/AIDS in Guatemala include lack of knowledge and lack of safe sex practices. In the most recent Guatemala DHS that had a module on HIV/AIDS, only 1.5 percent of young women 15-19 and 9.1 percent of those 20-24 had ever used a condom (ENSMI 1995). Three-quarters of the AIDS diagnoses to date in Guatemala have been the result of heterosexual sex (UNAIDS/WHO Epidemiological Fact Sheet: Guatemala 2000). In the target area, only 14% of women know that using condoms can help a person prevent getting AIDS (HOPE's Final KPC Survey, 2001). Staying faithful to one partner was mentioned by 23% of respondents; abstaining from sex was mentioned by 16%, and avoiding sex with prostitute was mentioned by 12%. More than one-quarter of those interviewed were not able to mention a single measure that they could take to avoiding becoming infected with HIV/AIDS.

Other factors that facilitate the spread of AIDS include the use of prostitutes, the practices of having multiple sex partners, and the dearth of public health messages promoting safe sex practices.

Strategic Plans for De-stigmatization.
During training and refresher training at all levels components will be added that addresses the rights of persons with HIV/AIDS and role play exercises that feature case scenarios of client-patient interaction.

J. INTEGRATED CHILD SURVIVAL PROGRAMS AND IMCI

1. MOH strategies, activities, and training materials

Guatemala formally adopted the IMCI strategy as the national child health care policy in August of 2000. The MOH created two working teams to facilitate the adoption of IMCI: a National IMCI Technical Team, which included members of NGOs and PVOs, including Project HOPE; and an Intra-Ministerial Working Group responsible for adapting and implementing the IMCI strategy. In collaboration with PAHO, UNICEF, and PVOs, the MOH carried out IMCI pilot projects in ten departments across the country in December 2000. The pilot projects were implemented in those municipalities with higher infant mortality rates. As a result, norms were revised, a clinical training manual was developed, and an operation plan is being put in effect. Today, the implementation of the IMCI strategy occurs at the clinical/health facility and community levels. Three components are identified as the foundation for IMCI implementation:

Component I: Improvement of case management/health facility staff skills
The following elements are included in order to improve the skills of health providers and health workers on case management:

For newborns:

- Case management of perinatal asphyxia
- Case management of neonatal sepsis
- Case management of low birth weight

- Case management of neonatal tetanus
- Case management of jaundice

For children between one week – under 2 months:

- Classification of bacterial infections
- Case management of diarrheal diseases
- Identification of low birth weight
- Verification of immunization schedule

For children between 2 months – 5 years of age:

- Classification of general danger signs
- Case management of respiratory infections
- Case management of ear and throat infections
- Case management of diarrheal diseases
- Case management of fever
- Nutritional surveillance and feeding practices
- Monitoring of immunization schedule
- Monitoring of other problems

***Protocols*:**
See Attachment ___ for each of the IMCI protocols adopted by the MOH. The adopted protocols are:

- Classification of ear and throat infections
- Classification of diarrheal diseases
- Classification of fever-related diseases
- Evaluation of nutritional status and feeding problems
- Evaluation of vaccination schedule

Protocols for children between 1 week and 2 months

- Determination of bacterial infections
- Classification of diarrheal diseases
- Evaluation of nutritional and feeding problems

Protocols for newborns are developed under the Essential Maternal Neonatal Care Program (AMNE) and are currently under revision by the MOH, with the technical support of JHPIEGO. They are expected to be available by the end of year 2002.

Component II: Strengthening of health systems
Health system strengthening in Guatemala includes the following elements:

- Training of health workers
- Supervision of trained workers
- Evaluation of knowledge and quality of care
- Strengthening of information system
- Supply of essential drugs
- Institutional coordination

- Developing of training materials

<u>Component III</u>: **Improvement of family and community practices**
The community component of IMCI is designed to complement the other two clinical components. It focuses on clinical activities of community health workers as well as the preventive and home-based care elements. As part of the community component, there is major strategy to integrate IEC and community participation activities. A sub-committee for the HH/C-IMCI, of which Project HOPE is an active member, has been formed to develop IEC and community participation strategies. The improvement of family and community practices is currently under revision, with the intention to include the AIN-C model used in other Central American countries. Currently, the following elements are being proposed as part of the community component:

- Training of community health workers (volunteers)
- IEC campaigns, including use of posters, radio broadcasting, and meetings with mothers
- Analysis of situational health with community members

Project HOPE has provided support in the clinical training of health workers in the project target area, with emphasis in the departments of Quetzaltenango, San Marcos, and Suchitepequez. In San Marcos, HOPE initially supported the MOH in the training of master trainers. Later on, the training included not only the master trainers, but all the health workers in all districts. In Quetzaltenango, HOPE provided support in the clinical training of more than half of the MOH physicians and nurses in priority districts. Through the rest of the year 2002, HOPE facilitators will train the remaining of health personnel. In Suchitepequez, HOPE took the lead in supporting the MOH on the clinical training that included physicians of all districts. Follow-up sessions, in coordination with the MOH, will continue in 2002.

For the next three years, the MOH has prioritized 10 geographical areas across the nation for the training of community volunteers. The focus will be on the validation of C-IMCI materials, and training of health workers and community volunteers. The MOH will also work on the redesigning of monitoring and supervision models at different levels within the health system for both health facility personnel and community volunteers.

For the IMCI protocols included in **Attachment 8**, the MOH has the following training and other materials:

- *Training modules*: there are 5 modules that include theory, examples, and exercises.
- *Photo albums*: there are sets of images, drawings, and pictures depicting sick children.
- *Flowcharts*: there are sets of flowcharts that provide information for classification, treatment, and check ups.

2. Role of the child survival program in IMCI

Project HOPE will continue to support the MOH in the implementation of the IMCI strategy. Currently, HOPE is an active member in the National Committee for Clinical IMCI and also in the National Committee for Community IMCI/IEC chapter.

As part of the previous CS program, HOPE has trained IMCI core facilitators in most of the project target areas. For the current CS program, HOPE will continue providing support for follow-up sessions and supervision. HOPE has also trained health workers of local NGOs in IMCI.

The role of the current child survival program in IMCI is to continue supporting the implementation of IMCI through training and supervision of MOH health personnel in the project target areas. In addition, HOPE will work together with the MOH and other PVOs in the design and implementation of the community component of the IMCI, including the piloting of the AIN-C model.

The AIN-C model is currently under revision by the MOH. HOPE will carry out two pilot programs following the AIN-C model, which focuses on monthly growth monitoring carried out by health promoters. The AIN-C model is aimed to improve the nutritional status of children under 2 based on monthly nutritional surveillance. The pilot programs will be implemented by HOPE in coffee plantations with active health promoters.

During the extension, HOPE will continue its direct support to MOH health services by strengthening:

- Institutional training
- Monitoring and supervision of trained personnel
- Evaluation of knowledge and quality of care
- Follow up of IEC strategy at the clinical level
- Training and follow up of volunteer personnel
- Training materials

For the community IMCI component, HOPE will continue the strengthening of IEC in the community through training and follow up of community agents. Production of materials to be used at the community level will include distribution of posters, radio broadcast of key messages in coffee plantations and communities during holidays.

In addition, HOPE will implement the Mothers' Reminder Materials (MRM) project that will produce and distribute materials to *remind* mothers how to recognize the danger signs of major childhood killers at the household level, and to respond in a timely and appropriate manner. The materials will complement the clinical and community-based IMCI components and will provide mothers with basic information about danger signs and care-seeking, basic home management of IMCI illnesses, and child feeding information. The materials will take into account maternal literacy, local preferences, and local health resources. The contents of the materials will be addressed in education and counseling contacts of mothers with the health system (hospitals, health centers, health posts, etc.).

The project will conduct formative research to assess knowledge of danger signs, prevention practices, and to identify potential "reminder" materials to disseminate key messages. Once the prototypes are field-tested and if necessary re-designed, the project will produce the materials, carry out the distribution, and perform monitoring activities. A final evaluation will attempt to measure the impact of this initiative considering both intervention and non-intervention communities. Local partners, including the Ministry of Health and non-governmental organizations, will be invited and encouraged to participate from the very beginning.

3. Specific components of the child survival program's IMCI strategy

See each of the technical interventions descriptions for the specific components of the child survival program's IMCI strategy. The MRM project described above will address the issues of recognition of danger signs at the household/community level. This project will be developed as an add-on to the CS project interventions.

ANNEXES

PROJECT HOPE

Improving the Health of Guatemala's Most Vulnerable Population – Migrant Women and their Children in the Boca Costa of Guatemala

CS-XIII Cooperative Agreement No. FAO-A-00-97-00030-00

FINAL KPC SURVEY REPORT

Project Location:
Boca Costa of San Marcos, Quetzaltenango, and Solola, Guatemala

Submitted to:
U.S. Agency for International Development
BHR/PVC
Washington, DC 20523

Submitted by:
Project HOPE –
The People-to-People Health Foundation, Inc.
Millwood, Virginia 22646
Tel: (540) 837-2100
Fax: (540) 837-1813

March 29, 2002

Contact person:
Bettina Schwethelm, PhD, MPH

Field Contact Person:
Victor Calderon, MD

TABLE OF CONTENTS

EXECUTIVE SUMMARY

From August 30 to September 12 2001, Project HOPE, with the participation of the Ministry of Health, The Guatemalan Social Security Institute, IGSS , implemented the final KPC survey of its Child Survival (CS) project. The survey was implemented in the Boca Costa.
The purpose of this survey was to: 1) assess whether the objectives set by the Detailed Implementation Plan (DIP) had been reached; 2) compare the results to baseline findings; 3) to gather baseline data about the prevalence, knowledge, and practices regarding reproductive health; and 4) to gather baseline information about the new target area.

The KPC2000+ survey was implemented by Project HOPE field staff, MOH, IGSS and with technical support from Project HOPE's headquarters in Millwood, Virginia. A representative from HOPE's headquarters also participated and helped the country Director supervise the implementation of this KPC survey.

Project staff used relatively the same survey instrument (sections on reproductive health and malaria were included) and the cluster sample methodology used in the baseline surveys. The general survey instrument was the one developed by CORE group and CSTS. Wording and the names of foods were revised to be culturally appropriate. The local staff provided all training. Ten or eleven interviews (depending on cluster size) of mothers with children under the age of two years were conducted in each of the 73clusters, approximately the same number of communities. A separate group of women in fertile age were surveyed on reproductive health.

A comparison of the baseline and final KPC noted significant progress in immunization coverage, proportion of children with a health card, early breastfeeding and complementary feeding, vitamin A supplementation coverage, ORT use rate, home fluids use rate during diarrhea, maternal knowledge of pneumonia danger signs, knowledge and use of child spacing methods, proportion of mothers with maternal cards, and proportion of women delivering in the hospital. The findings also provided information about knowledge and practices related to the new interventions.

I. INTRODUCTION

A. Background

Project HOPE started this child survival project in Guatemala in 1997 as a collaborative effort of Project HOPE; The Guatemalan Ministry of Health; the Guatemalan Social Security Institute (IGSS); the Guatemalan coffee growers, association, ANACAFE; local NGOs and independent coffee producers and community volunteers.

The project is located in the Boca Costa of Guatemala, a narrow strip of land between the highlands and the coast. This area is the largest national coffee production region for export coffee in Guatemala.

Coffee growers require a large number of seasonal workers during the harvest season. Some of these workers come from the resident population which lives in villages close to the plantations. In the past, resident workers felt entitled to receive all services from the plantation: housing, food, education, and in some cases health services. Most migrant worker are indigenous families from highland communities that come to Boca Costa during the harvest

season, because they lack job opportunities in their home communities. In some cases migrants have obtained loans from plantation administrators that have to be paid off, regardless of the amount paid per *quintal* (55 Kg) of coffee picked. In 2001, the rates were 15-22 Quetzales (about $2) /110 pound of coffee beans, a task that requires a day of work of one adult laborer. A man and his family can pick about 1 ½ to 2 ½ *quintales*.

The baseline survey had been performed in two separate strata: residents and migrants. No midterm survey was conducted, only a qualitative, participatory evaluation. Since migrants are a floating population, there is no practical way to ensure that those surveyed in the final KPC survey could have benefited from the interventions.

The final KPC used an improved evaluation design, and included relevant new questions. Information was only collected from residents. It also includes a group, drawn from the five new target municipalities added in the extension project.

The final KPC included only children less than two years of age; while the baseline had included children below 5. To improve comparability, a secondary analysis of baseline data was restricted to children less than two years of age.

The final KPC survey included questions as required by the DIP, the new interventions the extension project, and the Rapid CATCH list, and anthropometric measurements.

Those changes have improved the data collection for the resident population. Mini-studies will be designed later on for the migrants to address the following primary concerns: are the migrants using the health units in the coffee plantations? Are they being exposed to health education? Are they changing practices relevant to health and nutrition? A new position has been created (Impact Assessment Specialist) to assist the existing staff to conduct these studies.

B. Objectives of the Survey

The main objective of the final survey was to determine the impact of the child survival interventions on knowledge, practices and coverages in the targeted communities. (See Appendix A for a list of performance indicators). The CS XIIII project was scheduled to end September 29, 2001, but it has been extended for another four years, with the same interventions, and additional interventions for malaria reproductive health and an expanded target area.

C. Location/Population

A total of 73 clusters including coffee plantations and nearby communities were surveyed in the Boca Costa. 300 households with children under two years of age represent the CS XIII area. In 5 new municipalities, 30 clusters with 300 households in total (10 respondent mothers /cluster on the average) were selected to obtain baseline information for the new target area. Table 2 shows the distribution of the samples (mothers with infants and women of fertile age) by department.

D. Schedule of activities for the KPC Survey

Table 1.

Date	Activities
August	Planning of this activity with the communities for the months of June, July and August.
August	Survey Planning -organization and selection of the communities -routes and dates to communities

	planned
15-29 August	Development of survey materials, and general training
20-29Aug	Pilot testing of anthropometric methods, and survey instrument.
20-29Aug	Final adjustments - copying of questionnaire - distribution of survey materials
30 Aug-12 Sept	Survey implementation
18 –30 Sept	Review of data collected, and data entry into the computer
Oct-Dec.	Preliminary data analysis and development of conclusions. Debriefing of USAID Mission in Guatemala.
1 – 12 Oct	External Evaluation of the CS project
Dec-Jan	Development of Report with conclusions and assessment of project outputs and progress.
Jan-2002	Dissemination of Final KPC Report

II. METHODOLOGY

A. Questionnaire

This is relatively the same questionnaire that was used in the previous surveys, except new sections on reproductive health (See appendix for sample survey). KPC 2000+ was developed by the CSSP and the CORE MEWG, and reviewed by the field team. Wording and the names of foods were also adapted to the local situations. The MOH and IGSS staff reviewed the survey instrument it and given their approval. Questions were included because:

a) They were aimed to assess if the objectives set in the DIP were met
b) They were aimed to determine a baseline for the extension in the new municipalities, new interventions such as malaria and reproductive health
c) Were included in the Rapid CATCH list.

