

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

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ACRONYMS

Anacafé	National Coffee Growers' Association (Asociación Nacional del Café)
ADISS	Asociación de Desarrollo Integral Sostenible para la Salud
ARI	Acute Respiratory Infection
CA	Cooperating Agency
CHV	Community Health Volunteer
CS	Child Survival
HIS	Health Information System
IEC	Information, Education, Communication
IGSS	Guatemala Social Security Institute
ILO	International Labor Organization
IMCI	Integrated Management of Childhood Illnesses
MOE	Ministry of Education
MOH	Ministry of Health
NGO	Non-Governmental Organization
QAP	Quality Assurance Project
SIAS	Integrated System of Decentralized Health Services (Sistema Integral de Atención en Salud)
TBA	Traditional Birth Attendant
WHO	World Health Organization

INTRODUCTION

This report summarizes the activities of HOPE's child survival (CS) project in its third year. This project is implemented in close coordination with the Ministry of Health (MOH), the Guatemalan Social Security Institute (IGSS), the National Coffee Association, and seven NGOs to improve the health of residents and migrants on private coffee plantations in the Boca Costa in the South West of Guatemala.

The project is implemented in five departments and 20 municipalities in the region of Guatemala, the Boca Costa, that produces most of its export coffee. Approximately 370,000 inhabitants (residents, plantation residents, small land holders, plantation owners, and migrants) live in this narrow strip of land which begins at the west coast and goes towards east. The target area comprises the following municipalities: in San Marcos, the municipalities of El Quetzal, La Reforma, San Rafael Pie de la Cuesta, El Tumbador, El Rodeo, Malacatán, San Pablo y Nuevo Progreso; in Quetzaltenango, the municipalities of Santa María de Jesús, Colomba, Flores Costa Cuca, Génova and El Palmar; in Suchitepéquez, the municipalities of Santa Bárbara, Chicacao, Pueblo Nuevo, Zunilito and San Francisco Zapotiltlán. Retalhuleu with the municipality de San Felipe and Sololá with the municipality of Santa Catarina Ixtahuacán are integrated with Quetzaltenango and Suchitepéquez, respective, due to geographical proximity. In Year III, 150 private coffee plantations in the Boca Costa participated in the project.

Migrants are poor families that come from the distant Western highlands. Many are of Mayan descent, have low levels of literacy, limited Spanish, poor health status, and lack vocational skills and land to sustain their families. In traveling to the coffee estates in the Boca Costa, they are exposed to a different climate and diseases which place them at great risk of disease and death.

The resident population lives in proximity of the plantations or on plantation land. They have better access to work and services, including health care. Their housing is much better than that of the migrants. Nonetheless, this is also a low-income population with poor health status.

The total target population includes 56,500 children under five and 114,700 women of reproductive age. It is estimated that there are about 11,600 pregnancies yearly.

The primary project interventions include:

- Training in diarrheal disease control, immunization, pneumonia control, nutrition and maternal care.
- Implementation of minimal health units on the coffee plantations.
- Development of master trainers in the main partner agencies of the project.
- The development and implementation of an organized IEC approach.
- Improvement of supervision systems and logistics.
- Coordination with radio stations to disseminate health messages in the local Mayan languages.

The primary approaches and strategies include:

- Interinstitutional coordination and strengthening of the technical capabilities of the project's partner agencies.
- Involvement and community participation through community leaders, promoters, and TBAs.
- Development of a sustainable approach to health training and education in the MOH, IGSS, local NGOs, and Anacafé.
- Development and implementation of the activities in accordance with the national integrated health care system (SIAS).
- Involvement of plantation owners and administrators for long-term sustainability.

MAJOR ACTIVITIES IN THE THIRD YEAR OF THE PROJECT

1. Strengthening of Inter-Institutional Coordination

The project has continued to coordinate activities with all public and private sector partners of the project. In addition, during the third project year, HOPE has been involved in the following activities:

- Since the MOH has adopted IMCI in November 2000, HOPE has participated in the National IMCI Taskforce with IGSS, the Quality Assurance Project (QAP), URC, and the Population Council. There are monthly meetings for the country adaptation process (planning, definition of methodologies and training, monitoring and supervision, and community education).
- HOPE is coordinating with JHPIEGO's MNH project in new capacity building activities for maternal and basic and essential neonatal care. HOPE is considering building the capacity in this technical area of the health areas of San Marcos, Quetzaltenango y Suchitepéquez, working with the respective maternal health commissions.

2. Involvement of Plantation Owners and Administrators

Only about 15% of the plantation owners actually live on the plantation, so most of the contacts of project staff is with the plantation managers. The plantations also vary in terms of size and resources, and these factors affect their support to the health services for residents and migrants. Project staff have noted that larger plantations generally have more resources, and the promoter tends to be more stable. The smaller plantations have more problems and sometimes have to let staff go.

In this third project year, 150 coffee plantations participated in the program. Major achievements include the fact that some plantations have started to make improvements in hygienic facilities and nutrition for the migrants. Both the MOH and IGSS have increased their outreach and health activities on the plantations. Also, all 150 promoters are paid by the plantations (between Q600 – 800, equivalent to US\$77 - 103). They are office staff, in charge of the plantation warehouse, or similar activities. Promoters dedicate an average of 80% of worktime during the migrant season and 50% during the off-season to their health activities.

3. HIS

Activity report of the promoters on number of ARIs, diarrheas, malnutrition, and anemia managed is entered into the official MOH HIS on a monthly basis, when promoters provide their

reports to the closest health facility. In addition the MOH HIS has started to include information about outreach activities on the plantations (morbidity, vaccination, prenatal care). The project has also assisted the MOH in developing a supervision toll to monitor promoter activities and a form to collect information about health education activities of the promoter. HOPE also developed a maternal care form used by the TBAs for the MOH.

4. Materials Development

Together with the MOH, IGSS, CAs, and NGOs, HOPE has developed, adapted, and field-tested education and training materials that are being used by the MOH, IGSS, and some of the NGOs. In the third year, HOPE has complemented these materials with a bibliography and technical support documents. This makes these training materials very attractive to the partner agency trainers, because they have all the necessary tools and supporting technical information for conducting good training session.

5. Monitoring and Supervision

Supervision and follow-up is key to success of the minimal health units. In the third project year, the health areas of the three departments have contracted additional staff in districts that have more plantation health units to be supervised and supported. In addition, 15% of the participating coffee plantations have started to contract a physician or nurse to support the promoter during the coffee harvest.

6. Changes in Project Design

No change was made during the third project year.

7. Service Delivery to Migrant Families

Table 1. Morbidity of migrant children under five years treated in the minimal health units on coffee plantations in the Boca Costa, October to December 2000

Department	ARI	%	Diarrhea	%	Mal-nutrition	%	Anemia	%	Total # of cases seen	%
Quetzaltenango	1747	31.0%	1080	35.0%	31	31.0%	43	24.7%	2901	32.2%
San Marcos	2441	43.2%	1385	45.0%	65	65.0%	117	67.3%	4,008	44.6%
Suchitepéquez	1455	25.8%	616	20.0%	4	4.0%	14	8.0%	2087	23.2%
Total	5643	100.0%	3083	100.0%	100	100.0%	174	100.0%	8996	100.0%

Source: SIGSA 3 MOH 2000

The MOH HIS currently does not enter the number of resident children treated by the promoters, since migrants are the priority. As a result, the number of cases managed exceeds by far the 8,996 listed above.