B. Determination of Sample Size

1. Mothers with children under 24 mo
Sample sizes were calculated with the following formula:

$$\mathbf{n = Z^2\, pq/d^2}$$

Where:
n= sample size
Z= statistical certainty chosen
p= estimated coverage or prevalence level/rate to be investigated
q= 1-p
d= level of precision or sampling error

The statistical certainty was chosen to be 95% (Z=1.96). The value of p was defined as the coverage rate that requires the largest sample size (p=0.5). The value of d depends on the precision or margin of error desired, which for this case was set a 10% (d=0.1). Given the above values, the sample size (n) needed was determined to be:

$\mathbf{n}= (1.96)^2\,(0.5 \times 0.5) / (0.1)^2$
$\mathbf{n}= (3.84)\,(0.25) /0.01$
$\mathbf{n}=96$

Due to the fact that it would take a great deal of time to randomly select an identified individual from a survey population, and then perform this selection 96 times (for a sample of n=96) an alternative method of cluster sampling was used. Using this method, a minimum of 30 clusters are selected in which several individuals within each cluster are chosen to reach the required sample size. In order to compensate for the bias introduced by interviewing persons in clusters rather than as randomly selected individuals, experience has shown, given the values of Z, p, and d above, that an average sample of 300 (10 per cluster) should be used.

As stated above, separate strata of intervened and non-intervened communities were selected. Sample size is enough to show differences of 15% as statistically significant, between baseline and final KPC surveys.

Confidence limits were calculated using the following formula:

95% confidence limit of p=p± 2 Z (pq)/n
Where:

p= proportion/rate in population found from survey

Z= statistical certainty chosen (if 95%, then Z=1.96)

q= 1-p

n= sample size

2. Women of fertile age

Since RH is a new intervention, sample size (300 as calculated as above) combined the new and the CS XIII target areas.

C. Selection of Clusters

The probability of selection was proportional to the population of communities to be selected in the Departments of Quatzaltenango, San Marcos and Suchitepequez. See attachment with the list of clusters.

D. Selection of households

Eligible households were those having at least one living and present child younger than two years of age or a woman of reproductive age. Only information from the youngest child in the family was collected, in the event that there was more than one child <24 months. If no family member was able of giving the information, the family was immediately replaced, but this event was very uncommon.

Women of fertile age were selected with parallel sampling in the same clusters. In no instance more than one woman per household was interviewed.

E. Procedures to Collect Clinical Information

Anthropometry

The same methods were used as in previous surveys to weigh each child and collect height measurements in Guatemala. For the most part, the children were weighed without any clothing. When clothes were being worn, an amount of 2-3 oz. was subtracted to obtain the net weight. Scales (Salter-type, 3 oz. in precision, 50-pound capacity) were adjusted to zero prior to every measurement. Height was measured with a wooden infantometer while lying down.

F. Training of Supervisors and Interviewers

The training was conducted in a 10-day period. The staff (HOPE and MOH) received training on survey methodology, KPC surveys, discussed and completed exercises for the sampling methodology, selection of first and consecutive households, anthropometric procedures, survey questions pertaining to the new reproductive health section, and appropriate interviewing techniques. A written guide was also supplied to the field team. Training also included revision and validation of questions and a pilot test of the survey instrument.

G. Interviewers

The actual survey was conducted over 12 days: Aug 30- Sept 12 (See table 1). There were three teams of interviewers.

Supervisors of each team were responsible for the selection of the initial household and the geographical direction in which each person would proceed in order to collect his/her number of surveys. Each questionnaire was checked for completeness before the survey team left the survey area so that, in the case of missing or contradictory information, the mother and/or adult could be re-interviewed the same day. In addition, all questionnaires were checked again for completeness and accuracy at the end of each day by the supervisor.

H. Data Handling and Processing

The data were entered to EPI INFO at the Universidad Rafael Landivar. An administrative assistant entered the data in 15 days. A faculty member/researcher who was trained in EPI INFO and who has extensive knowledge in data analysis conducted the initial analysis.

The exact age of the child was calculated subtracting the date of birth from the date of the interview. Anthropometric indexes, WAZ (Z-score for weight-for-age), HAZ (Z-score for height-for-age), WHZ (Z-score for weight-for-height) were calculated with EPI INFO. Scores over 6Z or under –6Z (Z being the number of standard deviations of the mean) were assumed outliers and discarded from the analysis. The Z-score of =2Z is used to define children with wasting or low weight-for-height, while the Z score of =2Z is used to define children with stunting or low height-for-age.

Frequencies were generated with EPI INFO directly. Graphs showing the results of the above analysis were generated with MS Excel. Vertical lines represent confidence intervals.

The rates reported here are in some cases slightly different from the rates shown in the report written by the external evaluation, because baseline data is based on children less than 5 years. This report uses data from a secondary analysis with children under two years to improve comparison between the CS XIII baseline and final survey. Data from migrant mothers was also excluded from the baseline database.

III. RESULTS

For the CS-XIII survey a total of 73 clusters were surveyed, with the aim of including a total of 600 households with children under two years.

Table 2. Distribution of the sample.

	CS-XIII area		Extension area	
Dept.	Clus-ters	Number of Interviews	Clus-ters	Number of Interviews
San Marcos	27	MC:186 WFA: 103	0	0
Quetzal-tenango	11	MC:77 WFA: 32	19	MC: 187 WFA: 95
Suchite-péquez	5	MC:35 WFA: 15	7	MC: 70 WRA: 35
Sololá	0	0	4	MC: 40 WRA: 20
Total	43	MC: 298 WRA: 150	30	MC: 297 WRA: 150

MC: mothers with children <2y
WRA: women of reproductive age

A. CS-XIII Target Area

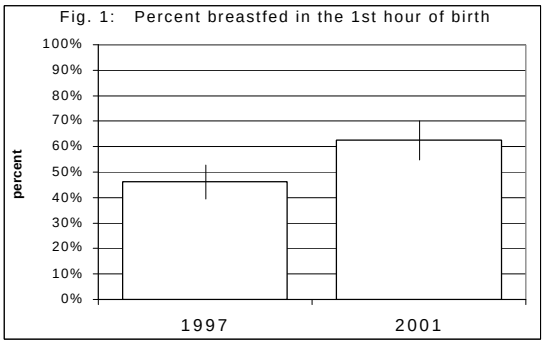
1. Survey of resident mothers with children under the age of two: child health

A total of 299 mothers were surveyed and the results are presented below. As in the baseline, mothers were young (27 ± 7 years). The proportion that had attended school was significantly higher (69.5% for year 2000) than at baseline (59.5%), p=0.006. However, the average number of schooling years was

about the same. The main languages spoken at home were Spanish and Quiche, followed by Mam. Two thirds (67%) of the mothers did not work outside the home.

a. Breastfeeding and Weaning Practices

Early initiation of breastfeeding has improved significantly from 46.2 to 62.5% (Fig.1, p=0.0000)



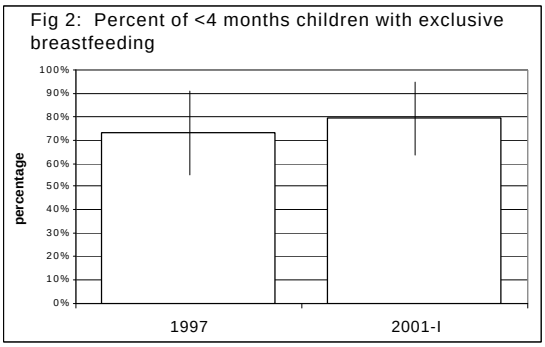
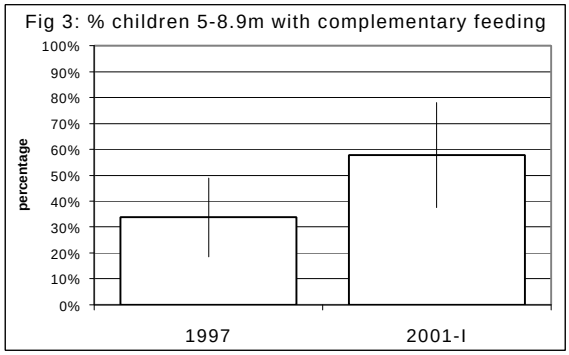


Figure 2 shows the proportion of children under 4 months of age that are exclusively breastfed. The change (73.9% in 1997, 79.2% in 2001) is not statistically significant due to the fact that this variable uses a small subsample and the improvement was not large enough. Still, the benchmark of the DIP (maintaining exclusive breastfeeding rate>60% among children under 4 months) was met. Future surveys will use children under 6 months in the denominator.

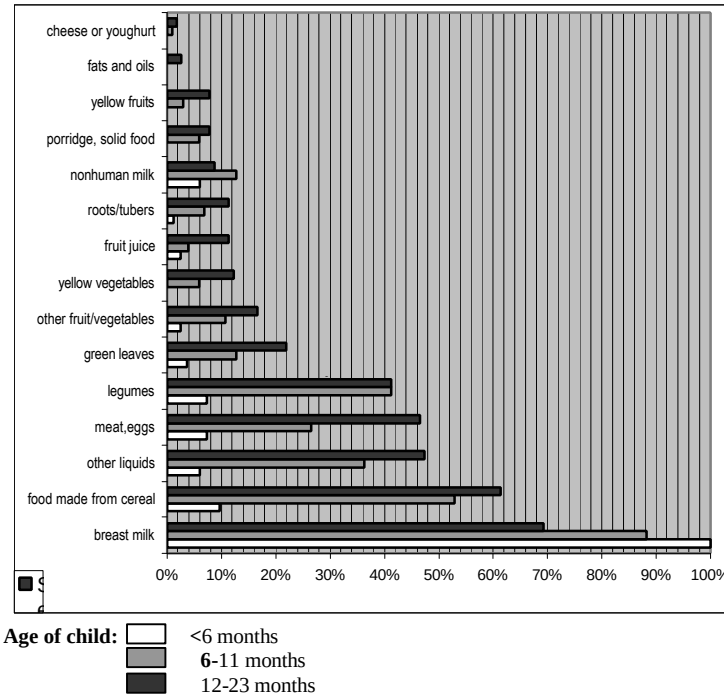
The proportion of children 5- 8.9 months receiving complementary feeding is shown in figure 3. In spite of the small number of cases, the differences are statistically significant. The benchmark set in the DIP (20% increase) was achieved. Confidence intervals are overlapped, but the upper limit of the 1997 rate is below of the rate in 2001.



The proportion of children eating three or more meals per day did not increase (42.8 in baseline to 43% in the final KPC); and the benchmark (90%) was not achieved.

The consumption of food from different food groups by children in every age group is shown in figure 4.

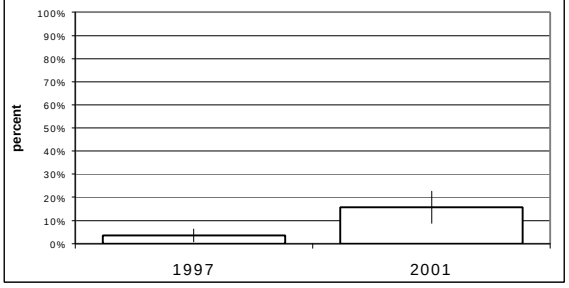
Fig 4: Percent of children that ate specific foods on the day before the survey, by age group



Children start complementary foods with liquids. Most children under 2 years do not receive non-human milk. Foods made out of cereals and legumes -particularly beans and tortillas- are the main dietary staples, with fewer children having meat, eggs or green leaves. A very low proportion of children, even during the second year of life, consume solid foods.

The proportion of mothers reporting the consumption of foods rich in fat/oils is below 5%, even for children in their second year of life.

Fig . 5 Percent of children 6-23 receiving Vitamin A supplements during the 6 months preceding the final KPC



Not considering dark green leafy vegetables -with a low bioavailability for carotenoids, the proportion of mothers giving the child vitamin-A rich foods (such as dairy, animal liver or eggs) is very small. The local diet of children continues to lack energy density, and adequate available vitamin A.

Vitamin A supplements were given to about 1/6 of the children according to the family/child health cards (Fig. 5). This is a significant increase over baseline but still less than expected, although no benchmark had been set in the DIP regarded to vitamin A supplementation coverage levels.

b. Nutritional status of children

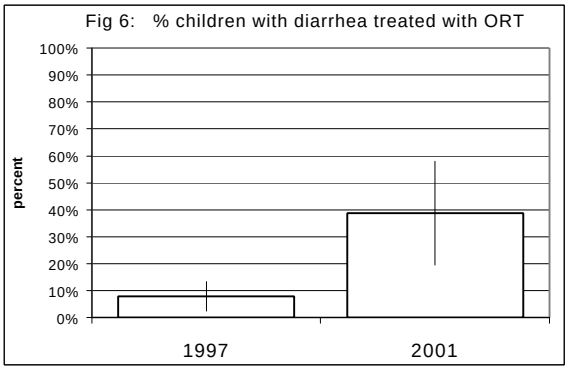
While 4.9% (CI = 2.8-8.3) of the children were wasted (WFHZ<-2), 32.7% (CI =27.4-38.6) were stunted (HFAZ<-2). See table 11 in the annex containing the frequency tables for more detail. An analysis of the raw information during the final evaluation showed that in about half of the records, the weight had been rounded to the nearest pound or half pound. As a result, the prevalence of malnutrition is somewhat overestimated. The baseline survey did not include anthropometric indicators.

c. Diarrhea Case Management

The proportion of children that had diarrhea in the 2 weeks before the interview was 21.1% in 2001, in comparison with 44.8% at baseline (p=0.0000). This may be in part due to better preventive actions, but other factors (season, weather conditions) may have contributed to this reduction in diarrhea prevalence.

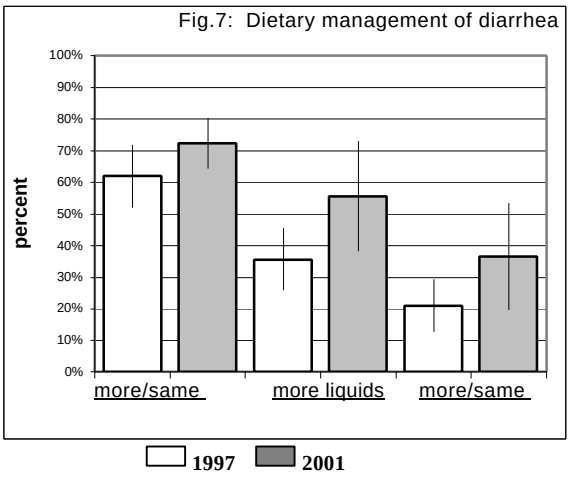
The DIP set a benchmark of 30% of episodes of diarrhea receiving ORT. Figure 6 shows that this was achieved. The increase from 8.0 to 38.8% is statistically significant (p=0.000).

Fig 6: % children with diarrhea treated with ORT

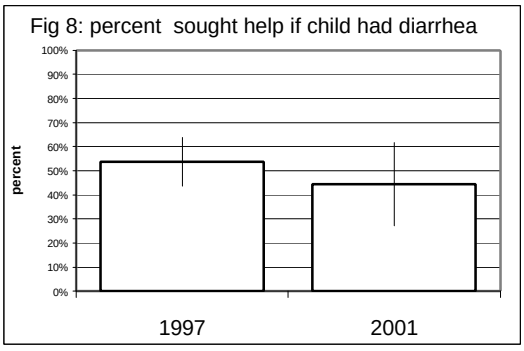


The percentage of mothers who gave more breastmilk during a diarrheal episode increased from 62% at baseline to 72% at the final KPC (Fig. 7). This difference lacks statistical significance. The percent of mothers that maintained or increased fluids during diarrhea and the percent that gave the same or more food during diarrhea increased

significantly. White bars show 1997 data while gray bars show 2001 data.



The percent of mothers whose children had diarrhea and sought help was lower at the final KPC (Fig. 8). This reduction is not statistically significant. The benchmark of the DIP (60% care seeking for cases *with dehydration*) was not reached. This could be due to better home management and prevention of dehydration and/or reduced care seeking due to the economic crisis, or quality of health services.

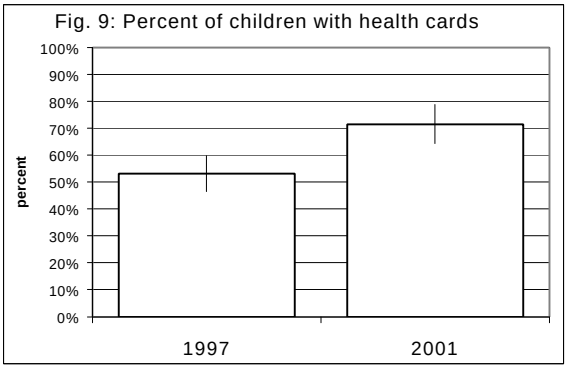


Four percent of the mothers in the final KPC survey reported seeking care for the last diarrheal episode at the plantation health unit. This might indicate some under-reporting because mothers use the label health posts/centers, when seeking care from any trained provider, including our HU promoter.

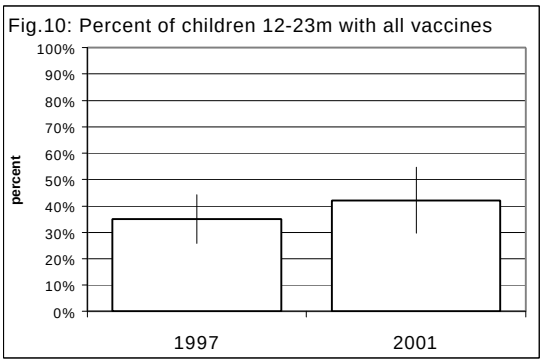
Looking at utilization rates for the basic HUs on the plantations, 43.5% of mothers and infants had sought help there in the last year for various health problems. 86.4% of the mothers said they would seek care at the HU again if needed. The main reasons for dissatisfaction with HU services were lack of medicines and limited hours.

d. Immunizations

72% of the mothers could produce a child health (vaccination) card. This is a significant (p=0.000) increase from the baseline of 53%. The target of at least 60% of families/children with a health card was achieved (Fig.9)



42% of the children (12-23 months) had received a complete set of vaccinations, compared with 35.1% at baseline (Fig. 10). To be completely immunized, the child needs to have at least received BCG, DPT3, OPV3, and a measles vaccine. The DIP target (80% of coverage) was not achieved.



However, there were statistically significant increments in coverage of individual vaccines: BCG (p=0.0002), OPV3 (p=0.005), and DPT3 (p=0.018).

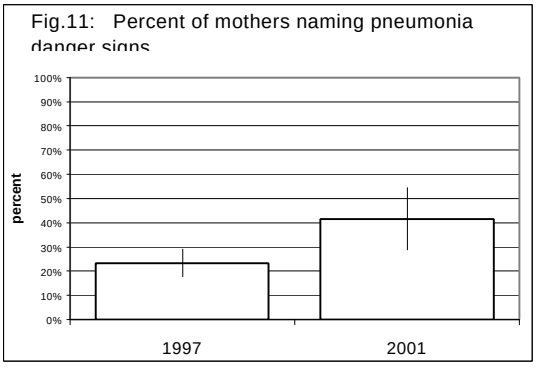
The percent of mothers who know the age when a child should get the measles vaccine has not changed (21.4% both in baseline and final). The DIP benchmark (50%) was not achieved. Recent changes in immunization regulations, including the use of MMR administered after the first birthday, have made this objective difficult to achieve, and this question should probably be dropped.

The percent of children (12-23m) with measles immunization, when counting in the denominator all children (Rapid CATCH), was 43.3% .

e**. Acute Respiratory Infections (ARI)**

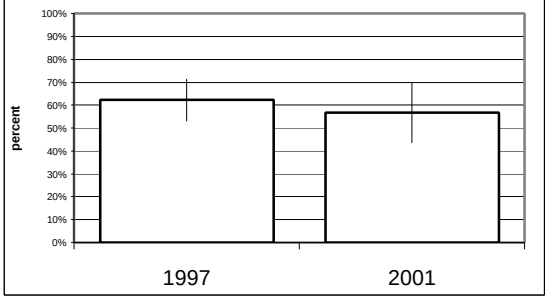
The percent of women that can name danger signs for pneumonia increased significantly (Fig. 11). The target set in the DIP (40%) was met.

Fig.11: Percent of mothers naming pneumonia danger signs



The percent of mothers that sought help for cough or difficult breathing –as specified in the DIP- declined from 62.2% at baseline to 56.6% at final. This difference is not statistically significant. The target set in the DIP (60%, lower than the baseline level) was not met.

Fig.12: % sought help if child had cough or difficult breathing



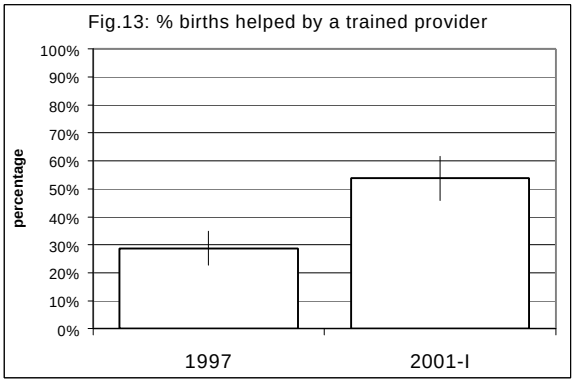
The reduction in demand for curative services has been associated with the current economic crises. The basic HUs on the plantations provided services to 10% of children with cough or difficult breathing. Compared to the baseline survey results, fewer mothers took children with cough to private practitioners (p=0.03) and pharmacies (p=0.04)

2. Maternal health

a. Place of birth

Of the 299 women interviewed, 53.8% had their last birth assisted by a trained provider –not counting TBAs- in comparison with 28.8% at baseline, see figure 13. The DIP benchmark (40%) was achieved:

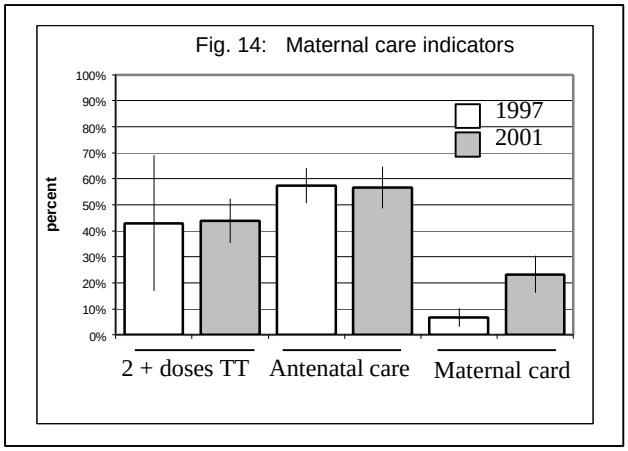
Fig.13: % births helped by a trained provider



b. Antenatal care

The proportion of women seeking antenatal care in their last pregnancy was slightly lower in 2001, but the reduction lacks statistical significance (Figure 14). The benchmark (70%) was not achieved. This reduction is consistent with reduced care-seeking for child illnesses and may be related to the economic situation.

The percent of women with at least two doses of tetanus (TT) vaccine did not change significantly (42.9% in 1997 and 43.9% in 2001) and the DIP target (70%) was not achieved. Only women with prenatal cards – 23% of the total- are included in this analysis, a subgroup of the women interviewed. When all women interviewed



are included in the denominator –as per the Rapid CATCH list- the rate was 22.6%.

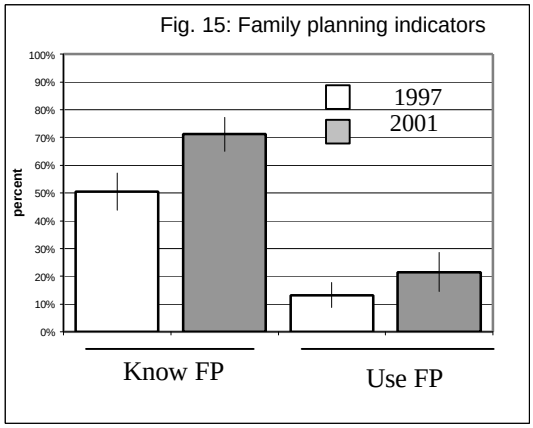
The proportion of women able to show a maternal card increased significantly from baseline (6.7 to 23.3 %, p=0.0000).

c. Post partum care

In the final KPC, 13.2 % of women said they had had at least one postpartum visit; there are no data in the baseline survey for comparison.

d. Child spacing

The percent of women that can name a family planning (FP) method increased significantly from baseline (50.5 to 71.2%) p=0.0000). The use of FP methods also increased significantly (13.3 to 21.6%, p=0.01).



Child spacing methods most frequently mentioned by women in the year 2001 were oral anovulatories (pills) and injectables: Knowledge of pills (p= 0.0000), injections (p=0.0000), vasectomy (p=0.0035), rhythm (p=0.0098), and condoms (p=0.0002) at project end was higher than during the baseline survey.

e. Exposure to educational messages

When asked to recollect previous exposure to health messages through radio, 39% acknowledged hearing radio messages. The main topics mentioned by mothers were:

- Child health (infant feeding, diarrhea, pneumonia, food hygiene, personal hygiene, immunizations, breastfeeding);
- Maternal health (maternal feeding, prenatal care, safe delivery, pregnancy, breastfeeding);
- Reproductive health (child spacing) and
- Family Health (cholera, hygiene, dengue, safe food/water, latrines)

B. New municipalities, extension areas

1. Survey of resident mothers with children under the age of two: child health

A total of 297 mothers were surveyed, most were young (26 ± 7 years). The proportion that had attended school was 63%. The main languages spoken at home were Spanish (88%) and Mam (11%), only 1% reported Quiche. 80 % of the mothers did not work outside the home, the remaining harvested fruit or coffee, were domestic servants or made handicrafts. Mostly (64%), the mothers were the caretakers of the young child, but in some cases older siblings (11%), and husbands (2%) helped.

Nutrition

97% of mothers did breastfed their infants. 51.5% started breast milk in the first hour after birth. According to a 24-hour recall, 60.6% of the children were given 3 or more feedings a day. Considering all children under 2 years, the diet consists of breastmilk (88%), grains (48%), legumes (30%), meats (30%), green leaves (13%) and tubers/roots (13%). Only few children consumed non-human milk (8%), yellow vegetables (7%), fruit juices (7%), purees or solids (5%), yellow fruits (3%) or cheese (2%).

About a sixth (16.5%) of the children had received a dose of vitamin A supplement.

33% of children were stunted (HFAZ<-2Z), 4.9% were wasted (WFHZ<-2Z), and 24.6% had low weight for age (<-2Z), the latter is identical to the rate found in CS XIII communities.

Immunization:

40.4% of the children in their second year of life had received all immunizations. 64.3% of children <2y had received BCG, 25.6% had received measles immunization. Since the MOH is switching to MMR given after the first birthday, this indicator is less useful than in the past, however the HIS still uses it.

Diarrhea management

The proportion of children that had diarrhea in the 2 weeks before the interview was 28.8%. In about two-thirds (68.4%) the mother said that she sought help. Most went to a health facility (36.7%), pharmacy (24.5%) health promoter (10.2%), relative or friend (10.2%). Only 4.1% went to private practitioners, the same percent went to a health unit inside a nearby coffee estate.

74% gave more/ same amount of breastmilk during the diarrhea episode. Only 16% said to have increased the amount of liquids given to the child during diarrhea. 38.1% gave same/more food during diarrhea.

23.6% of the mothers said to wash their hand after handling baby's feces. 81% had a latrine or flushing toilet.

Respiratory infection

Over a third (36.9%) of the children under two years had a respiratory infection in the two weeks prior to the survey. 62% gave more/ same amount of breastmilk; only 6% said to have increased the amount of liquids given to the child and 43% gave the same or more food during this episode.

72% of the mothers whose children had a ARI sought help. Most frequently places they went to were health facilities (35.5%), pharmacies (19.4%), hospitals (12.9%), and health promoters (9.7%). Basic health units on nearby plantations contributed 8.1% of all services to children with ARIs.

Malaria

56.6% of the mothers acknowledged not to

know malaria danger signs. 36.4% stated that they had bednets at home. 90% of children in houses with bednets slept under a bednet. Only 13% of the bednets have been impregnated with insecticide.

Danger signs of any illness and care seeking behavior

When mothers are asked for danger signs, they mention malaise/looks sick (65%), high fever (51%), difficulty to drink or eat (46%), only 4% mentioned fast or difficult breathing.

One percent said to have taken the child to a plantation HU in the last year- this is a new target area, and few coffee estates are expected to have an HU.

Exposure to radio messages

37.4% of the mothers recalled radio messages. The main topics mentioned by the mothers were:

- Child health (infant feeding, diarrhea, pneumonia, personal hygiene, malaria, immunizations, breastfeeding);
- Reproductive health (child spacing)
- Family Health (cholera, hygiene, dengue and malaria, safe food/water, latrines)

2. Maternal health

58.9% of the mothers had prenatal care during their last pregnancy. In 81% of the cases, a doctor or a nurse provided the antenatal care. 26.9% had their pregnancy/ maternal cards. From those with cards with a space to register prenatal visits (68), only 42 (62%) had recorded three or more visits. 87.5% of women with cards had 2+ doses of tetanus toxoid. When all women are counted in the denominator (Rapid CATCH) the TTV 2+ rate is reduced to 23.6%.

(57.6%) of the women were unable to name pregnancy danger signs. The most common signs mentioned were headache (21%), swollen face/hands (14%) and bleeding (9%). One third (34%) of the women stated that they had at least one danger sign during the last pregnancy, and 73% of them sought help. About a third sought help from a traditional birth attendant, the remaining accessed other providers.

55% of the births were at the mother's home; 3% had the baby delivered in another home; and 39% gave birth in a Hospital. TBAs continue to be the first choice for deliveries (56%). One percent of the mothers knew that a new disposable razor blade was used to cut the cord, 48% was unable to tell, while in 50% of the cases the mother knew that another instrument was used.

Of the women with maternal cards, only a fourth had controls after birth.

Differences between CS XIII and new communities

Appendix A compares performance indicators of the CS XIII area with the new municipalities. The CS XIII area is better off for 7 indicators, while the new area offsets the CS XIII area in 7 other indicators. HOPE local staff believes that the new municipalities have more access to basic health care, however control variables such as maternal education are not suggestive of differences in socio economic status. New municipalities were not chosen to serve as "control areas", but a more detailed comparison of external variables will be useful.
HOPE Guatemala plans to continue this analysis during 2002, with participation of a DPH student from Tulane University.

C. Survey of women of reproductive age [CS XIII and extension area pooled]

299 women of reproductive age were interviewed. Average age was 29 years, with a standard deviation of 10. Only a tenth were pregnant at the time of the survey. 69.6% of these women had attended school, and the average number years of schooling was 4. 96% of the respondents spoke Spanish at home; and 28.8% were working outside the home, 70% of these in handicrafts and agriculture.

STD/AIDS knowledge: 74.9% acknowledged having heard about HIV/ AIDS, 12.4% mentioned condoms as a way to prevent AIDS, and 22.7% mentioned monogamy.
Over three quarters of the women do not know about signs and symptoms of STDs in males, 12% mentioned weight loss as a sign. They mentioned more signs of STDs affecting women: abdominal pain (8%), vaginal discharge (8%), pain when urinating (8%), and weight loss (13%).

Family planning: Most frequently recalled methods were anovulatories –oral (60%) and injectable (58%)- followed by female sterilization (18%) and condoms (19%). While 28.5% of women said they wanted another child in the following two years, only 16.9% were using a FP method. Methods used most frequently were female sterilization (43%) and injectable anovulatories (34%).