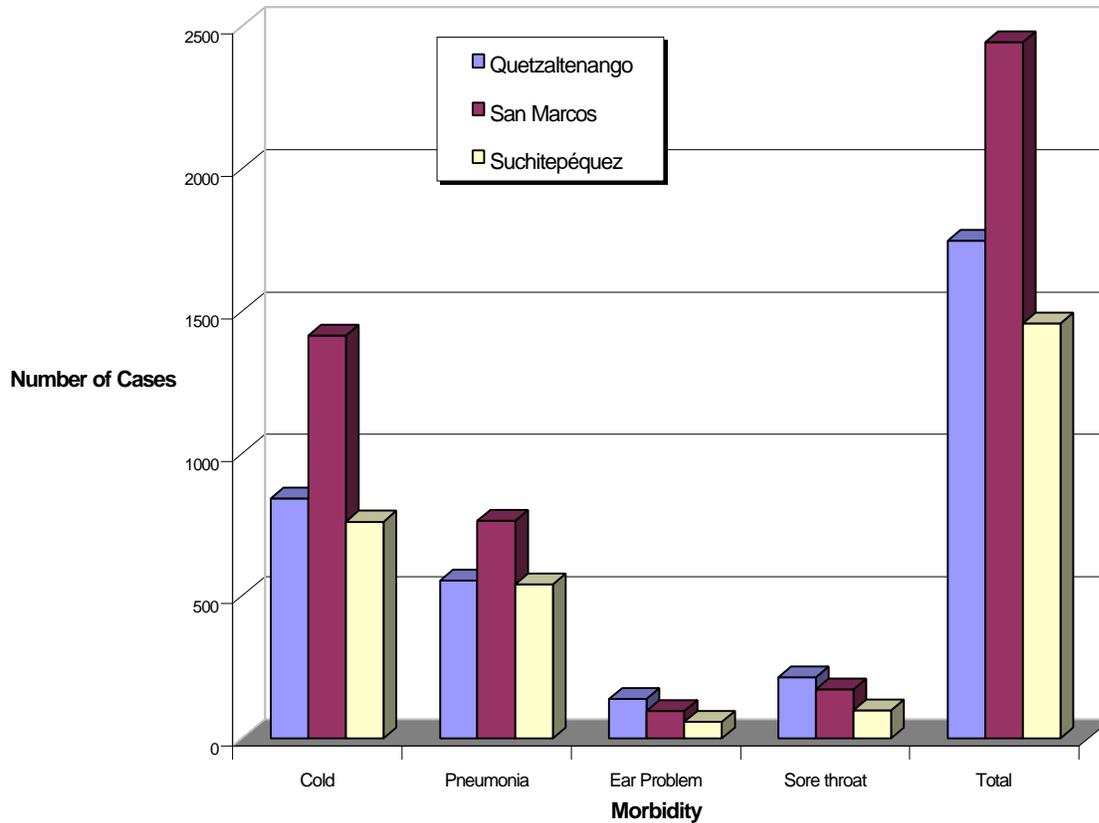
In Year 3, 150 coffee plantations participated in the project with a minimal health unit and a promoter trained by the HOPE's partner agencies and with HOPE's support. The information in the table above corresponds to 147 plantations. 15% of the participating plantations lost their

promoter during the time period, but 19 rehired an individual, leaving only three plantations without a promoter. The average number of cases seen per promoter per month was about 20, with a range of 17 to 301.

As can be seen in the table above, most cases were seen in San Marcos. This may in part due to the fact that most migrants in San Marcos come from highland communities of the same department and travel with more children. Also, the plantations in San Marcos tend to be larger and provide work for more migrants. Further reasons provided by HOPE staff include a) plantation health units were promoted better in San Marcos; b) drug availability was better at most plantation health units in San Marcos; c) information flow between promoter and health facility was better in San Marcos.

With respect to identifying malnourished children, only 23% of the plantations have a scale to date.

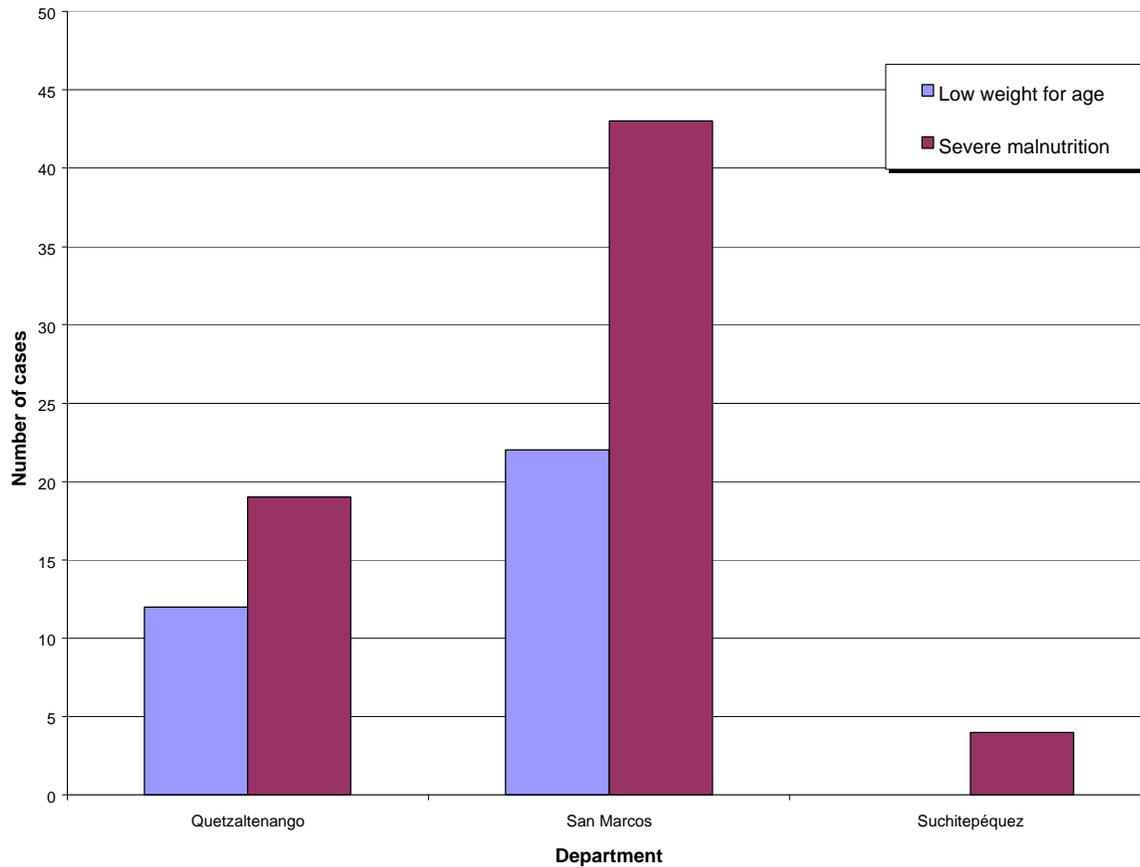
**Fig 1. ARI morbidity in Migrant Children under five
Seen in the Minimal Health Units of the Participating Coffee Plantations
October to December 2000**



Source: SIGSA MOH 2000

The graph above shows how the promoters classified the ARIs they treated. The classification is based on standard case management and adapted to the IMCI norms. Of the 5,646 cases classified, 53.4% were common colds, 32.8% pneumonia (5.5% were severe pneumonia, and four cases of very severe disease), and the remainder, ear and throat infections. The large percentage of cases classified as pneumonia may be due to the poor living conditions, common malnutrition, climate and indoor smoke pollution due to the fact that cooking and sleeping takes place in the same quarters.