Personal hygiene: 92.3% of women reported handwashing before handling foods, 81.3% after going to the latrine, 42.8% before feeding the infant, and 16.4% after handling baby feces. The latter is consistently with local beliefs that baby stools are not harmful. 88.4% of women use a flush toilet or latrine consistently because they have one at home.

Radio messages: 43% recalled education messages disseminated by radio, mainly about child health, family health and only 2% about maternal health. It is not clear whether there are fewer messages broadcast about maternal health or whether women are paying more attention to family and child health than to their own health.

Utilization of plantation health units: 17% women had visited a plantation HU in the last year. 92.5% would visit the unit again.

Appendix A: performance indicators **Indicator**	**EOP Target**	**Baseline (1997) resident population**			**Final KPC (2001)**			**Difference Final-Base intervened**	**Chi ^{2}**	**New Municipalities, 2001**		
	%	**n**	**%**	**CI 95%**	**n**	**%**	**CI 95%**		**P value**	**n**	**%**	**Difference with CS-XIII KPC 2001**
1.1 Utilization of MCH services	>10%	NR			298	43.5%						
2.1(a) Fully immunized children 12-23m	80%	208	35.1%	(28.6 – 42.0)	121	42.1%	(33.2 – 51.5)	**+7.0**	0.203	141	40.4	+1.7
2.2 Mothers know to get measles vaccine @ 9m	50%	420	21.4%	(17.2 – 25.7)	299	21.4%	(16.9 – 26.5)	0.0	0.997	297	24.5	-3.1
2.3 Families with child health cards	60%	420	53.1%	(48.2 – 57.9)	298	71.5%	(66.0 – 76.5)	**+18.4**	**0.000**	297	71.4	**+**0.1
3.1(b) Exclusive breastfeeding, 0-3.9 m	60%	46	73.9%	(58.9 – 85.7)	53	79.2%	(65.9 – 89.2)	**+5.3**	0.530	65	83.1	-3.9
3.2 Complementary feeding, 5-8.9 m	>20 pts	74	33.8%	(23.2 – 45.7)	45	57.8%	(42.2 – 72.3)	**+24.0**	**0.010**	42	50.0	+7.8
3.3 Three or more meals previous day [4-12m]	90%	145	42.8%	(34.6 – 51.2)	114	43.0%	(33.7 – 52.6)	**+0.2**	0.972	232	31.9	+11.1
4.1 Diarrhea cases (0-2 yr) seeking care	60%	188	53.7%	(46.3 – 61.0)	49	57.1%	(42.2 – 71.2)	**+3.4**	0.668	85	61.2	-3.9
4.2 Diarrhea -*Dehydration* cases (0-2 yr) using ORT	30%	188	8.0%	(4.5 – 12.8)	49	38.8%	(25.2 – 53.8)	**+30.8**	**0.000**	85	11.8	+27.0
4.3 Mothers maintain/ increase feeding during/after diarrhea	60%	188	21.0%	(16.5-26.2)	63	36.5%	(24.7-49.6)	**+15.5**	**0.012**	81	74.1	-37.6
5.2 . Mothers who recognize signs of pneumonia	40%	420	23.3%	(19.4-27.7)	113	41.6%	(32.4-51.2)	**+18.3**	**0.0001**	109	36.9	+4.7
5.3 Care seeking for cough or difficult breathing	60%	217	62.2%	(55.4 – 68.7)	113	56.6%	(45.3 – 67.5)	-5.6	0.326	109	66.1	-9.5
6.1 Mothers seeking prenatal care	70%	420	57.4%	(52.5 – 62.1)	297	56.6%	(50.7 – 62.3)	-0.8	0.828	297	58.9	-3.2
6.2(b) Mothers with TT2	70%	28	42.9%	(24.5 – 62.8)	67	43.9%	(31.7 – 56.7)	**+1.0**	0.969	80	52.5	-8.6
6.3 Births attended by trained provider	40%	420	28.8%	(24.8 – 32.9)	299	53.8%	(48.0 – 59.6)	**+25.0**	**0.000**	297	44.1	+9.7

Indicator 6.2 includes in denominator only mothers with cards
Positive changes in bold.
Confidence interval of Final Survey data @ 95%.
Significant changes are highlighted.
NR: Not Reported NA: Not Applicable

Appendix B: PRIORITY CHILD HEALTH INDICATORS (Rapid CATCH) – HOPE CS Guatemala, Intervened communities August-September 2001

1. Percentage of children age 0–23 months who are underweight (<2 SD from the median weight-for-age, according to the WHO/NCHS reference population): **24. 6%**

Prevention of Illness/Death

2. Percentage of children age 0–23 months who were born at least 24 months after the previous surviving child : **53.7%**

.

3. Percentage of children age 0–23 months whose births were attended by skilled health personnel: **58.3%**

4. Percentage of mothers with children age 0–23 months who received at least two tetanus toxoid injections before the birth of their youngest child: **22.56%**

.

5. Percentage of children age 0–5 months who were exclusively breastfed during the last 24 hours: **79.2%**

6. Percentage of children age 6–9 months who received breastmilk and complementary foods during the last 24 hours: **57.8%**

7. Percentage of children age 12–23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday: **42.1 %**

8. Percentage of children age 12–23 months who received a measles vaccine: **43.3%**

.

9. Percentage of children age 0–23 months who slept under an insecticide-treated net (in malaria risk areas) the previous night: **32.7%**

10. Percentage of mothers with children age 0–23 months who cite at least two known ways of reducing the risk of HIV infection: **17.3%**

11. Percentage of mothers with children age 0–23 months who report that they wash their hands with soap/ash before food preparation, before feeding children, after defection, and after attending to a child who has defecated: **26%**

Management/Treatment of Illness

12. Percentage of mothers of children age 0–23 months who know at least two signs of childhood illness that indicate the need for treatment **34.4%**

Percentage of sick children age 0–23 months who received increased fluids and continued feeding during an illness in the past two weeks: **93%**

Appendix C: Credits

Coordination and planning
Dr. Víctor Calderón de León
Dr. Anabella Judith Aragón Soto
Dr Bettina Schwethelm, HOPE HQ

Training
Dr. Ivan Mendoza
Dr. Edgar Alfredo López Santizo
Dr. Ronald de Jesús Alvarado Ávila

Supervision
Dr. Edgar Alfredo López Santizo
Dr. Ronald de Jesús Alvarado Ávila

Interviewers
Alma de Jesús Hernández Arreaga de Herrera
Javier Maldonado Quiñónez
Sandra Elizabeth Guzmán Reyna
José Estuardo Ovalle Cabrera
Pedro Gonzalo Alvarado Ovalle
Juan Carlos de León
Karina Maricruz Gálvez Reyes
Obira Gabriela Peláez Sánchez
Luis Antonio Díaz de León
Brenda Elizabeth Yes Orozco
José Antonio de León
Carlos Vidahí Sandoval de León (MSPAS)
Fredy Armando Vásquez González (MSPAS)
José Luis Navarro Queme (MSPAS)

Field support
Armando Ambrosio Ramírez Vázquez
Lucia Trapaga
Carlos Humberto Fuentes Minchez

Data processing
Marco Vinicio Cifuentes Rodríguez

Data analysis, Reporting
Dr. Ivan Mendoza (Universidad Rafael Landivar Guatemala)
Dr. Luis Benavente (HOPE Center)
Dra. Anabella Judith Aragón Soto (HOPE Guatemala)

Appendix D: List of Clusters

Depart-ment	Municipality	Communities and plantations	Population	Depart-ment	Municipalities	Communities and plantations	Population
1	Patulul	Patulul	6673	3	San Martin	Santa Ines	495
1	Patulul	Cocales San Rufino	1003	3	San Martin	Talconac	160
1	Patulul	Estación Cocales	242	3	San Martin	Tojalic	2260
1	Patulul	El Ingenio San Jerónimo	182	3	San Martin	Tuipic	200
1	Patulul	El Triunfo	2438	3	San Martin	Toscoman	
1	Patulul	El Rosario	955	3	San Martin	San Martín Chiquito	
1	Patulul	San Rafael	233	3	San Martin	Tosmech	
1	Patulul	La Ermita	251	3	San Martin	Tuichin	
1	Patulul	Los Tarrales	453	3	San Martin	Toscon	
1	Patulul	Santa Isabel	250	3	San Martin	Xecxuc	
1	Samayac	Samayac	9111	3	San Martin	Las Hortencias	
1	Samayac	Chiguaxte	1825	3	San Martin	Tuibul	
1	Samayac	San Antonio Puma	701	3	San Martin	Canjul	
1	Samayac	Parraxe	540	3	San Martin	Tuitzalaj	
1	Samayac	Quila	1648	3	San Martin	Mandalay	106
1	Samayac	San Antonio Ixtacapa	839	3	San Martin	San José Altamira	12
1	Samayac	San Antonio Nima	811	3	San Martin	Chuicabal	120
1	Samayac	San Francisco Puma	1404	3	San Martin	Ronrones	60
1	Cuyotenango	Cuyotenango	6770	3	San Martin	La Providencia	470
1	Cuyotenango	Chacalte Sis	2346	3	San Martin	San Isidro	125
1	Cuyotenango	Chacalte Aparicio No.1	2777	3	San Martin	La Isla	96
1	Cuyotenango	Entre Rios	788	3	San Martin	La Joya	1500
1	Cuyotenango	Concepción	547	3	San Martin	El Rosario	90
1	Cuyotenango	Guachipilin No.1	544	3	San Martin	La Conchita	60
1	Cuyotenango	Guachipilin No. 2	1086	3	San Martin	La Soledad	60
1	Cuyotenango	Guadalupe	846	3	San Martin	Santa Isabel	60
1	Cuyotenango	La Maquina Centro Urbano	4572	3	San Martin	Gerona	21
1	Cuyotenango	La Tejanita	289	3	Coatepeque	Coatepeque	26393
1	Cuyotenango	San Rafael Olimpo	323	3	Coatepeque	Bethania	2255
1	Cuyotenango	Aceituno	261	3	Coatepeque	Buena Vista	271
1	Cuyotenango	San Isidro	521	3	Coatepeque	Colón	487
1	Cuyotenango	La Maquina	12689	3	Coatepeque	El Silencio	648
1	Cuyotenango	Las Mercedes	203	3	Coatepeque	El Pital	789
1	Cuyotenango	Santa Teresa	366	3	Coatepeque	El Castaño	443
1	Cuyotenango	El Castaño, Candelaria	194	3	Coatepeque	El Relicario	531
2	Santiago Atitlan	Panaj	6357	3	Coatepeque	El Chaguite	355
2	Santiago Atitlan	Xechivoy	4730	3	Coatepeque	El Reparo	421
2	Santiago Atitlan	Tzanjuyu	3575	3	Coatepeque	Jalisco	336
2	Santiago Atitlan	Pachichaj	4169	3	Coatepeque	La Ayuda	381
2	Santiago Atitlan	Panul	4353	3	Coatepeque	El Troje	1001
2	Santiago Atitlan	Cerro de O.	3081	3	Coatepeque	La Democracia	619
2	Santiago Atitlan	Panabaj	829	3	Coatepeque	Las Palmas	2954
2	Santiago Atitlan	Tzanchaj	1363	3	Coatepeque	La Esperanza	665
2	Santiago Atitlan	Chacaya	723	3	Coatepeque	Los Cerritos	1013
2	Santiago Atitlan	Finca Met Zabal	115	3	Coatepeque	La Felicidad	3287
2	Santiago Atitlan	Finca El Rosario	21	3	Coatepeque	Las Animas	742
2	Santiago Atitlan	Finca El Brote	54	3	Coatepeque	Los Encuentros	1160
2	Santiago Atitlan	Finca Montequina	73	3	Coatepeque	La Unión	2630
2	Santiago Atitlan	Finca Monte de Oro	179	3	Coatepeque	Magnolia	5202
2	Santiago Atitlan	Finca Olas de Moca	523	3	Coatepeque	Miguel Angel Asturias	707
2	Santiago Atitlan	Finca San Isidro Chacaj	44	3	Coatepeque	Monterrey 1	319
2	Santiago Atitlan	Finca la Armonia	60	3	Coatepeque	Nuevo Chuatuj	4908
2	Santiago Atitlan	Finca las Cascadas	70	3	Coatepeque	Rancho Grande	286
2	Santiago Atitlan	Finca la Providencia	66	3	Coatepeque	San Agustin Pacaya	993
2	Santiago Atitlan	Finca el Recuerdo	110	3	Coatepeque	San Francisco Julain	670
2	Santiago Atitlan	Finca Santa Amalia	73	3	Coatepeque	San Vicente Pacaya	1609
3	San Martin	El Rincón	1800	3	Coatepeque	San Rafael Pacaya 1	1908
3	San Martin	Santa Anita	522	3	Coatepeque	San Rafael Pacaya 2	2780
3	San Martin	Nueva Concepción	1025	3	Coatepeque	Santa María Naranjo	847
3	San Martin	El Carmen	260	3	Coatepeque	Santa Ines	1372
3	San Martin	El Más Alla	1037	3	Coatepeque	San Isidro	891
3	San Martin	Nueva Esperanza	262	3	Coatepeque	Campo Libre	318
3	San Martin	Santo Domingo	1025	3	Coatepeque	Zanjon Seco	413
3	San Martin	Nuevo San José	171	3	Coatepeque	El Socorro	553
3	San Martin	El Colón	120	3	Coatepeque	Monte Cristo	537
3	San Martin	La Cumbre	800	3	Coatepeque	Valparaiso	383
3	San Martin	La Estancia	852	3	Coatepeque	El Refugio	901
3	San Martin	Loblatzan	2000	3	Coatepeque	El Jardín	5156
3	San Martin	Las Nubes	1500				
3	San Martin	Miramar	450				
3	San Martin	La Loma	600				
3	San Martin	Buena Vista	92				

Appendix E: Frequency tables for intervened communities, KPC 2001:

Women with children

Table 1-a: Distribution of women by Department

Dept .	Freq	Percent	Cum.
San Marcos	190	63.5%	63.5%
Quetzalto.	73	24.4%	88.0%
Suchitepeq	6	12.0%	100.0%
Total	299	100.0%	

Table 2: Did the mother ever attended School?

Attendance	Freq	Percent	Cum.
Yes	207	69.5%	69.5%
No	91	30.5%	100.0%
Total	298	100.0%	

Table 3:Number of years at school (only those who ever attended)

Number of years	Freq	Percent	Cum.
1	42	20.2%	20.2%
2	60	28.8%	49.0%
3	41	19.7%	68.8%
4	18	8.7%	77.4%
5	9	4.3%	81.7%
6	23	11.1%	92.8%
7	1	0.5%	93.3%
8	2	1.0%	94.2%
9	6	2.9%	97.1%
11	1	0.5%	97.6%
12	5	2.4%	100.0%
Total	208	100.0%	

Table 4: Do you do any income generating work?

Answers	Freq	Percent	Cum.
Nothing	195	66.8%	66.8%
Handicrafts	2	0.7%	67.5%
Harvesting fruit	63	21.6%	89.0%
Selling agricultural produ	5	1.7%	90.8%
Selling foods	6	2.1%	92.8%
Domestic servant	8	2.7%	95.5%
Street/ store vendor	10	3.4%	99.0%
Salaried worker	3	1.0%	100.0%
Total	292	100.0%	

Table 5 Comparison of general characteristics of the sample 1997- 2001

INDICATOR	KPC 1997			KPC 2001			DIFF.	P value
	Sample	%	CI 95%	Sample	%	CI 95%		
LANGUAGE:								
SPANISH	420	90.5	(87.2; 93.0)	297	93.6	(83.9; 98.4)	3.1	0.1510
QUICHE		4.3	(2.6; 6.8)		2.4	(1.0; 4.8)	-1.9	0.1240
MAM		3.8	(2.3; 6.2)		2.1	(0.2; 2.9)	-1.7	0.1830
MATERNAL AGE (years)	420	27.1	7.4	287	27.0	7.1	-0.1	0.8520
(Mean, Std deviation)								
SCHOOL ATTENDANCE	420	59.5	(54.6; 64.2)	298	69.5	(63.9; 74.6)	10.0	0.0063
YEARS IN SCHOOL	250	3.1	1.6 (DE)	208	3.3	2.4 (DE)	0.2	0.2870
(Mean, standard deviation)								
ECONOMIC ACTIVITY OUTSIDE HOME								
NONE	420	61.4	(56.6; 66.1)	292	66.8	(61.1; 72.2)	5.4	0.1440
HANDICRAFTS		1.1	(0.3; 2.6)		0.7	(0.1; 2.5)	-0.4	0.7710
AGRICULTURE		26.0	(21.9; 30.5)		21.6	(17.0; 26.7)	-4.4	0.1790
STREET VENDOR		1.4	(0.6; 3.2)		1.7	(0.6; 4.0)	0.3	0.9940
OWNS A BUSSINESS		4.3	(2.6; 6.8)		3.4	(1.7; 6.2)	-0.9	0.5610
SALARIED WORKER		1.7	(0.7; 3.6)		1.1	(0.2; 3.0)	-0.6	0.6970

Table 6:Who takes care of (name) while you are away from home?

Answers	Freq	Percent	95% Conf Limit
Mother takes child	189	63.2%	57.5%-68.7%
Husband/partner	10	3.3%	1.6%- 6.1%
Older siblings	45	15.1%	11.2%-19.6%
Relatives	45	15.1%	3.3%- 8.9%

Table 7:How long after birth did you put (name) to the breast?

Hours after birth	Freq	Percent	Cum.
less than one	185	62.5%	62.5%
one to eight	58	19.6%	82.1%
more than eight	53	17.9%	100.0%
Total	296	100.0%	

Table 8: How many times was (name) fed yesterday?

Feedings	Freq	Percent	Cum.
1	11	4.7%	4.7%
2	38	16.4%	21.1%
3	54	23.3%	44.4%
4	32	13.8%	58.2%
5	31	13.4%	71.6%
6	32	13.8%	85.3%
7	5	2.2%	87.5%
8	20	8.6%	96.1%
9	9	3.9%	100.0%
Total	232	100.0%	

Table 9: Foods eaten the previous day by age group

Food/food group	Children< 2y		Children<1y		Infants<6months	
	Freq	%	Freq	%	Freq	%
Breast milk	252	84.3	158	95.8	79	100.0
Cereals	132	44.1	51	30.9	7	8.9
Legumes	95	31.8	37	22.4	4	5.1
Meats and/or eggs	86	28.8	24	14.5	3	3.8
Green vegetables	41	13.7	12	7.3	2	2.5
Other vegetables	32	10.7	10	6.1	2	2.5
Non-human milk	28	9.4	14	8.5	5	6.3
Yellow vegetables	20	6.7	4	2.4	0	0.0
Tubers and roots	20	6.7	5	3.6	0	0.0
Fruit juice	19	6.4	4	2.4	1	1.3
Gruels, solid food	15	5.0	5	3.0	0	0.0
Yellow fruits	12	4.0	3	1.8	0	0.0
Cheese	3	1.0	1	0.6	0	0.0

A.

Table 10: Comparison of child feeding practices, 1997-2001

INDICATOR	DIP bcnch.	KPC survey 1997			KPC survey 2001			DIFF	P value
		Sample	%	CI 95%	Sample	%	CI 95%		
Percent of children given 3 or more feedings the day preceding the survey	90%	145	42.80	(34.6 – 51.2)	114	43.00	(33.7 – 52.6)	0.2	0.9720
Percent of children (age group 5-8.9 months) that are receiving semi-solid or solid food	>20 pts	74	33.80	(23.2 – 45.7)	45	57.80	(42.2 – 72.3)	24.0	0.0100
Percent of children (age group 0-5.9 months)who were fed breastmilk only in the last 24 hours	60%	46	73.90	(58.9 – 85.7)	53	79.20	(65.9 – 89.2)	5.3	0.5300
Percent of children aged 0-23 months who were breastfed in the first hour of birth		413	46.20	(41.4 - 51.2)	296	62.50	(56.7 - 68.0)	16.3	0.0000
Percent of mothers that maintain or increase breastfeeding during and after child diarrhea	60%	188	62.00	(48.8 – 73.9)	63	72.30	(65.4 – 78.6)	10.3	0.1190
Percent of children aged 0-23 months with diarrhea in the last two weeks that were offered more fluids during the illness		188	35.60	(28.8 - 42.9)	63	55.60	(42.5 - 68.1)	20.0	0.0050
Percent of children aged 0-23 months with diarrhea in the last two weeks that were offered the same amount or more food during the illness		188	21.00	(16.5 - 26.2)	63	36.50	(24.7 - 49.6)	15.5	0.0120
Percent of children aged 6-23 months that had received vitamin A supplements in the 6 months preceding the survey	NP	334	3.60	(2.0 – 6.4)	217	15.70	(10.7 – 20.7)	12.1	0.0001

Table 11: Prevalence of stunting (low height for age)

	Male	Female	Both sexes
Proportion under–2 Z	48 35.3%	44 30.3%	92 32.7%
95% CI	(27.4,44.0)	(23.1,38.6)	(27.4,38.6)
Proportion under –3Z	16 11.8%	19 13.1%	35 12.5%
95% CI	(7.1;18.7)	(8.3;20.0)	(8.9,17.0)

Distribution of height-for-age

Median	-1.46	-1.15	-1.31
Mean	-1.40	-1.24	-1.32
95% CI of the mean	(-1.67,-1.13)	(-1.50,-0.98)	(-1.51,-1.13)
Standard Deviation	1.27	1.61	1.61

Table 12: Prevalence of wasting (low weight for height)

Proportion <-2.0	8 6.0%	6 4.0%	14 4.9%
95% CI	(2.8,11.8)	(1.6,8.9)	(2.8,8.3)
Proportion <-3.0	1 0.7%	3 2.0%	4 1.4%
95% CI	(0.0,4.7)	(0.5,6.2)	(0.5,3.8)

Distribution of weight-for-height

Median	-0.35	0.04	-0.16
Mean	-0.21	0.02	-0.09
95% CI	(-0.42,0.01)	(-0.19,0.23)	(-0.24,0.06)
Std. deviation	1.13	1.29	1.29

Table 13: Prevalence of global malnutrition

Proportion <-2.0	38 27.3%	34 22.2%	72 24.7%
95% IC	(20.3,35.7)	(16.1,29.8)	(19.9,30.1)
Proportion <-3.0	7 5.0%	9 5.9%	16 5.5%
95% IC	(2.2,10.5)	(2.9,11.2)	(3.3,8.9)

Distribution of weight-for-age

Median	-1.14	-1.00	-1.06
Mean	-1.06	-0.85	-0.95
95% CI	(-1.29,-0.82)	(-1.09,-0.61)	(-1.12,-0.78)
Std. Deviation	1.20	1.51	1.47

Table 14: Immunization coverage rates, 1997-2001

INDICATOR	DIP bench	KPC survey 1997			KPC survey 2001			DIFF	P value
		Sample	%	CI 95%	Sample	%	CI 95%		
Percent of children aged 0-23 months who have a immunization card	60%	420	53.10	(48.2 – 57.9)	298	71.50	(66.0 – 76.5)	18.4	0.0000
Percent of children aged 12-23 months that who received BCG, DPT3, OPV3 and measles vaccines	80%	208	35.10	(28.6 – 42.0)	121	42.10	(33.2 – 51.5)	7.0	0.2030
Percent of children aged 0-12 months that have specific vaccines:									
BCG		210	49.5	(42.6; 56.5)	185	67.6	(59.7; 73.3)	18.1	0.0002
OPV (newborn)		210				26.0	(19.6; 33.3)		*
OPV 1		210	52.9	(45.9; 59.8)		57.3	(49.8; 64.5)	4.4	0.3760
OPV 2		210	36.4	(30.1; 43.6)		46.5	(39.1; 54.0)	10.1	0.0370
OPV 3		210	22.9	(17.4; 29.1)		35.7	(28.2; 43.0)	12.8	0.0050
DPT 1		210	48.1	(41.2; 55.1)		54.6	(47.1; 61.9)	6.5	0.1970
DPT 2		210	35.7	(29.2; 42.6)		44.3	(37.0; 51.8)	8.6	0.0810
DPT 3		210	22.4	(16.9; 28.6)		33.0	(26.3; 40.3)	10.6	0.0180
Percent of children aged 12-23 months who received measles vaccine		208	40.4	(33.7; 47.4)	121	47.9	(38.8; 57.2)	7.5	0.1820
Percent of mothers that know when measles vaccine should be administered to the child	50%	420	21.40	(17.2 – 25.7)	299	21.40	((16.9 – 26.5)	0.0	0.9970

B. Table 15: Child morbidity, 1997-2001

INDICATOR	KPC survey 1997			KPC survey 2001			DIFF	P value
	Sample	%	CI 95%	Sample	%	CI 95%		
Percent of children 0-23 months with cough in the 2 weeks preceding the survey	420	51.70	(46.8 - 56.5)	299	37.80	(32.3 - 43.6)	-13.9	0.0002
Percent of children aged 0-23 months with cough in the last two weeks who were taken to any provider	217	62.20	(55.4 - 68.7)	113	41.60	(32.4 -51.2)	-20.6	0.0003
Place where the mother sought help								
Hospital	135	3.70	(1.2 - 8.4)	47	0.00		-3.7	
Health center/ post	135	18.50	(12.4 - 26.1)	47	27.70	(15.6 - 46.6)	9.2	0.1842
Health unit- coffee estate	135	0.00		47	10.60	(3.5 - 23.1)	10.6	
Private provider	135	28.10	(20.8 - 36.5)	47	12.80	(4.8 - 25.7)	-15.3	0.0339
Pharmacy	135	25.20	(18.1 - 33.1)	47	10.60	(3.5 - 23.1)	-14.6	0.0363
Health promoters	135	6.70	(3.1 - 12.3)	47	4.30	(0.5 - 14.5)	-2.4	0.8086
Traditional birth attendant	135	4.40	(1.6 - 9.4)	47	0.00		-4.4	
Percent of children 0-23 months with diarrhe in the 2 weeks preceding the survey	420	44.80	(40.0 - 40.7)	299	21.10	(16.6 - 26.1)	-23.7	0.0000
Percent of children aged 0-23 months with diarrhea in the last two weeks who were taken to any provider	188	53.70	(46.3 - 61.0)	63	44.40	(31.9 - 57.5)	-9.3	0.2022
Percent of children aged 0-23 months with diarrhea in the last two weeks who received Oral Rehydration Terapy	188	8,00	(4.5 – 12.8)	49	38,80	(25.2 – 53.8)	30,8	0,0000
Place where the mother sought help								
Hospital	101	5.00	(1.6 - 11.2)	28	7.10	(0.9 - 23.5)	2.1	0.9854
Health unit- coffee estate	101	0.00		28	3.60	(6.1 - 6.9)	3.6	
Private provider	101	16.80	(10.1 - 25.6)	28	10.70	(2.3 - 28.2)	-6.1	0.6196
Pharmacy	101	16.80	(10.1 - 25.6)	28	14.30	(4.0 - 32.7)	-2.5	0.9731
Health promoters	101	5.90	(2.2 - 12.5)	28	14.30	(4.0 - 32.7)	8.4	0.2883
Traditional birth attendant	101	5.90	(2.2 - 12.5)	28	0.00		-5.9	

Table 16-a: What are the signs of malaria that would cause you to seek help?

SIGN / SYMPTOM	Freq	Percent
Do not know	137	45.80%
Fever	138	46.20%
Shivering	108	36.10%
Headache	47	15.70%
Seizures	1	0.30%
Unable to drink	7	2.30%

Table 16-b: What are the signs of dengue that would cause you to seek help?

SIGN/SYMPTOM	Freq	Percent
Do not know	158	52.80%
Headache	61	20.40%
Muscles aching	41	13.70%
Joints/bones aching	35	11.70%
Eyes aching	2	0.70%
Irritability	9	3.00%

C. Table 16-c: Do you have bednets at home?

	Freq	Percent
Yes	149	49.80%
No	145	48.50%
Do not know	2	0.70%
Total	299	

D. Table 17: Maternal Health, 1997-2001

INDICATOR	DIP	KPC survey 1997			KPC survey 2001			DIFF	P value
		Sample	%	CI 95%	Sample	%	CI 95%		
ANTENATAL care	>10%								
Provided by a physician		241	38.60	(32.4 - 45.1)	168	55.40	(37.0 - 52.5)	16.8	0.0008
Provided by a nurse		241	25.30	(19.9 - 31.3)	168	19.00	(13.4 - 25.8)	-6.3	0.1370
Provided by a TBA		241	33.60	(27.7 - 40.0)	168	23.80	(17.6 - 31.0)	-9.8	0.0326
Provided by a health promoter		241	0.40	(0.0 - 2.3)	168	1.20	(0.1 - 4.2)	0.8	0.7524
BIRTH									
Delivery attended by physician		241	17.40	(13.9 - 21.4)	168	37.50	(30.2 - 45.3)	20.1	0.0000
Delivery attended by a nurse		241	9.50	(7.0 - 12.8)	168	10.10	(6.0 - 15.7)	0.6	0.8471
Delivery attended by a TBA		241	63.80	(59.0 - 68.4)	168	50.00	(42.2 - 57.8)	-13.8	0.0050
Delivery attended by a health promoter		241	0.50	(0.1 - 1.9)	168	0.60	(0.1 - 4.2)	0.1	0.7524

E. Table 18: Other indicators of maternal health and child spacing, 1997-2001

INDICATOR	DIP Bench	KPC survey 1997			KPC survey 2001			DIFF	P value
		Sample	%	CI 95%	Sample	%	CI 95%		
Percent of mothers with a maternal card		420	6.70	(4.6 - 9.6)	287	23.30	(18.6 - 28.8)	16.6	0.0000
Percent of mothers who had at least one prenatal visit prior to the birth of her youngest child less than 24 months of age	70%	420	57.40	(52.5 – 62.1)	297	56.60	(50.7 – 62.3)	-0.8	0.8280
Percent of mothers that had antenatal care by a trained provider	40%	420	28.80	(24.8 – 32.9)	299	53.80	(48.0 – 59.6)	25.0	0.0000
Percent of mothers who received at last two tetanus toxoid injections	70%	28	42.90	(24.5 – 62.8)	67	43.90	(31.7 – 56.7)	1.0	0.9690
Percent of mothers who had at least one post-partum check-up			NR		299	13.20	(9.7 - 17.8)		
Percent of nonpregnant mothers who are using a modern method of child spacing		420	13.30	(10.3 - 17.0)	153	21.60	(15.3 - 28.9)	8.3	0.0160
Maternal knowledge of Child spacing methods									
Mother does not know any		420	49.50	(44.7 - 54.4)	153	28.80	(21.7 - 36.6)	-20.7	0.0000
Female sterilization		420	10.20	(7.6 - 13.6)	153	15.00	(9.8 - 21.7)	4.8	0.1117
Vasectomy		420	1.20	(0.4 - 2.4)	153	5.90	(2.7 - 10.9)	4.7	0.0035
Nortplant		420	1.00	(0.3 - 2.6)	153	0.00		-1.0	
Anovulatory inyections		420	31.90	(27.5 - 36.6)	153	60.80	(52.6 - 68.6)	28.9	0.0000
Anovulatory, Pills		420	39.50	(34.8 - 44.4)	153	63.40	(55.2 - 71.0)	23.9	0.0000
Intrauterine devices		420	9.80	(7.2 - 13.1)	153	13.70	(8.7 - 20.2)	3.9	0.1766
Diaphragm		420	1.20	(0.4 - 2.9)	153	0.00		-1.2	
Condom		420	6.90	(4.8 -9.9)	153	17.00	(11.4 - 23.9)	10.1	0.0002
Foam		420	1.00	(0.3 - 2.6)	153	1.30	(0.2 - 4.6)	0.3	0.9245
LAM – exclusive breast feeding		420	0.50	(0.1 - 1.9)	153	0.70	(0.0 - 3.6)	0.2	0.7524
Rhythm		420	3.30	(1.9 - 5.7)	153	8.50	(4.6 - 14.1)	5.2	0.0098
Abstinence		420	0.70	(0.2 - 2.3)	153	3.30	(1.1 - 7.5)	2.6	0.0571

Table 19-a: Have you ever taken your child to the health Unit (inside the coffee estate) in the last year?