Fig. 2. Anthropometric Indicators of Migrant Children under five seen on 34 coffee plantations in the Boca Costa October – December 2000

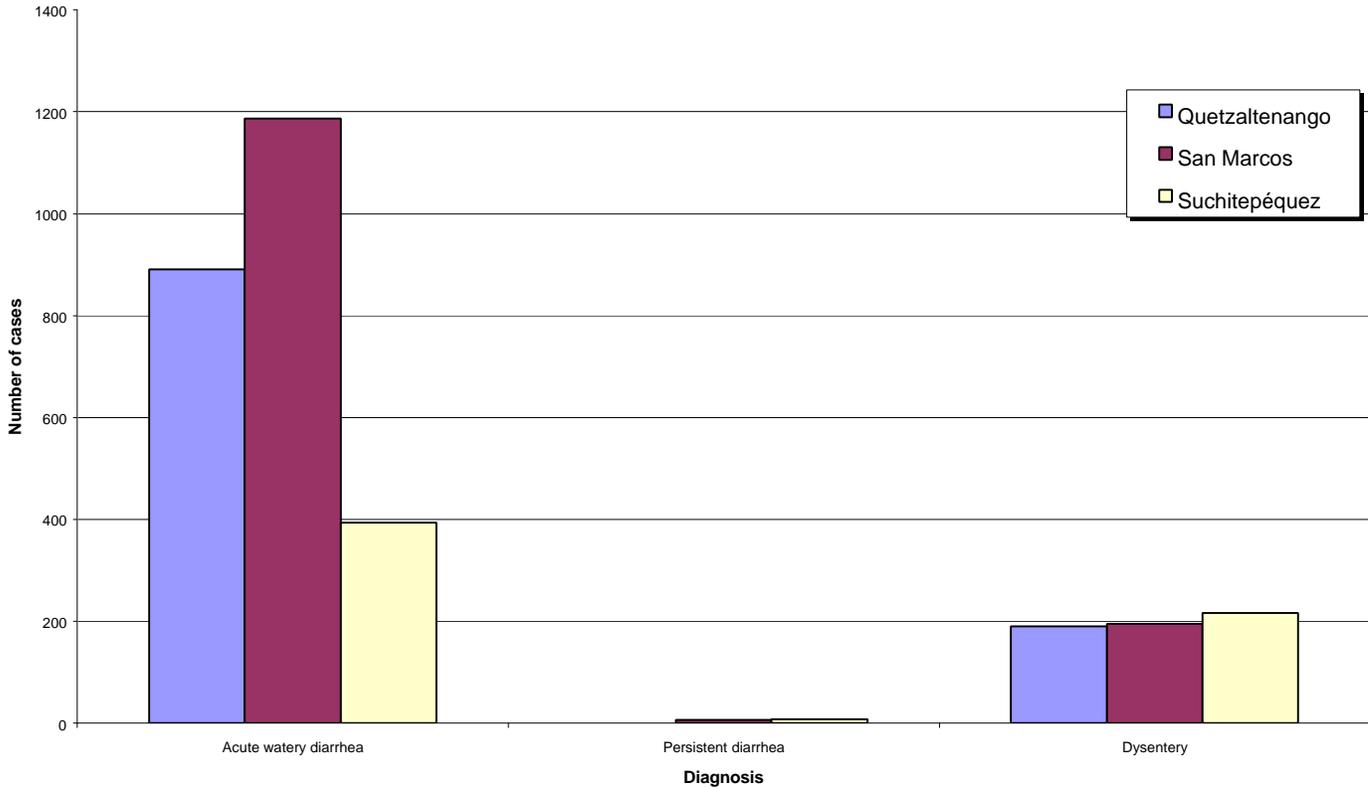


Source: SIGSA MOH 2000

On the 34 plantations with weighing scales, 100 malnourished children were identified. 34% were classified as low weight-for-age, and 66% severely wasted (marasmus).¹ Promoters counseled parents and/or referred the identified children based on the IMCI guidelines. The promoters also identified 156 cases of mild anemia and were treated with iron supplements provided by the MOH.

¹ The MOH HIS only captures the number of children malnourished, not the total number of children weighed.

Fig 3. Diarrheal Disease Cases in Migrant Children under Five on Coffee Plantations of the Boca Costa

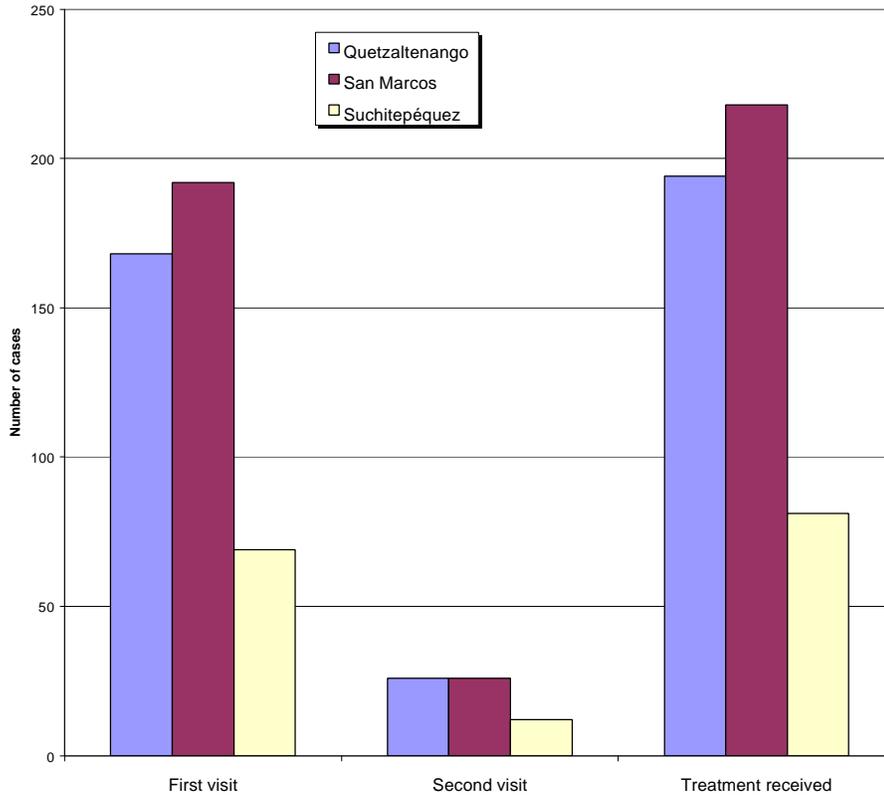


October to December 2000

Source: SIGSA MOH 2000

Of the 3,083 cases with diarrhea, about 80% were classified as watery diarrhea. Of these 2,469 cases, 37.9% of the children had signs of dehydration and were treated according to Plan B in the plantation health unit. In addition, there were 13 cases of persistent diarrhea and 601 (19.4%) of cases with dysentery. The relatively large number of cases of diarrhea is probably due to lack of access to safe water and latrines on the plantations, and poor hygiene practices. The project staff expect some improvements in the future, as some of the plantation owners and administrators are improving sanitation and housing conditions on the plantations, and as migrants improve family hygiene.

**Fig 4. Prenatal Care for Migrant Women
On 60 plantations of the Boca Costa
October to December 2000**



Source: SIGSA MOH 2000

As can be seen above, 493 prenatal checks were conducted by the MOH and IGSS on 60 coffee plantations. 87% of the checks were first prenatal checks, and 15% of these migrant women were seen a second time. The MOH and IGSS provided prenatal care to an average of eight migrant women per plantations. Participation rates in this service are limited by work hours and lack of demand on the part of pregnant migrant women. During the prenatal check-ups, 127 women received their first dosis of TTV, 56 a second dosis, and 20 a third.

**Table 2. Vaccination of Migrant Children under Five on Coffee Plantations
October to December 2000**

Department	Polio < 2 yrs					Polio 2 - 5 yrs					DPT < 2 yrs					DPT 2 - 5 yrs					Measles				BCG			
	1 st	2 nd	3 rd	Total	%	1 st	2 nd	3 rd	Total	%	1 st	2 nd	3 rd	Total	%	1 st	2 nd	3 rd	Total	%	< 2	2-5	Total	%	< 2	2-5	Total	%
Quetzaltenango	82	11	11	104	20	61	3	2	66	29	87	13	13	113	21	59	3	3	65	28.0	41	57	98	32.0	13	2	15	9.8
San Marcos	137	90	94	321	60	37	29	39	105	47	135	90	98	323	60	37	26	32	95	40.9	110	43	153	50.0	100	14	114	75.0
Suchitepequez	50	30	26	106	20	20	10	23	53	24	41	32	25	98	18	21	16	35	72	31.0	25	30	55	17.9	13	10	23	15.1
TOTAL	269	131	131	531	100	118	42	64	224	100	263	135	136	534	100	117	45	70	232	100	176	130	306	100	126	26	152	100

Source: SIGSA MOH 2000

120 out of 150 coffee estates had at least one health campaign, including immunizations. Coverage rates cannot be provided, since the project has insufficient census information for the participating plantations.

8. Results of Quantitative and Qualitative Studies

a. Small Study of Knowledge of Migrant Women about Child Health

This small study was conducted to assess knowledge changes in migrant women with children under five who were exposed to health education for one month, consisting of daily health messages transmitted through loudspeakers in the local Mayan languages and two weekly health education sessions conducted by the promoter about priority topics (diarrheas, ARI, immunization, and nutrition), including breastfeeding, timely introduction of complementary foods, complementary feeding of children six months to one year, and one to two years, and micronutrients (particularly vitamin A). 173 women were interviewed by project staff at the beginning of the study and 117 at the end of the intervention.

Women's knowledge about how to maintain a good milk supply for breastfeeding did not improve. More than half of the women could not provide a way to improve milk supply. With respect to infant feeding, 9% more women mentioned that children need three meals and two snacks after the health education intervention. There was no improvement in the percent of women who knew when to introduce complementary food. 13% more mothers responded that children need eight vaccination contacts during the first year of life, and 15% more mothers were able to state the correct age for polio, DPT and measles vaccination. There was no change from the pre- to the post-test in the percent of women who knew that vaccines protect the child against dangerous diseases (about 87%). More than half of the women in the pre- and post-test were not able to report ARI danger signs, and knowledge about how to treat coughs in the home did not improve. However, the majority of women knew where to seek care for their child during their stay on the plantation, and most often mentioned the minimal health unit. There were also no improvements in the knowledge of dehydration danger signs or feeding during (more than two thirds of mothers did not know how to feed the child) and after (less than a third of mothers knew that children need additional food during recovery) a diarrheal episodes. When asked how to prevent diarrhea, 46.4% knew how to prevent diarrhea. This is probably due to the fact that there was a cholera outbreak on three of the plantations that participated in the health education intervention, and the MOH allocated additional resources for treatment and prevention education.

b. *Focus Group Discussions with Migrant Women*

Three focus group discussions with an average of six participants were conducted on three plantations in each of the three departments. The purpose of this investigation was to determine to acceptance of the minimal health units, health education sessions, and vaccinations during their stay on the plantation.

The main findings were:

- The mothers knew about the minimal health units on the plantations and thought they were good to prevent serious disease in the children. The main barrier to using the health units are work hours and the fact that sometimes the health units did not have medications.
- The women stated that they did not have money to purchase medications, even though some stated that they were willing to buy drugs at low cost. The mothers also reported that they had visited the health unit two to three times during the past months for their children or themselves.
- The women reported that they had heard health messages in the communities of origin about sanitation, vaccination, and ARIs, but that they had no radios on the plantations.
- The women stated that they were willing to participate in health education, but said that they had limited time due to their work schedule.
- The women agreed that vaccinations were good, but would like to know in advance of scheduled vaccination activities and that they should take place on Saturday or Sunday at the health units or in the living quarters.

9. **List of Participating Plantations in Year 3**

Table 3: Plantations by department and municipality

Department	Municipality	Number of Participating Plantations	Partner Agency Providing Services
Quetzaltenango	Colomba	40	MOH
	Génova	2	MOH
	Flores	2	MOH
	El Palmar	10	MOH
	San Felipe	4	MOH
		58	
San Marcos	Tumbador	21	MOH
	Malacatán	5	MOH and ASDIMA
	San Pablo	11	MOH
	San Rafael PC	5	MOH
	El Quetzal	6	MOH
	La Reforma	4	MOH
	El Rodeo	6	MOH
		58	
Suchitepéquez	Chicacao	20	MOH and IGSS
	Santa Bárbara	8	MOH and IGSS
	San Fco. Zap.	6	MOH and IGSS
		34	
Total number of plantations		150	

10. Response to the Recommendations of the Midterm Evaluation

R.2. *In view of the success to date, continue to implement the program according to the style and principles used to date. In other words, keep up the good work.*

Working with many partners is very challenging. Project HOPE Guatemala has learned much during the past three years about how to strengthen joint work with governmental and private organizations. The progress made so far motivate the staff to make the main activities sustainable for its partners and to provide the MOH with public-private partnership model.