Answer	Freq	Percent
Yes	130	43.50%
No	67	22.40%
Total	298	

Table 19-b: Would you take your child again to the Heath Unit?

Answer	Freq	Percent
Yes	121	40.50%
No	19	6.40%
	299	

Table 19-c: Why not?

Answer	Freq	Percent
Closed	4	1.30%
No medicines available	9	3.00%
Reduced hours of services	5	1.70%
Other	5	1.70%

Women of fertile age

Table 1 : Distribution of the sample by Department

DEPARTMENT	Freq	Percent	Cum.
San Marcos	107	69.5%	69.5%
Quetzaltenango	31	20.1%	89.6%
Suchitepequez	16	10.4%	100.0%
Total	154	100.0%	

Table 2: Percent of respondents that were pregnant at the moment of the survey

Pregnant	Freq	Percent	Cum.
Yes	13	8.4%	8.4%
No	141	91.6%	100.0%
Total	154	100.0%	

Table 3.: Did the woman ever attended School?

Attendance	Freq	Percent	Cum.
yes	106	68.8%	68.8%
No	48	31.2%	100.0%
Total	154	100.0%	

Table 4.: Number of years at school (only those who ever attended).

Years	Freq	Percent	Cum.
1	7	6.5%	6.5%
2	28	25.9%	32.4%
3	22	20.4%	52.8%
4	12	11.1%	63.9%
5	6	5.6%	69.4%
6	23	21.3%	90.7%
8	2	1.9%	92.6%
9	2	1.9%	94.4%
11	2	1.9%	96.3%
12	3	2.8%	99.1%
14	1	0.9%	100.0%
Total	108	100.0%	

Table 5.: Do you do any income generating work?

Work outside the home	Freq	Percent
None	110	78.6%
Handicrafts	21	15.0%
Agriculture	6	4.3%
Selling agricultural pr	1	0.7%
Domestic servant	1	0.7%
Total	140	100.0%

Table 6.:In there anything a person can do to avoid getting AIDS?

Answer	Freq	Percent.
Nothing	2	1.3%
Abstain from sex	25	16.2%
Use condoms	21	13.6%
Stay faithful to one partner	35	22.7%
Limit number of sexual partners	6	3.9%
Avoid sex with prostitutes	18	11.7%
Avoid sex with persons who have many	6	3.9%
Avoid blood transfusions	8	5.2%
Avoid injections	14	9.1%
Avoid kissing	3	1.9%
Avoid mosquito bites	1	0.6%

Avoid sharing razors/ blades	7	4.5%
Don’t know	41	26.6%

Table 7.: In man, what signs and symptoms would lead you to think that he has an infection that can be transmitted through sexual contact?

Sign/ symptom	Freq	Percent
Abdominal pain	10	6.5%
Genital discharge	5	3.2%
Foul smelling discharge	1	0.6%
Burning pain on urination	5	3.2%
Inflamation in genital area	4	2.6%
Genital sores/ ulcers	4	2.6%
Genital warts	1	0.6%
Blood in urine	3	1.9%
Weight loss	22	14.3%
Impotence	1	0.6%
No Syntoms	2	1.3%
Don’t know	109	70.8%

Table 8.: In woman, what signs and symptoms would lead you to think that he has an infection that can be transmitted through sexual contact?

Signs/ symptoms	Freq	Percent
Abdominal pain	15	9.7%
Genital discharge	27	17.5%
Foul smelling discharge	8	5.2%
Burning pain on urination	12	7.8%
Inflamation in genital area	3	1.9%
Genital sores/ ulcers	1	0.6%
Genital warts	4	2.6%
Blood in urine	3	1.9%
Weight loss	20	13.0%
Don’t know	94	61.0%

Table 9: Knowledge of family planning methods

Method	Freq	Percent
Female sterilization	23	14.9%
Vasectomy	9	5.8%
Injections	94	61.0%
Pills	98	63.6%
Intrauterine device	22	14.3%
Condoms	26	16.9%
Foam/Gel	2	1.3%
LAM, exclusive breastfeeding	1	0.6%
Rhythm	14	9.1%
Abstinence	5	3.2%
Don’t know	44	28.6%

Table 10: Women willing to have a pregnancy in the next 2 years

	Freq	Percent	Cum.
Yes	43	28.1%	28.1%
No	91	59.5%	87.6%
Don’t know	19	12.4%	100.0%
Total	153	100.0%	

Table 11: Couples using any family planning method

Use any method	Freq	Percent	Cum.
Yes	33	21.4%	21.4%
No	121	78.6%	100.0%
Total	154	100.0%	

Table 12: Family planning method used

Method	Freq	Percent	Cum.
Female sterilization	12	36.4%	36.4%
Vasectomy	1	3.0%	39.4%
Norplant	12	36.4%	75.8%
Inyections	3	9.1%	84.8%
Pills	1	3.0%	87.9%
Condom	1	3.0%	90.9%
Rhythm	3	9.1%	100.0%
Total	33	100.0%	

Table 13: Handwashing practices

When do you wash your hands?	Freq	Percent
Before food preparation	141	91.6%
Before feeding the child	62	40.3%
After defecation	120	77.9%
After attending a child who Has Defecated	36	23.4%

Table 14: Place used for excreta disposal

place	Freq	Percent	Cum.
Latrine or flush toilet	146	94.8%	94.8%
Open field/ bush	7	4.5%	99.4%
River,superficial water	1	0.6%	100.0%
Total	154	100.0%	

Table 15: Recalling health messages in local radio

Recalls health me	Freq	Percent	Cum.
Yes	66	43.1%	43.1%
No	87	56.9%	100.0%
Total	153	100.0%	

Table 16: Have you ever sough help at the health Unit (inside the coffee estate) in the last year?

Answer	Freq	Percent	Cum.
Yes	50	49.0%	49.0%
No	52	51.0%	100.0%
Total	102	100.0%	

Table 17: Would you sough help again?

Answer	Freq	Percent	Cum.
Yes	48	97.0%	97.0%
No	1	3.0%	100.0%
Total	49	100.0	

.Appendix F: New municipalities and survey questionnaire: Proyecto Hope/ *Project HOPE*

Cuestionario para las madres con niños menores de 2 años sobre Conocimientos, Prácticas y Coberturas

Questionnarie for mothers with children under 24 months : knowledge, practices and coverages

Programa Supervivencia Infantil Zona Bocacosta Región VI Guatemala 2001/ *Child Survival, Boca Costa, 2001*

Distribución de casos por departamento/ *Distribution of the sample by department*

Department	Freq	Percent	Dept	Freq	Percent	Dept	Freq	Percent
San Marcos	179	60.3%	Quetzaltenango	78	26.3%	Suchitepequez	40	13.5%

Distribución por municipios encuestados/ *Distribution of the sample by municipality*

Municipality	Freq	Percent	Municip	Freq	Percent	Municip	Freq	Percent
San Martín	79	26.6%	Santiago Ati.	40	13.5%	Samayac	10	3.4%
Patulul	20	6.7%	Coatepeque	108	36.4%	Cuyotenango	40	13.5%

Datos de la madre/ *Mother's data*

1. Nombre de la madre/ *Name of the mother*_____
2. Cuantos años cumplidos tiene Ud.? *How old are you?* _____ años cumplidos. / *years*

3. Asistió Ud. alguna vez a la escuela? / *have your ever attended school?*

	Freq	Percent
1. Si/ Yes		
2. No (pase a la pregunta 5*/ go to question 5*)		

4. Cual es el último año de escuela que aprobó?/ *last school grade passed*_____años/*grade*

5. Cual es el idioma que mas habla en su casa?/ *What language do you spoke at home*?

	Freq	Percent
1. Español/ *Spanish*	248	83.5%
2. Quiché	2	0.7%
3. Mam	31	10.4%
4. Otro (especifique)/ *Other (specify)* _____	1	0.3%

6. Que tipo de trabajo hace para ganar dinero / *Do you work outside the home to earn money?*

	Freq	Percent
1. Nada/ *None*	227	76.4%
2. Artesanía? *handicrafts*	8	2.7%
3. Cosechando, recogedor de frutas/ *harvesting,other agricultural activities*	24	8%
4. Vendiendo productos agrícolas/ *selling agricultural produce*	3	1%
5. Vendiendo comidas, productos lácteos / *selling food, dairy products*	3	1%
6. Servicios domésticos/ *domestic servant*	10	3.3%
7. Dueño de tienda/vendedor de la calle/ *shopkeeper, street vendor*	7	2.3%
8. Trabajador asalariado/ *salaried worker*	1	0.3%
9. Otros (especifique)/ *other, specify* _____	0	

7. Quien cuida al niño cuando Ud. esta fuera de casa*/ who takes care of [name] when you are away?*

	Freq	Percent
1. La misma madre/ *mother, respondent*	190	64%
2. Esposo / *husband, partner*	5	1.7%
3. Hijos mayores/ *older children*	33	11.1%
4. Otro pariente (especifique)/ *other relative, specify*_____	59	40.1%
5. Familiares,amigos / *friends*	0	
6. Otro (especifique)/ *other, specify*_____	0	

Listado de los niños menores de cinco años/ *Children under 5 years of age*

8. Cuantos niños menores de cinco años viven con usted/ *How many children under 5y live with you?*

9. Cuantos de estos son hijos propios: / *How many are your [biological] children* ____ niños / *children*

10. Cuales son sus nombres, sexo y edades (si es uno solo, cual es su nombre, sexo y edad)/ *What are the names, sexes, and dates of birth of your two youngest children?*

	Nombre/ *Name*	Sexo/ *Sex*	Fecha de nacimiento/ *Date of birth*	Caso índice/ *index case*
1		1. Masculino/ *male* 2. Femenino/ *female*	__ __ / __ __ / __ __ Dia Mes Año *d/m/y*	X
2		1. Masculino/ *male* 2. Femenino / *female*	__ __ / __ __ / __ __ Dia Mes Año *d/m/y*	

[Caso índice debe ser el niño de menor edad]/ [*index case must be the younger child]*

11. Entre sus niños más pequeños (nombre de los dos menores) tuvo otro embarazo? *Between [1 and 2] did you have another pregnancy?*

1. Si */ yes*
2. No */ no*

Freq	Percent

Lactancia materna y nutrición del niño/ *Breastfeeding and infant feeding*

12. Alguna vez dio de mamar a (nombre del niño menor o caso índice)/ *have you ever breastfed [name]*

	Freq	Percent
1. Si / *yes*	290	97.6%
2. No (pase a la pregunta 14) / *No -> go to question 14*	6	2%

13. Cuanto tiempo después de nacer le dio de mamar (nombre del niño)? */ how long after birth did you put [name] to the breast*

	Freq	Percent
1. Inmediatamente o dentro de la primera hora de nacido/ *within 1st hour of birth*	153	51.5%
2. Entre 1 y 8 horas de nacido/ *between 1 and 8 hours after birth*	65	21.9%
3. Después de 8 horas de nacido/ *after the eight hour*	73	24.6%

14. Dígame si (nombre del niño índice) comió y/o bebió ayer.. *has (name) eaten yesterday*..

	Alimentos o bebidas/ *Food and beverages consumed in the last 24h*	*Frequency, %*
1	Leche materna / *breast milk*	362 (88.2%)
2	Agua pura/ *plain water*	No data
3	Otras leches: maternizada, enlatada, fresca/ *milk, other than breast milk*	25 (8.4%)
4	Jugo de fruta/ *fruit juice*	21 (7.1%)
5	Otro liquido: te de hierba, sopa/caldo,refresco/ *other fluids such as teas an soups*	No data
6	Papillas o alimentos sólidos/ *mashed, pureed foods or solids*	14 (4.7%)
7	Alimento hecho de granos: maíz, trigo, avena, papilla confeccionada con cereales, pan, galletas, fideos/ *any food made from grains*	142 (47.8%)
8	Calabaza/zapallo,zanahoria, camotes amarillos/ *yellow vegetables*	10 (3.4%)
9	Otros tuberculos/raices: papas../ *tubers and roots*	37 (12.5%)
10	Hojas verdes/ *green leaves*	38 (12.8%)
11	Mango,papaya/otra fruta amarilla rica en vitamina A/ *yellow, vitamin A rich fruits*	9 (3%)
12	Otras frutas o vegetales (platano,manzana,tomate)/ *other fruits or vegetables*	21 (7.1%)
13	Carne de res, de gallina, pescado o huevos/ *meats, seafood, eggs*	90 (30.3%)
14	Alimentos hechos con frijoles, lenteja, soya o similar/ *any foods made from legumes*	90 (30.3%)
15	Queso / *cheese*	7 (2.4%)
16	Alimentos que contienen grasa/ *Any food made with oil, fat or butter*	No data

15. Además de la lactancia cuantas veces comió o bebió líquido [nombre del niño] ayer? Incluir tanto las comidas principales como las refacciones [especificar que "ayer' se refiere a día y noche _____ Número de veces
Besides breast milk, how many times did [name] have foods and drinks yesterday?

Veces/ *times*	Freq	Percent
0	74	24.6%
1	8	2.7%
2	35	11.8%
3	75	25.3%
4	39	13.1%
5	26	8.8%
6	27	9.1%
7	1	0.3%
8	10	3.4%
9	2	0.7%

Salud maternaPrenatal / *prenatal care*

16. Cuando Ud. estaba embarazada de (nombre del niño) se hizo su control prenatal?/ *Did you see anyone for prenatal care while you were pregnant with [name]*

	Freq	Percent
1. Si/ *Yes*	175	58.9%
2. No (pase a la pregunta 22) */ No -> go to question 22*	119	40.1%

17. A quien acudió usted? (puede marcar más de una)/ *Whom did you see?*

	Freq	Percent
1. Médico/ *Doctor*	104	35%
2. Obstetríz/ *Professional Midwife*	0	
3. Enfermera/ *Nurse*	38	12.8%
4. Promotor de Salud/ *health promoter*	5	1.7%
5. Comadrona/ *Traditional Birth attendant*	37	12.5%
6. Otro (especifique)*/ other, specify*	2	0.7%

18. Tiene Ud. Su tarjeta de control de embarazo?/ *Do you have a maternal card?*

	Freq	Percent
1. Si -> pida que se la muestre/ *Yes -> ask her to show it*	80	26.9%
2. No -> pasa a la pregunta 22 / *No-> go to question 22*	204	68.7%

19. Registre el numero de vacunas Toxoide Tetánico que recibió la madre / *record the number of doses of TT vaccine listed on the card*

	Freq	Percent
1. Una/ *one*	8	10%
2. Dos/ *two*	43	53.8%
3. Mas de dos/ *more than two*	23	28.8%
4. Ninguna/ *none*	4	5%

20. Tiene la tarjeta espacios para visitas prenatales?/*Has the card space for prenatal visits?*

	Freq	Percent
1. Si/ *Yes*	68	85%
2. No -> pasa a la pregunta 22 / *No -> go to question 22*	8	10%

21. Cuantas veces fue la madre a visitas prenatales?/ *How many times did you see someone for care during the pregnancy?*

	Freq	Percent
1. Una / *one*	8	10%
2. Dos / *two*	20	25%
3. Tres o mas/ *three or more*	33	41.3%
4. Ninguna/ *none*	9	11.3%

22. Conoce alguno de estos signos de peligro durante el embarazo/ *what are the signs during pregnancy indicating the need to seek health care?*

	Freq	Percent
1. Dolor de cabeza/ *headache*	62	20.9%
2. Sangrado antes de entrar en dolores de parto*/ bleeding before starting labour*	27	9.1%
3. Hinchazón de cara o manos/ *swollen face or hands*	40	13.5%
4. Convulsiones/ *seizures*	4	1.3%
5. Fiebre alta/ *high fever*	21	7.1%

6. Palidez, respiración dificultosa/ *pale, difficult breathing*	**7**	**2.4%**
7. Dolor o ardor al orinar/ *pain when urinating*	9	3%
8. Otro (Especifique)/ *other, specify*		
9. No sabe (pase a la pregunta 26)/ *Don't know -> go to question 26*	171	57.6%

23. Tuvo alguno de esos signos antes del parto? / *did you have any of those signs before giving birth*?

	Freq	Percent
1. Si / *Yes*	102	34.3%
2. No -> pase a la pregunta 26 / *No -> go to question 26*	130	43.8%

24. Pidió consejo o ayuda? / *Did you seek help?*

	Freq	Percent
1. Si / *Yes*	74	24.9%
2. No -> pase a la pregunta 26/ *No -> go to question 26*	26	8.8%

25. A quien acudió usted? (puede marcar mas de una opción)/ *Whom did you see?*

	Freq	Percent
1. Unidad de salud de la finca/ *Health Unit inside the Coffee estate*	5	1.7%
2. Doctor privado/ *private practitioner*	9	3%
3. Farmacia/ pharmacy	5	1.7%
4. Promotor/ *health promoter*	7	2.4%
5. Centro o puesto de salud del Minsa/ *MOH health post or center*	12	4%
6. Unidad de salud de ONG´s / *health facility managed by a local NGO, Anacafe*	3	1%
7. Comadrona/ *Traditional birth attendant*	23	7.7%
8. Otro/ *Other*		

Características del Parto/ *Delivery*

26. Donde se atendió el parto de (nombre del niño) *Where did you give birth to [name]?*

	Freq	Percent
Casa Propia/ *your home*	162	54.5%
2. Otra casa/ other home	8	2.7%
3. Establecimiento de salud……./ health facility (specify)	116	39.1%
4. Hospital / *Hospital*	10	3%

27. ¿Quién atendió el parto de (nombre del niño)? / *Who assisted [name's] delivery?*

	Freq	Percent
1. Médico/ *doctor*	96	32.3%
2. Enfermera, obstetríz / *Nurse of professional midwife*	27	9.1%
3. Auxiliar de enfermería / *Auxiliary nurse*	8	2.7%
4. Comadrona tradicional/ *Traditional birth attendant*	165	55.6%
5. Voluntario de la comunidad/ *volunteer*		
6. Miembro de la familia (especifique el parentesco) / *Relative ,specify*_____	5	1.5%
7. Otro (especifique) / *other, specify*_____	1	0.3%
8. Nadie la ayudo/ *no one*		

28. Con que se cortó el (cordón umbilical) / *what instrument was used to cut the cord?*

	Freq	Percent
1. Hoja de afeitar nueva / *new razor blade*	3	1%
2. Otro instrumento / *other intrument*	147	49.5%
3. No sabe / *Don't know*	141	47.5%

Postnatal / *Postpartum care*

29. Tiene la tarjeta espacios para visitas postnatales (verificar) APLICARSE SI TIENEN TARJETA */ Has the maternal card space to record postpartum visits? Only mothers with cards.*

	Freq	Percent
1. Si / yes	52	65%
2. No -> pase a la pregunta 31/ *no-> go to question 31*	27	33.8%

30. La madre tuvo al menos una visita postparto? APLICARSE SI TIENEN TARJETA */ After [name] was born, did anyone check on your health**?*** ++--++-

	Freq	Percent
1. Si / Yes	20	25%
2. No / No	33	41.3%

31. Conoce usted algún signo de peligro después del parto (menciónoselos)/ *what are the signs after birth indicating the need to seek health care?*

	Freq	Percent
1. Salida de mucha sangre de su parte / *severe bleeding*	36	12.1%
2. Mucha calentura / *high fever*	34	11.4%
3. Mal olor de su parte*/ smelly discharges*	8	2.7%
4. Dolor fuerte debajo de su estómago / *abdominal pain*	61	20.5%
5. Otro (especifique) / *other (specify)*	7	1.6%
6. No sabe (pasar a la pregunta 35) / *Dont' know -> go to question 35*	200	67.3%

32. Tuvo alguno de esos signos después del parto? *did you have any of those signs before giving birth*?

	Freq	Percent
1. Si */ yes*	81	27.3%
2. No -> pase a la pregunta 35 / No -> *go to question 35*	149	50.2%

33. Pidió consejo o ayuda? *Did you seek help?*

	Freq	Percent
1. Si */ yes*	53	17.8%
2. No-> Pase a la 35 No -> *go to question 35*	27	9.1%

34. A quien acudió usted? *Whom did you see?*

	Freq	Percent
1. Unidad de salud de la finca *Health Unit inside the Coffee estate*	4	1.3%
2. Doctor privado *private practitioner*	10	3.4%
3. Farmacia pharmacy	6	2%
4. Promotor *health promoter*	1	0.3%
5. Centro o puesto de salud del Minsa *MOH health post or center*	6	2%
6. Puesto de salud de Ong o ANACAFE *health facility managed by a local NGO*	0	
7. Comadrona *Traditional birth attendant*	17	5.7%
8. Otro		

Inmunizaciones del niño / Child immunizations

35. Tiene una tarjeta de vacunas con el nombre de (nombre del niño)? La puedo ver por favor? */ do you have a card where [name's] vaccinations are written down? Can I see it, please?*

	Freq	Percent
1. Tiene tarjeta, la muestra al entrevistador/ *yes, seen by interviewer*		
2. No esta disponible, perdida -> pase a la pregunta 36/ *lost, misplaced ->q.36*		
3. Nunca tuvo tarjeta de vacunas de este niño -> 36 */ never had a card ->q.36*		
4. No sabe/ no responde -> pase a la pregunta 36 / *Don't know*		

Copie las fechas en el cuadro, exactamente como están en la tarjeta de vacunas / *Copy the dates the child received each immunization*

	Día		Mes		Año	
BCG						
POLIO 0						
POLIO 1						
POLIO 2						
POLIO 3						
DPT 1						
DPT 2						
DPT 3						
Sarampion/ *measles*						
Pentavalente/ *Pentavalent*						
Tres viral/ *MMR*						
VITAMINA A / *Vitamin A*						

Indicador / *Indicator*	FREQ	%
Esquema completo de inmunizaciones en niños de 12 a 23 meses de edad / *All immunizations*	...	
Cobertura de vacunación en niños de 0 a 12 meses de edad / *Coverage rates for individual doses, <12 months*		
BCG	117	67.2
POLIO RN / *polio vaccine at birth (polyvalent*)	77	44.3
POLIO 1ª DOSIS / *polio 1*	105	60.3
POLIO 2ª DOSIS / *polio 2*	78	44.8
POLIO 3ª DOSIS / *polio 3*	56	32.2
DPT 1ª DOSIS / *DPT 1*	100	57.5
DPT 2ª DOSIS/ *DPT 2*	77	44.3
DPT 3ª DOSIS / *DPT 3*	55	31.6
Coverage rates among children 12-23m		
Antisarampionosa / *measles*	68	48.9
POLIO 1ª DOSIS / *polio 1*	84	60.6
DPT 1ª DOSIS / *DPT 1*	80	57.6
DPT 3ª DOSIS / *DPT 3*	67	48.2
Coverage rates among children 0-23m		
Vitamin A supplementation	49	16.5

36. A que edad debe recibir un niño la vacuna contra el sarampión? / *when should measles immunization be given to children?*

Freq	Percent

1. Número de meses / *age in months* _____
2. No sabe / *Don't know*

Malaria y Dengue:

37. Que señales le indicarían que su niño puede tener el paludismo? (puede marcar uno o mas o opciones) / *what are the signs of malaria that would cause you to seek help?*

	Freq	Percent
1. No sabe / *Don't know*	168	56.6%
2. Fiebre / *Fever*	113	38%
3. Escalofríos / *Shivering*	78	26.3%
4. Dolor de cabeza / *Headache*	32	10.8%
5. Convulsiones/ *seizures*	1	0.3%
6. No puede tomar pecho / *Unable to drink*	5	1.7%
7. Otro (especifique) / *Other, specify*_____	9	1.0%

38. Que señales le indicarían que su niño puede tener dengue (puede marcar mas de una opciones) / *what signs would tell you that the child might have dengue?*

	Freq	Percent
1. Fiebre / fever	106	35.7%
2. Dolor de cabeza / *headache*	64	21.5%
3. Dolores musculares / *aching muscles*	42	14.1%
4. Dolor de huesos / *bones, joints aching*	45	15.2%
5. Dolor en la órbita de los ojos / *pain in the eyeballs*	6	2%
6. Irritado, llorón / *child restless, crying*	4	1.3%
7. No sabe / Don't know	174	58.6%
8. Otros (especifique) / *Other, specify*_____	18	8.3%

39. Tiene mosquiteros aquí en donde vive? / *Do you have any bednets in your house?*

	Freq	Percent
1. Si / *Yes*	108	36.4%
2. No -> Pase a la pregunta 42 / *No -> go to question 42*	186	62.6%
3. No sabe -> pase a la pregunta 42 / *Don't know -> go to question 42*	1	0.3%

40. Quién durmió bajo un mosquitero anoche? (señale uno o mas) / *Who slept under a bednet last night?*

	Freq	Percent
1. El niño / *Child [name]*	97	32.7%
2. La madre / *myself, informant*	76	25.6%
3. Otros (especifique) / *Other, specify* _____	37	1.2%

41. Alguna vez ese mosquitero fue tratado con un líquido para espantar a los mosquitos? (Cuando usan mosquitero no usan ningún insecticida) / *Was the bednet ever soaked or dipped in a liquid to repel mosquitoes*?

	Freq	Percent
1. Si. / *Yes*	15	5.1%
2. No. */ No*	94	31.6%
3. No sabe. / *Don't know*		

Enfermedades de los niños y su manejo / *Management of child illnesses*

42. Algunas veces los niños necesitan recibir tratamiento. Que molestia le indicaría a Ud. que debe buscar un tratamiento para su niño? ("no sugiera respuestas.") / *Sometimes children are sick and need treatment. What signs would cause you to seek treatment for your child?*

	Freq	Percent
1. Luce enfermo, no juega normalmente / *looks sick, does not play*	192	64.6%
2. No come o bebe / *unable to eat or drink*	137	46.1%
3. Letárgico, difícil despertarlo / *sleepy*	11	3.7%
4. Fiebre alta */ high fever*	150	50.5%
5. Respiración rápida o difícil / *Fast, difficult breathing*	11	3.7%
6. vómitos frecuentes / *Frequent vomiting*	23	7.7%
7. Convulsiones / *Seizures*	3	1%
8. Otro (especifique) ……/ *Other, specify*		
9. No sabe. / *Don't know*	15	5.1%

Tuvo (nombre del niño) en las dos últimas semanas alguna de las molestias que voy a mencionarle / Has [name] been sick in the last 2 weeks, has [name] had any of those signs..

Síntoma o signo / *Sign or symptom*	Diarrea o sangre en las heces */ Diarrhea or bloody stools*	Tos, respiración difícil, o rápida / *Cough, fast breathing*	Fiebre o Convulsiones / *Fever or seizures*	***Translation of the previous three columns***
A. Lo tuvo? / *Had it?*	1. Si 2. No	1. Si 2. No	1. Si 2. No	*1. Yes 2. No*
B. Buscó ayuda? / *Sought help?*	1. Si 2. No	1. Si 2. No	1. Si 2. No	*1. Yes 2. No*
C. A quien acudió primero para buscar consejo o ayuda? *Where did you first seek help?*	1. Unidad BS 2. Promotor 3. Centro o puesto 4. Proveedor privado 5. Hospital 6. Farmacia 7. Curandero 8. Familiar/amigo 9. Otro……	1. Unidad BS 2. Promotor 3. Centro o puesto 4. Proveedor privado 5. Hospital 6. Farmacia 7. Curandero 8. Familiar/amigo 9. Otro……	1. Unidad BS 2. Promotor 3. Centro o puesto 4. Proveedor privado 5. Hospital 6. Farmacia 7. Curandero 8. Familiar/amigo 9. Otro……	1. *Health Unit inside the Coffee estate* 2. *Promoter* 3. *MOH center or post* 4. *Private practitioner* 5. *Hospital* 6. *Pharmacy* 7. *Traditional healer* 8. *Relative or friend* 9. *Other……*
D. Después de esa ayuda a quién más buscó? *Did you seek help elsewhere?*	1. Unidad BS 2. Promotor 3. Centro o puesto 4. Proveedor privado 5. Hospital 6. Farmacia 7. Curandero 8. Familiar/amigo 9. Otro……	1. Unidad BS 2. Promotor 3. Centro o puesto 4. Proveedor privado 5. Hospital 6. Farmacia 7. Curandero 8. Familiar/amigo 9. 9. Otro……	1. Unidad BS 2. Promotor 3. Centro o puesto 4. Proveedor privado 5. Hospital 6. Farmacia 7. Curandero 8. Familiar/amigo 9. Otro……	*1. Health Unit inside the Coffee estate* *2. Promoter* *3. MOH center or post* *4. Private practitioner* *5. Hospital* *6. Pharmacy* *7. Traditional healer* *8. Relative or friend* *Other……*
E. Dio al niño menos, igual o mas leche materna? / *Did you give same, less or more breastmilk?*	1. Menos 2. Igual 3. Mas 4. ya no lactaba	1. Menos 2. Igual 3. Mas 4. ya no lactaba	1. Menos 2. Igual 3. Mas 4. ya no lactaba	*1. Less* *2. Same* *3. More* 4. *N/A, not longer being breastfed*
F. Dio al niño menos, igual o mas líquidos? / *Same, less or more liquids?*	1. Menos 2. Igual 3. Mas	1. Menos 2. Igual 3. Mas	1. Menos 2. Igual 3. Mas	*1. Less* *2. Same* *3. More*
G. Dio al niño menos, igual o mas comida? / *Same, less or more food?*	1. Menos 2. Igual 3. Mas	1. Menos 2. Igual 3. Mas	1. Menos 2. Igual 3. Mas	*1. Less* *2. Same* *3. More*
H. Que tratamientos le dio? / *Any treatment?*	A. Ninguno B. Sobre de rehidratación oral C. Liquido casero D. medicinas……. E. Otro…	A. Ninguno B. Liquido C. Medicamentos D. Alimentos …… E. Otros…	A. Ninguno B. Liquido C. Medicamentos D. Alimentos……. E. Otros…	*A. None* *B. Liquids* *C. Drugs...* *D. Special foods…….* *E. Other…*