R.3. *Continue to focus on arrangements for sustaining funding.*

Migrant health services are a priority of the MOH, making it possible that the MOH will allocate additional resources to serve this population in the future. HOPE is also working through plantation owner/administrator networks to increase the contribution of the plantations to these health services and, thus, increase their long-term sustainability.

R.4. *Project HOPE and USAID should beginning planning now for the final evaluation of the project, with the idea of ascertaining whether or not, and how, the project should be expanded and disseminated widely in Guatemala and in other countries.*

The partner agencies already consider this project successful, giving the close coordination and joint work with the public and private sector to serve one of the poorest populations in Guatemala. It is the only project of its kind in the country, with a consistent training and health education approach and program components with a great likelihood of sustainability which should be strengthened during a project extension. The current political climate and the Peace Agreement provide a supportive context for this project. HOPE would like to leave behind a sustainable project that can be scaled up nationally and internationally.

R.5. *Seek additional opportunities for local involvement and coordination in health care.*

HOPE is assisting the MOH in coordinating more effectively with the municipalities, local organizations and committees, and NGOs to work together jointly and to bring community involvement into health planning and implementation.

R.6. *Continue to strengthen MOH leadership.*

HOPE plans to continue to strengthen the MOH and IGSS through technical assistance, training, development of supervision systems, monitoring and evaluation, as well as support to the health area councils, which provide the opportunity for the MOH to exert a leadership role in its respective department.

R.7. *Systematize and institutionalize the periodic selection, training and incorporation of new individuals into the core facilitator groups.*

The groups of master trainers developed by HOPE in the MOH and IGSS are key to a sustainable training process in the departments. The MOH recently adopted IMCI and decided to similarly develop a group of master trainers responsible for national training, starting initially with a pilot site. HOPE is assisting its health areas with this process, and the health areas have added additional staff to join the groups of master trainers.

R.8. *Strengthen individual partner organization skills in monitoring, supervision, evaluation and team work.*

HOPE continues to assist its partners in improving supervision, monitoring, and evaluation systems. This is a long-term and gradual process to system improvements.

R.10. *Strengthen MOH planning and implementation in training of case management.*

Until recently, the MOH used standard case management norms developed by WHO and HOPE assisted the MOH in improving technical capacity. Now that the MOH has formally adopted IMCI, HOPE's IMCI trainers will continue to develop the technical/training capacity of the MOH.

R.12. *Continue providing support to the MOH to help it to implement and supervise its community reporting system.*

The MOH HIS continues to go through changes. HOPE continues to assist the MOH, and HOPE is using the MOH system. Because HOPE's role in the target area is one of capacity building, developing a parallel system would be counterproductive to a coordinated approach.

R.13A. *Continue to pursue and to systematize the personal system of contacts with key people in the partner organizations.*

Project staff meet with staff from the partner agencies on a monthly and quarterly basis to exchange information on progress, jointly supervise the different levels where activities are implemented, including the plantations, and to identify additional sources of local support to the project activities.

R.13B. *Aggressively pursue the undertaking of mini-studies as planned, keeping them as focused and low-cost as possible. For example, focus them on issues presented at individual estates or health facilities, and involve key personnel at these locations to the full extent in order to be able to implement the findings and transfer the mini-study approach. Bring in outside expertise to help with the mini-studies when appropriate and not too costly in terms of time and money. Examples of mini-studies that might be pursued noted elsewhere in this report include:*

- * reasons why migrant families do not use sanitary facilities;*
- * criteria migrants use to decide whether or not to return to same estate;*
- * costs to estates of providing health units, in relation to total budget;*
- * quality of case management services provided by CHVs.*

HOPE agrees with the need to conduct mini-studies, particularly with the migrant population. However, the time frame is very limited (during the coffee harvest only), and parents have very limited time due to their long work hours. Results of two studies are included in this annual report. Based on the midterm evaluation results, HOPE has proposed that additional human resources be included during an extension of this project to conduct a series of OR and mini-studies to assess impact of interventions/strategies, fine-tune/improve activities, and compare alternative approaches.

R.14A. *The project should develop and disseminate a periodic progress report (perhaps quarterly) that is shared with all stakeholders in the project, including all owners and managers of partner estates. Its continuation should be subject to how well it is received.*

To date, HOPE is still providing updates to the partner agencies and plantations during face-to-face meetings. Written formats will be developed during the extension.

R.14B. *This finding has implications for Project HOPE throughout the organization with regard to its competitive strategy and policies.*

HOPE is continuing to strengthen its work models with the private sector in Guatemala and other countries to improve public-private partnerships with the purpose of increasing access to and participation in health services.

R.15. *Staff of Project HOPE must constantly upgrade their technical skills, and continue to involve expert outsiders, including other USAID supported projects, for the provision of technical assistance.*

HOPE/Guatemala is always seeking and providing opportunities for building the capacity of its staff, and the quality of staff is well recognized by the partner agencies. Because of the approach the Guatemala CS project has taken in establishing a sustainable approach with multiple partners, the Guatemala Country Director participated in a Regional Workshop on Sustainability in Nicaragua in Fall 2000 and shared lessons-learned with other CS projects. Guatemala CS staff will also participate in a workshop to improve program monitoring skills of HOPE's projects in the Americas in March 2001. The main constraint to additional participation in continuing education opportunities is the project budget.

R.16A. *The project should negotiate with the estates, the MOH and other partners to ensure a consistent supply of essential medicines, supplies and equipment.*

The MOH is providing essential drugs to the plantation health units. These drugs are only for children and pregnant women. Some plantation owners are already purchasing drugs for adults. However, there is no systematic process in place, but is left to the criteria of owners and administrators. HOPE is working to improve this situation. HOPE's local NGO ADISS also has developed revolving drug funds to benefit child health in the target area. As the number of revolving drug funds/community pharmacies increases in the target area, drugs will become more available at the community level. ADISS' activity is based on cost-recovery and community financing and is supported by a contract the MOH has signed with ADDIS.

R.16B. *MOH should provide funding for essential medicines in its future budgets.*

Based on the priority the MOH has placed on migrant health care, the MOH is planning to provide the health units with essential drugs. As pointed out above, HOPE is also working with the plantation owners and administrators and through the revolving drug fund project of ADISS to increase local availability of drugs.

R.16C. *Continue to give priority to helping the new NGO find and implement solutions to the medicine supply problem. The project should work with the new NGO to explore sustaining funding from estates and local organizations as well as the government for the provision of medicines.*

Project HOPE/Guatemala and ADISS are working together closely on the local drug supply issue.

R.17. *The project should encourage estates to seek ways whereby the health units can provide essential medicines and supplies (such as pain relievers, multi-vitamins, first aid supplies) for adults.*

HOPE has worked with the plantation owners and administrators to contribute to the drug supply of the plantation health unit, particularly with respect to drugs that might be needed by adults (men and non-pregnant women). Some owners have started to purchase drugs. Revolving drug

funds are also being established (as described above). In some cases plantation owners have contributed a first supply of drugs. These are sold slightly above cost so stocks can be replenished.

R.18. *The project should coordinate with the MOH, IGSS and the estates to provide first aid training for the estate based CHVs, and to create a consistent supply of first aid supplies for the estate health units, which can be used to provide health service to adults.*

Supervision of promoters and outreach activities to the plantations by MOH and IGSS staff have increased substantially this year. In addition, HOPE assisted the health facilities to improve their indirect supervision of promoters when they report monthly to the health facility. HOPE's role has been more one of supervision and assistance to the MOH and IGSS that these commitments to supervisions are put into action. This aspect will continue to be strengthened during the proposed extension of the project.

R.19. *Health staff at the partner organizations should continue to provide supportive supervision and follow-up to the CHVs working on the estates.*

Some promoters have been trained by IGSS in first aid, and some plantation owners have purchased first aid supplies for their promoters. The project plans to seek similar opportunities for the remaining promoters, as knowledge and skills in first aid also serve to increase the prestige of the promoter on the plantation.

R.20.A. *Undertake mini-studies on the reasons the migrant mothers do not use the health units and develop strategies to overcome those barriers.*

See response to R.13B.

R.20B. *The project should explore how to extend its contact with migrants working on the estates to the home communities of the migrants. Many of these communities are in the same departments where the project is now working, which provides opportunities for collaborative effort by the current partner organizations, including especially the MOH. Careful planning is needed to make such an extension.*

San Marcos, one of the departments with the most internal migrants has asked HOPE to assist in the communities of origin of the migrants, where there are more opportunities for health education and community outreach. This issue is being addressed in the extension proposal.

R.20C. *Increase availability of medicines and supplies (see findings 16 and 17).*

See responses to R.16 and 17.

R.20D. *Move to regular hours and explore payments to health unit staff with the estates (see findings 22, 23, 24).*

This year, the project was able to negotiate more hours of promoter services with the larger coffee plantations during the coffee harvest. Because of the very low coffee prices, the smaller plantations felt unable to increase promoter time. HOPE continues to emphasize the importance of the promoter with the plantations. All promoters are paid, but not all are able to work full-time on their health activities and services.

R.21A. *Strengthen radio broadcasting and estate loudspeaker broadcasting of health messages in native languages, but analyze the effectiveness of this action before moving too fast and far to expand it.*

The number of health messages transmitted by radio and through loudspeakers were increased during this project year. Further research is needed about their impact.

R.21B. *(See recommendation 20B.)*

HOPE is in process of developing a proposal for the ILO to assist the MOH to improve the health and nutrition of children in four highland municipalities of San Marcos which contribute to the internal migrant population. The purpose of the ILO is to increase school attendance of the children and reduce their participation in the coffee harvest. Part of the proposal includes direct health care of children and pregnant women while they are working on the coffee plantations.

R.22. *(See recommendation 23.)*

See response to R 20.B. and D.

R.23. *Conduct estate-specific cost and effectiveness studies on having a paid manager of the health units, such as a part-time or full-time auxiliary nurse or a stipend for a competent CHV.*

HOPE is eager to look at this issue more systematically during an extension and has had some initial contacts with Abt Associates to collaborate on a cost-effectiveness study under the PHRII project. Some plantations (about 15%) are already increasing their contribution to plantation health care by contracting with physicians, nurses, or auxiliary nurses during the coffee harvest. This assists the promoter and increases the quality of care provided. However, the promoter remains the main provider, and most are still dividing their time between plantation work and health services. This is more challenging on the larger plantations with greater demand than on the smaller ones.

R.24. *The project should explore with the partner organizations a stable arrangement of paid auxiliary nurses or stipends for estate-based CHVs who manage the health units.*

During this project year, two of the health areas contracted two auxiliary nurses for the two districts with the most migrants. Given the limited resources of the MOH, this was very positive. The project is also considering developing proposals for the Social Investment Fund to provide annual resources for contracting additional auxiliary nurses every year during the coffee harvest to assist with promoter supervision and support.

R.25A. *Promote meetings with estate owners/managers about migrant living conditions that share lessons about improving those conditions and, when appropriate, which seek innovative strategies to improve migrant living conditions on the estates that improve health.*

There are now meetings involving plantation owners/administrators and MOH staff every two to three months. Some of the topics covered include environmental sanitation and the food rations provided to the migrants. About 5% of the plantations have started to make some improvements in migrant nutrition, housing and beds, and latrines. HOPE will assist the MOH in continuing to motivate the plantations to make such improvements.

R.25B. *Undertake mini-studies to determine how to design more effective facilities, and how to improve the health practices of the migrants and help them take advantage of existing facilities. The project should consider involving organizations with expertise in formative research and behavior change in this effort.*

Given the short time migrants remain on the plantations and the difficulty of finding time for health education this has not yet been feasible.

R.26. *Seek funding to: (A) develop health messages in additional native languages and in local variations of Mam and Quiche, (B) develop and record new health messages, and (C) expand broadcasting to additional estates and radio stations.*

Project HOPE has coordinated with the departmental offices of the Adult Education Office of the Ministry of Education (MOE) and local radio stations. This Division of the MOE has assisted in the translation of messages into the local languages and in the development and taping of new messages. During the third project year, messages were disseminated through radio stations at the district level and loudspeakers on plantations.

R.27. *(See recommendation 26A.)*

See response to R.26.

R. 28. *(See recommendation 26B.)*

See response to R26.B In coordination with the MOH and some radio stations other health messages (malaria, dengue, family planning, HIV/AIDS) have also been disseminated.

R.29. *The project should work with local companies to obtain funds to pay for broadcasting on commercial stations.*

Commercial radio stations are supposed to provide air time for health messages to the MOH and have responded positively to requests from the project and the MOH. The main limitation is that the stations decide when to air messages, and this is not usually the preferred listening time of the project's target groups. HOPE is continuing to negotiate with the radio stations on this issue.

R.30. *The project should promote this.*

The three individuals in charge of the health promotion activities of the MOH in the three departments and the IGSS have planned live radio programs that are conducted occasionally on weekends or holidays, in the case of Quetzaltenango.

R.31. *Seek funding to upgrade the sound quality of the tapes by using higher quality recording equipment and the use of a professional recording studio to improve sound effects, background music, etc.*

To improve the sound quality of the radio messages, the project has been assisted by the radio station La Voz de la Buena Nueva in San Marcos. This radio station has very modern equipment, and the quality of the messages is much better now than during the midterm evaluation.

GENERAL PROJECT RECOMMENDATIONS

- ◆ The policies of the National Health Plan which prioritizes services to the migrant population needs to be adopted at the departmental level and become an active part of the departmental health plan and agenda. This would increase the interest and commitment to health services for the migrant population on the plantations as well as in their communities of origin.