Indicator	Freq	Percent
Respiratory infections		
% children with cough	109	36.9%
% children with cough, sought help	62	56.9%
Where services were provided		
Hospital	8	12.9%
MOH Health Center or Post	22	35.5%
Health Unit inside the coffee estate	5	8.1%
Private practitioner	3	4.8%
Pharmacy	12	19.4%
Promoter	6	9.7%
Traditional birth attendant	0	
Traditional healer	1	1.6%
Relative or friend	5	8.1%
Amount of breast milk given during illness		
Less	33	31.4%
Same	58	55.2%
More	7	6.7%
N/A, nor longer being breastfed	7	6.7%
Amount of liquids given during illness		
Less	45	43.3%
Same	52	50%
More	6	5.8%
Amount of food given during illness		
Less	50	56.2%
Same	37	41.6%
More	1	1.1%
Treatments given		
None	17	15.9%
Liquids	1	0.9%
Drugs	82	76.6%
Special foods	4	3.7%
Other	3	2.8%

Diarrea		
% children with diarrhea	85	28.8%
% children with diarrhea, sought help	49	57.6%
Where services were provided		
Hospital	2	4.1%
MOH Health Center or Post	18	36.7%
Health Unit inside the coffee estate	2	4.1%
rivate practitioner	2	4.1%
Pharmacy	12	24.5%
Promoter	5	10.2%
Traditional birth attendant	3	6.1%
Traditional healer	5	10.2%
Relative or friend	0	
Amount of breast milk given during illness		
Less	16	19.8%
Same	53	65.4%
More	7	8.6%
N/A, nor longer being breastfed	5	6.2%
Amount of liquids given during illness		
Less	27	33.3%
Same	40	49.4%
More	13	16%
Amount of food given during illness		
Less	47	61.8%
Same	27	35.5%
More	2	2.6%
Treatments given		
None	11	13.4%
ORS	10	12.2%
Homemade Liquids	12	14.6%
Frugs	46	56.1%
Other	3	3.7%

43. En el ultimo año llevó a su niño al menos una vez a la unidad básica de la finca (esta pregunta aplica solo para áreas de intervención actual: fincas y comunidades aledañas) / *Have you taken your child to the health Unit inside the coffee estate?*

	Freq	Percent
1. Si */ yes*	3	1%
2. No / *No*	6	2%

45. Lo llevaría nuevamente

	Freq	Percent
1. Si (pase a la pregunta 47)		
2. No		

46. Porqué no lo llevaría

	Freq	Percent
1. Porque está cerrada		
2. Porque no hay medicamentos		
3. No atienden todo el día		
4. Otros (especifique)		

Higiene personal / *Personal Hygiene*

47. Cuando se lava Ud. Las manos? / *When do you wash your hands?*

	Freq	Percent
1. Nunca / *never*	1	0.3%
2. Antes de preparar alimentos / *Before food preparation*	280	94.3%
3. Antes de alimentar al niño / *before feeding children*	201	67.7%
4. Después de defecar / *After defecation*	210	70.7%

5. Después de manipular heces del niño / *after attending a child who defecated*	70	23.6%
6. Otro (especifique) / *Other (specify)*_____	11	1.0%

48. Dónde defeca usualmente (nombre del niño) / *What happens to the stools of babies and young children who do not use the toilet facility, or they use the toilet?*

	Freq	Percent
1. Letrina o sanitario / *Use toilet or latrine, or feces thrown into latrine*		
2. En una esquina o espacio vacío / *defecates in a corner of the house*		
3. En campo abierto / *child defecates in open field*		
4. Directamente en el río, canal o manantial / *disposed on a channel, creek or river*		
5. Otro (especifique)/ *Other (specify*)_____		

49. Tiene su familia una letrina o servicio sanitario para uso diario*?/ Do you have a latrine or toilet at home?*

	Freq	Percent
1. Si */ yes*	240	80.8%
2. No */ No*	55	18.5%

Mensajes radiales / *Radio messages*

50. Recuerda haber escuchado en la radio algún mensaje sobre salud del niño y de la madre en este último mes? / *Have you heard a health message in the radio in the last month?*

	Freq	Percent
1. Si / *Yes*	111	37.4%
2. No (pase a antropometría pregunta 52) / *No -> go to to question 52*	185	62.3%

51. Recuerda cual o cuales eran los temas de los que se hablaba (especifique) en esos mensajes radiales? / *Can you recall what were the messages about?*

	Freq	Percent
1. No recuerda		
2. Salud del niño (especifique)_____		
3. Salud materna (especifique)_____		
4. Salud reproductiva (especifique)_____		
5. Salud familiar (especifique) _____		

Antropometría / *Anthropometry*

52. Pese, mida la longitud (acostado) del niño. Registre el peso del niño en libras. Registre la longitud al mm mas próximo. *Record the child weight in pounds and ounces. Measure the length in centimeter to one decimal..*

Peso del niño / *Weight* ☐☐ ☐ Libras

Longitud del niño / *lenght* ☐☐ ☐ Cm

Termine la entrevista / *End the interview here*

ENCUESTA A MUJERES EN EDAD FÉRTIL/ *Survey with women of fertile age*

No. Identificación: */ identification number*__ __ __ __

(No incluye a madres entrevistadas con niños menores de 2 años.) / *Do not include women with infants already interviewed*

Departamento / *Department* _____( )
Municipio / *Municipality* _____( )
Comunidad / *Community* _____( )

Años aprobados	Freq	Percent
1	13	12.4%
2	25	23.8%
3	28	26.7%
4	8	7.6%
5	2	1.9%
6	14	13.3%
7	3	2.9%
8	1	1%
9	5	4.8%
10	1	1%
11	2	1.9%
12	2	1.9%
14	1	1%

A. Fecha de la entrevista / *Day of the interview* ...../...../.....
Día Mes Año

B. Nombre del entrevistador:/ *Name of interviewer*_____

C. Supervisor: / *Name of supervisor*_____

Datos de la entrevistada / *Women's data*

Nombre de entrevistada / *Name*_____

1. Esta embarazada Actualmente? / *are you pregnant now?*

Freq	Percent
20	13.5%
148	86.5%

1. Si
2. No

2. Cuantos años cumplidos tiene Ud.? / *How old are you?* _____ años cumplidos. / *years*

3. Asistió Ud. Alguna vez a la escuela? / *Have you ever attended school*?

Freq	Percent
105	70.5%
44	29.5%

1. Si / *Yes*
2. No (pase a la pregunta 5) / *No -> go to question 5*

4. Cual es el último año aprobado en la escuela? *Last grade passed* _____años

5. Cual es el idioma que mas habla en su casa? *Language spoken at home*

Freq	Percent
133	92.4%
2	1.4%
9	6.3%

1. Español / *Spanish*
2. Quiché
3. Mam

6. Trabaja fuera de su casa? / *Do you work outside the home to make money?*

Freq	Percent
44	29.7%
103	69.6%

1. Si / Yes
2. No (pase a la pregunta 8) / *No -> go to question 8*

7. Que tipo de trabajo hace para ganar dinero? / *What do you do?*

Freq	Percent
4	11.8%
18	52.9%
8	23.5%
1	2.9%
2	5.9%
0	
1	2.9%

1. Nada / *nothing*
2. Artesania / *handicrafts*
3. Cosechando/recogedor de frutas / *agriculture*
4. Vendiendo productos agrícolas / *selling agricultural produce*
5. Servicios domésticos / *domestic servant*
6. Dueño de tienda/vendedor de la calle / *store owner, street vendor*
7. Trabajador asalariado / *salaried worker*
8. Otros (especifique) / *other, specify*_____

Conocimientos de ETS/SIDA / *Knowledge of HIV/AIDS*

8. Ha escuchado Ud. alguna vez hablar de una enfermedad llamada SIDA? / *Have you ever heard about AIDS*

	Freq	Percent
1. Si / *Yes*	107	71.8%
2. No Pase a la pregunta 10 / *No -> go to question 10*	42	28.2%

9. Que es lo que puede hacer una persona para evitar contagiarse del SIDA? / *is there anything a person can do to avoid getting AIDS?*

	Freq	Percent
1. Nada / *Nothing*	0	
2. Abstenerse de tener sexo / *Abstain from sex*	25	16.8%
3. Usar condones / *use condoms*	16	10.7%
4. Limitarse a una pareja sexual, fidelidad a la pareja / *Faithful to one partner*	33	22.1%
5. Limitar el numero de parejas sexuales / *Limit number of sexual partners*	5	3.4%
6. Evitar sexo con prostitutas / *Avoid sex with prostitutes*	17	11.4%
7. Evitar sexo con personas que tienen muchas parejas sexuales/ *Avoid promiscuous p*.	3	2%
8. Evitar sexo con personas del mismo sexo/ *Avoid intercourse with persons of same sex*	0	
9. Evitar sexo con drogadictos / *Avoid sex with persons who inject drugs intravenously*	1	0.7%
10. Evitar transfusiones de sangre / *Avoid blood transfusions*	5	3.4%
11. Evitar inyecciones / *Avoid injections*	16	10.7%
12. Evitar besos/ *Avoid kissing*	3	2%
13. Evitar picaduras de mosquitos / *Avoid mosquito bites*	0	
14. Buscar protección del curandero, medicina tradicional/ *Seek traditional healers*	1	0.7%
15. Evitar compartir navajas, hojas de afeitar. / *Avoid sharing razors, blades*	10	6.7%
16. Otro (especifique) ……../ *Other, specify*		
17. No sabe / *Don't know*	34	22.8%

10. En un varón, que le haría pensar que tiene una infección que se contagia a través de relaciones sexuales? / *What signs and symptoms would lead you to think that a man has an infection that can be transmitted through sexual contact?*

	Freq	Percent
1. Dolor abdominal / *abdominal pain*	5	3.4%
2. Secreción uretral / *genital discharge*	7	4.7%
3. Secreción uretral maloliente /*foul smelling discharge*	1	0.7%
4. Dolor tipo ardor al orinar*/ burning pain on urination*	2	1.3%
5. Inflamación (rojo, caliente, hinchado) en el área de los genitales/ *swelling genital area*	3	2%
6. Ulceras en los genitales / *genital sores, ulcers*	2	1.3%
7. Verrugas en los genitales / *genital warts*	0	
8. Sangre en la orina / *blood in urine*	0	
9. Perdida de peso / *weight loss*	0	
10. Impotencia */ impotence*	2	1.3%
11. No síntomas / *no symptoms*	0	
12. Otro (especificar) / *other, specify....*		
13. No sabe / *Don't know*	117	78.5%

11. En una mujer, que le haría pensar que tiene una infección que se contagia a través de relaciones sexuales? / *What signs and symptoms would lead you to think that a woman has an infection that can be transmitted through sexual contact?*

	Freq	Percent
1. Dolor abdominal / *abdominal pain*	8	5.4%
2. Flujo vaginal / *genital discharge*	23	15.4%
3. Flujo maloliente /*foul smelling discharge*	11	7.4%
4. Dolor tipo ardor al orinar */ burning pain on urination*	11	7.4%
5. Inflamación (rojo, caliente, hinchado) en el área de los genitales *swelling genital area*	16	10.7%
6. Ulceras en los genitales / *genital sores, ulcers*	1	0.7%
7. Verrugas en los genitales / *genital warts*	1	0.7%
8. Sangre en la orina / *blood in urine*	1	0.7%
9. Perdida de peso / *weight loss*	18	12.1%
10. Esterilidad */ Sterility*	0	
11. No síntomas / *no symptoms*	0	
12. Otro (especificar) / *other, specify....*		
13. No sabe / *Don't know*	87	58.4%

Planificación familiar / *Child spacing*

12. Que métodos de planificación familiar conoce usted o ha oído hablar? */ Have you heard about methods to delay pregnancies?*

	Freq	Percent
1. Esterilización femenina / *Female sterilization*	30	20.1%
2. Vasectomía / *Vasectomy*	6	4%
3. Norplant / *Norplant*	0	
4. Inyecciones / *Injectable*	79	53%
5. Pastillas anticonceptivas / Pills	82	55%
6. Dispositivo Intrauterino / *IUD*	18	12.1%
7. Condones / *Condoms*	32	21.5%
8. Espumas o gel / *Gel, foam*	4	2.7%
9. Lactancia materna exclusiva/ *Exclusive breastfeeding/ LAM*	2	1.3%
10. Métodos del ritmo/ *Rhythm*	12	8.1%
11. Abstinencia / *Abstinence*	0	
12. Coito interrumpido / *Withdrawal*	2	1.3%
13. No sabe / *Don't know*	52	34.9%
14. Otros / *Other*		

13. Quisiera Ud. tener un hijo en los siguientes dos años? / *do you want to have a child in the following two years?*

	Freq	Percent
1. Si / Yes	43	28.9%
2. No / No	89	59.7%
3. No sabe/ no esta segura / *Don't know or not sure*	17	11.4%

14. Usted o su pareja están ahora usando algún método para planificar su familia/ evitar, cuidarse de un nuevo embarazo? / *Are you currently doing something or using any method to avoid getting pregnant*?

	Freq	Percent
1. Si / *Yes*	18	12.2%
2. No (pase a la pregunta 16) / *No -> go to question 16*	129	87.8%

15. Cual?

	Freq	Percent
1. Esterilización femenina / *Female sterilization*	11	55%
2. Vasectomía / *Vasectomy*	1	5%
3. Norplant / *Norplant*	0	
4. Inyecciones / *Injectable*	6	30%
5. Pastillas anticonceptivas / Pills	0	
6. Dispositivo Intrauterino / *IUD*	1	5%
7. Condones / *Condoms*	0	
8. Espumas o gel/ *Gel, foam*	0	
9. Lactancia materna exclusiva/ *Exclusive breastfeeding/ LAM*	0	
10. Métodos del ritmo / *Rhythm*	1	5%
11. Abstinencia / *Abstinence*	0	
12. Coíto interrumpido / *Withdrawal*	0	
13. No sabe / *Don't know*	0	
14. Otros / *Other*		

Higiene personal / *Personal hygiene*

16. Cuando se lava Ud. las manos? / *When do you wash your hands?*

	Freq	Percent
1. Nunca */ Never*	0	
2. Antes de preparar alimentos *Before food preparation*	135	90.6%
3. Antes de alimentar al niño */ before feeding children*	66	44.3%
4. Después de defecar / *After defecation*	123	82.6%
5. Después de manipular heces del niño / *after attending a child who defecated*	13	8.7%
6. Otro (especifique) */ Other (specify).....*		

17. Dónde defeca usualmente (reemplazar por localismo de defecar) Ud. y su familia?

	Freq	Percent
1. Letrina o sanitario */ latrine or toilet*	121	81.8%
2. En una esquina o espacio vacío / *in a corner of her property*	0	
3. En campo abierto */ open field*	14	9.5%
4. Directamente en el río, canal o manantial */over a canal, creek or river*	13	8.8%
5. Otro (especifique) */ Other (specify)*		

18. Tiene su familia una letrina o servicio sanitario para uso diario? */ Do you have a latrine or toilet at home?*

	Freq	Percent
1. Si / *yes*	119	80.4%
2. No */ no*	29	19.6%

Mensajes radiales

19. Recuerda haber escuchado en la radio algún mensaje sobre salud del niño y de la madre en este último mes? *Have you heard a health message in the radio in the last month?*

	Freq	Percent
1. Si / *Yes*	64	43%
2. No */ No*	85	57%

.