- ◆ It is very important to continue the coordination activities with the project's partner organizations to assure that activities that are already sustainable in theory continue to be sustained in the long-run.
- ◆ Coordination with plantation owners and administrators has to reach a level, so that only follow-up and supervision from the MOH and IGSS is needed to sustain the minimal health units.
- ◆ The capacity of the master trainers has to be strengthened in the final project year, so that they can continue to train and provide follow up to providers and community agents.
- ◆ A program extension is needed to assure that the MOH has a successful model that can be shared at the national and international level. Such a model would also require attention to migrant health needs in the communities of origin.
- ◆ The health areas should be encouraged and assisted in providing proposals to the Social Investment Fund to obtain the necessary funds to staff up during the harvest season to provide supervision to the plantation promoters and community outreach (health education, vaccinations, and prenatal care).
- ◆ The HIS needs to be strengthened in the final project year, so that the partner agencies have good information about the CS activities on the plantations for decision-making and allocating and prioritizing human and materials resources to where and when they are needed (e.g., migrants arriving for the coffee harvest).
- ◆ The MOH needs to make adjustments in its budget to include essential drugs for the plantation health units and for the contracting of additional staff during the coffee harvest.
- ◆ The MOH and IGSS need to strengthen supervision and follow-up to the plantation promoters through the closest health facilities and provide refresher trainings and updates to the promoters to help them maintain quality in the services they provide.

PROGRAM ACHIEVEMENTS

Objectives	Evaluation methods	Annual goal (KEY ACTIVITIES)	Results achieved	Comments
1. Increase by 10% the utilization of maternal and child health care services by migrants.	Almost 9000 migrant children <5 were seen in MHUs during the 2000 harvest season.	<ul style="list-style-type: none"> - Training of counterpart staff in IMCI/MEC MOH: 70 providers ANACAFE: 4 providers Coffee estates: 50 new promoters - IEC training for 234 resident, rural health promoters - Implementation of 50 additional plantation MHU Minimal Health Units (MHUs); - Support counterparts in making health care services more accessible (extended hours, additional locations); - Assist the plantation MHUs with a management plan that addresses the increased client load during the coffee harvest; - Strengthen health messages through radio and loudspeakers in Spanish and common dialects. 	<p>MOH: 70 workers trained ; ANACAFE: 4 providers trained; MHU: 50 providers trained. 234 promoters trained in IEC 50 new MHUs implemented;</p> <p>3 functioning committees of plantation administrators/owners; improved logistics, MOH providing vaccines and essential drugs on a timely fashion; an IEC plan was made with partners for all CS interventions; 15 mother groups received health education; while health services did not have extended hours, MOH staff from 20 health services visited MHUs regularly;</p> <p>10 radio stations spread health messages in Mam, Quiche, and Spanish</p>	<p>IGSS: Overall goal had been achieved in year I (123 health workers trained)</p> <p>Cumulative number of promoters trained: 650</p> <p>Goal of 10 radios broadcasting achieved in year II</p>
2. Increase to 80% the number of children between 12 and 23 months who have a complete immunization scheme.	Coverage rates available at final UPC survey.	<ul style="list-style-type: none"> - Training as per objective 1 - Strengthen partner agencies in immunization and outreach activities on the estates; - Assistance to partner agencies in maintaining vaccine supply; - Strengthened health messages through radio communications. 	<p>Training as per objective 1;</p> <p>MOH conducted at least one health campaign –including immunizations- in 120 out of 150 coffee estates;</p> <p>Plan with partner agency staff and promoters for immunization promotion;</p> <p>Increased availability of vaccines;</p> <p>10 radio stations broadcasting as above.</p> <p>Loudspeakers installed in 10 coffee estates broadcasting during working hours</p>	<p>Complete immunization coverage will require working with the communities of origin of the migrants-most migrants have a short stay on a given plantation</p>
3. Increase to 50% the number of mothers who know that their child needs to be vaccinated against measles at nine months of age.	Knowledge will be assessed at the final UPC	<ul style="list-style-type: none"> - Training as per objective 1 - Strengthened immunization promotions in communities and on plantations; - Strengthened health messages through radio communications. 	<p>Training in IMCI as per objective 1</p> <p>Planning with counterpart staff and promoters for immunization promotion;</p> <p>10 radio stations broadcasting as above</p>	<p>38 additional MOH staff will be trained in year 2001</p>

Objectives	Evaluation methods	Annual goal (KEY ACTIVITIES)	Results achieved	Comments
4. Increase to 60% the number of families with Family Health Cards.	To be assessed in the final UPC	<ul style="list-style-type: none"> - Promote the use of child and maternal cards in communities and on plantations, increase demand and have migrant mothers bring health cards to plantation; - Health cards made available to all providers. 	<p>70% of promoters are forming and teaching mothers groups.</p> <p>All health services have enough supply of health cards;</p> <p>In 150 MHUs, the use of cards is promoted, integrated with immunization and prenatal care;</p> <p>10 radio stations broadcasting as above</p>	
5. Increase to 70% the percentage of women with two or more TTV.	KPC surveys: 15% of migrant mothers had TT2 at baseline, among resident mothers coverage rate was 4.1%. To be assessed in the final UPC	<ul style="list-style-type: none"> - Training MOH, IGSS and NGO Counterparts in maternal health: IGSS: 10 providers; MOH: 54 providers; ANACAFE: 5 providers NGOs: 28 providers; TBAs : 354 - Develop IEC plan with messages on maternal care - Strengthened immunization promotion in communities and on plantations; - Spread messages on maternal health through radio communication; - Health service using maternal cards. 	<p>Training on maternal care given to:</p> <p>IGSS: 10 health workers; MOH: 18 workers; TBA: 354 providers trained;</p> <p>Improved planning and logistics: all health services with enough TT vaccine before the start of the harvest season;</p> <p>10 radio stations promoting vaccines in local Mayan languages as above.</p> <p>120 coffee plantations receive MOH out-reach campaign.</p>	<p>Goal for IGSS staff had been reached in year II.</p> <p>Cumulated number of TBAs trained: 679</p>
6. Increase to 60% the percentage of mothers exclusively breastfeeding for the first four months.	KPC survey: 25% of migrant infants <4mo being exclusively breastfed at baseline. To be assessed in the final UPC	<ul style="list-style-type: none"> - Training of counterpart staff in breastfeeding as part of IMCI training: MOH: 70 providers; ANACAFE: 4 providers; CATs : 234; Promoters: 50 new providers on plantations; - Implementation of 50 new plantation MHUs; - Strengthening of health messages through radio communications. 	<p>Training on IMCI-breastfeeding given to: 70 MOH health providers; TBAs: 234 providers trained, Promoters from coffee plantations: 50 trained, 150 MHUs functioning, providing nutrition counseling ;</p> <p>10 radio stations broadcasting nutrition messages as above.</p>	<p>Goal for IGSS staff had been reached in year I</p>
7. Increase by 20% the number of infants between 6 and 9 months of age receiving complementary foods.	To be assessed in the final UPC	<ul style="list-style-type: none"> - Training of counterpart staff in dietary counseling as part of IMCI training: MOH: 70 providers; ANACAFE: 4 providers; Promoters: 50 new providers to be trained; IEC training for 234 Promoters; - Implementation of plantation MHUs; - Strengthen of health messages through radio communications. 	<p>Training on IMCI-child nutrition given to: 70 MOH health providers, ANACAFE: 4 providers, Promoters from coffee plantations: 50 new providers trained;</p> <p>IEC training for 234 resident health promoters;</p> <p>150 MHUs functioning;</p> <p>10 radio stations broadcasting health messages.</p>	<p>Goal for IGSS staff had been reached in year I</p>

Objectives	Evaluation methods	Annual goal (KEY ACTIVITIES)	Results achieved	Comments
8. Reduce the percentage of children 6-59 months which have eaten two or fewer meals the day preceding the survey to 10%.	Baseline KPC survey: 13% of migrant children ate 2 or less meals/day To be assessed in final UPC	<ul style="list-style-type: none"> - Training of counterpart staff in the nutrition component of IMCI, as per objective 7 - Implementation of 50 new plantation MHUs; - Strengthening of health messages through radio communications. 	Training as per objective 7; 150 MHUs functioning; 10 radio stations broadcasting health messages.	
9. Increase to 60% the number of resident families seeking professional care for children with diarrhea and dehydration.	Baseline KPC surveys: 34% of migrant mothers sought care for their child in case of diarrhea. To be assessed in final UPC.	<ul style="list-style-type: none"> - Training of counterpart staff as per objective 7 - Implementation of 50 new plantation MHUs; - Assist counterparts in maintaining ORT supply; - Strengthening of health messages through radio communications. - Increase utilization of MHU by migrants. 	Training as per objective 7 150 MHUs functioning; Increased availability of ORS; 10 radio stations broadcasting health messages. 147 promoters reporting about case management of diarrheas in >5s.	
10. Increase to 30% the number of families using ORS and other acceptable home available liquids (tea, rice water, purified water) to prevent dehydration from diarrhea in children not being exclusively breastfed.	Baseline KPC survey ORS use rates among migrants: 14%, residents: 12.6% To be assessed in final UPS	<ul style="list-style-type: none"> - Training of counterpart staff as per objective 7 - Promoter training; - Implementation of plantation MHUs; - Assist counterparts in ORS packet distribution; - Strengthen health messages through radio communications. - Education of mother's groups. 	Training as per objective 7 150 MHUs operating; Increased availability of ORS; Increased number of packets distributed; 10 radio stations broadcasting health messages.	
11. Increase to 60% the number of mothers who continue to breastfeed, provide liquids and/or feed a child the same or more during episodes of diarrhea.	Baseline KPC survey: about 50% of migrant mothers gave more liquids during child diarrhea To be assessed in final UPC	<ul style="list-style-type: none"> - Training of counterpart staff as per objective 7 - Promoter training; - Implementation of plantation MHUs; - Strengthening of health messages through radio communications. 	Training as per objective 7 150 MHUs functioning; 10 radio stations broadcasting health messages.	
12. Increase to 90% the number of cases of pneumonia and diarrhea treated according to current WHO norms for case management.	80% of trained IGSS staff have adequate knowledge about pneumonia, 74% about nutrition, 66% about diarrhea. To be assessed in final UPC	<ul style="list-style-type: none"> - Training of counterpart health workers as per objective 7 CHV training; - Implementation of plantation MHUs; - Assist counterparts in maintaining antibiotic supply; - Strengthening of health messages through radio communications. 	Training as per objective 7 150 plantation MHUs functioning; Increased availability of antibiotics: MOH provides antibiotic supplies to MHUs; 10 radio stations broadcasting health messages. 147 promoters reporting about case management of ARIs in <5s.	In 1999 MOH supervised 100 health workers, 80% of them applied correctly standard case management norms.

Objectives	Evaluation methods	Annual goal (KEY ACTIVITIES)	Results achieved	Comments
13. Increase to 40% the percentage of mothers who recognize one or more symptoms of pneumonia.	Rapid survey: 23% of Migrants mothers were able to tell one + symptoms/ signs of pneumonia To be assessed in final KPC	- Training of counterpart staff as per objective 7 - Strengthening of health messages through radio communications.	Training as per objective 7 10 radio stations broadcasting health messages. 150 MHU promoters providing health education	
14. Increase to 60% the number of mothers seeking professional care or care from trained CHVs for children with cough or difficult breathing.	Baseline KPC survey: 43% of migrant mothers did so. 2000: 92% of migrant mothers sought help from the MHU To be assessed in final KPC	- Training of counterpart staff as per objective 7 - Implementation of plantation MHUs; - Strengthening of health messages through radio communications.	Training as per objective 7 150 MHUs functioning; 10 radio stations broadcasting health messages. 150 MHU promoters providing health education	
15. Increase to 70% the number of mothers seeking prenatal care from a trained provider.	Baseline KPC survey: 20% of migrant mothers sought prenatal care To be assessed in final KPC	- Training of counterpart staff responsible for prenatal care as per objective 5; - Support to counterparts in maintaining TT supply; - Strengthening of health messages through radio communications.	Training as per objective 5 10 radio stations broadcasting health messages; Increased availability of TT vaccine. 120 plantations receive MOH outreach campaign.	
16. Increase to 40% the number of births attended by trained personnel.	Baseline KPC survey: 9% of migrant mothers had a birth attended by a trainer provider To be assessed in final KPC	- Training of institutional staff responsible for maternal health as per objective 5; - improving planning, logistics of TT vaccine; - promoting the use of maternal cards in health services; - Strengthening of health messages through radio communications.	Training as per objective 5 10 radio stations broadcasting health messages; Increased number of women reporting delivery by trained providers. Health areas report fewer cases of maternal deaths.	

Objectives	Evaluation methods	Annual goal (KEY ACTIVITIES)	Results achieved	Comments
<p>17. Strengthen institutional capacity by promoting and collectively developing systems for monitoring and supervision, and data collection, analysis, and utilization.</p>	<ul style="list-style-type: none"> - 4 Master Trainer groups formed, one in each MOH health area, one in IGSS. - 3 departmental health councils functioning - Tools developed to collect quantitative monitoring and evaluation information on migrants - Supervision system structured, in use-health areas using supervision and monitoring plans 	<ul style="list-style-type: none"> - Train counterpart supervisors in monitoring and supervisory skills; - Promote a prioritization of monitoring and supervision skills by the Permanent Education Committee; - Promote a functional, integrated HIS for MOH, IGSS and NGO facilities in the project area; - Design and implement an instrument for collecting migrant data: a census of migrants collecting data on immunization coverage 	<p>Master trainers conduct education and training. TOT recently trained in obstetric care started to train MOH/IGSS staff. 150 MHU promoters use C/IMCI protocols, conduct health education and counseling. MOH/IGSS supervise bimonthly. Supervision tool in use, not official yet.</p> <p>Promoters provide monthly activity reports on cases managed in exchange for a new stock of essential drugs. These are entered into MOH HIS.</p> <p>Three Department Health Councils coordinating with IGSS, NGOs, and plantations. An annual operational plan for the monitoring, follow-up and supervision of health personnel and services in the target area.</p> <p>Census performed on 100 coffee estates.</p>	<p>17</p>