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

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LIST OF ACRONYMS

AIDS	Acquired Immuno-deficiency Disease Syndrome
AINM-C	Integrated Maternal and Child Health Attention - Community level
BCC	Behavior Change Communication
BHU	Basic Health Units
CBDA	Community-Based Distributing Agent
CS	Child Survival
CSHGP	Child Survival and Health Grants Program
CSTS+	Child Survival Technical Support Project
DIP	Detailed Implementation Plan
ECP	Expanded Coverage Project of the MSPAS (formerly called SIAS)
HIV	Human Immuno-deficiency Virus
IEC	Information, Education and Communication
IGSS	Guatemala Institute of Social Security
ILO	International Labor Organization
IMCI	Integrated Management of Childhood Illness
IPPF	International Planned Parenthood Foundation
KPC	Knowledge, Practices and Coverage
LQAS	Lot Quality Assurance Sampling
M&E	Monitoring and Evaluation
MSPAS	Ministry of Health, also MOH
ORS/T	Oral Rehydration Salts/Therapy
PDA	Personal Digital Assistant
RH	Reproductive Health
RHP	Rural Health Promoter
STI	Sexually Transmitted Infections
TBA	Traditional Birth Attendant
TT	Tetanus Toxoid
USAID	United States Agency for International Development

A. Summary

In 2001, Project HOPE was awarded a four-year extension to expand its CS-XIII project aimed at improving the health of women and children migrating to or residing in or near (and dependant upon) coffee plantations in the Boca Costa region of southwestern Guatemala which is a piedmont area about 20 miles wide by 100 miles long above the Pacific coast. The target population consists of 330,000 beneficiaries, including 162,304 children under age five and 171,959 women of reproductive age. The project provided benefits to migrants and residents in the target area through capacity building of Ministry of Health (MSPAS), Guatemala Institute of Social Security (IGSS), and 3 local NGOs involved in the national Expanded Coverage of health services program (ECP) in the target area. These three NGOs include ADISS, The Red Cross and the Funrural or Funcafe which is the development organization linked with ANACAFE, the coffee growers' national association. (See Annex D for an explanation of the Guatemala health system and administrative divisions.)

The project worked with partner technical staff and a nucleus of Master Trainers in 4 Health Areas, equivalent to geographic Departments: San Marcos, Quetzaltenango, Retalhuleu and Suchitepequez. In the Department of Suchitepequez, the project also worked with the IGSS which has a community outreach program. The project assisted these partners in replicating training programs associated with several national health strategies: clinical and community Integrated Management of Childhood Illness (IMCI) and Essential Maternal and Newborn Care (AMNE) for health staff and community volunteers through all health units in 29 municipalities[1]. These trainings reached 964 Rural Health Promoters (RHPs), 783 Traditional Birth Attendants (TBAs), and 60 Community Based Distribution Agents of family planning methods. In this way the extension project has continued to support increased access to primary health care while expanding to include a focus on integrated reproductive health and on strengthening capacity-building for sustainability of heath attention for migrants. During the first two years, the project also targeted four municipalities in the Highlands of San Marcos from which many migrants originate. Through the MSPAS and with involvement of municipal governments, the project trained 30 health workers in IMCI and 30 Rural Health Promoters in C-IMCI and trained 150 RHPs and 175 TBAs in preventive health and health promotion.

In the Boca Costa, the project instigated and helped to establish Basic Health Units (BHUs) within or next to coffee plantations with owner and administrator moral and financial support, and facilitated training of Rural Health Promoters (RHPs) to operate them. All but 35 of the BHUs operate under the auspices and supervision of the Ministry of Health and Social Assistance (MSPAS) district. The remaining 35 BHUs have been absorbed by NGOs contracted by the Extended Coverage Project (ECP). Despite the fact that many plantations have closed production or drastically reduced personnel due to the dramatic drop in coffee prices between 2000 and 2004, the project has worked with a total of 183 of the proposed 200 coffee plantations (this target was revised in 2002 in the 1st annual report submitted to USAID's CSHGP). In each coffee plantation there is one BHU. Out of the 164 active BHUs, 108 are located within coffee plantations; and the others are located in adjacent communities. All of these BHUs are managed by trained RHPs, who provide medicines appropriate for IMCI/AINM-C services, including antibiotics. The project

[1] The DIP mentions 30 municipalities; but Santiago Atitlan became covered by an organization contracted under the ECP shortly after the DIP was prepared and hence, was dropped. The project intervention in the highlands from which migrants originate was active in 4 of the 5 municipalities cited in the DIP during the first two yeas.

motivated MSPAS local health personnel and, in Suchitepequez, IGSS health personnel, to provide periodic health campaign outreach services on plantations, especially between October and February of every year when migrants are present for the coffee harvesting season.

Besides MSPAS and IGSS partners, the project collaborated closely with JHPIEGO to extend the Maternal and Neonatal Care (MNC) approach, and with local NGOs (ADISS, The Red Cross, the Suchitepequez branch of FUNCAFE which is the development organization of ANACAFE, the coffee grower's national association) to extend coverage of primary health care services to rural areas in accordance with national strategies for Integrated Systems of Health Attention (*SIAS*).

The project's level of effort is divided as follows: 5% immunization, 10% nutrition and 5% breastfeeding, 3% Vitamin A and 2% micronutrients, 15% acute respiratory infections, 10% control of diarrheic disease, 5% malaria, 20% maternal and newborn care, 15% child spacing and 10% HIV/AIDS.

The main accomplishments of the program

The principal accomplishment of the project, considering the context, is the attitude changes regarding migrants among Ministry of Health (MSPAS) staff and plantation owners and managers. When this project was designed nearly ten years ago, no one amongst the health workers, the MSPAS hierarchy, or the plantations took into account that the migrant families had health needs and rights which weren't being met. During this final evaluation, MSPAS staff at all levels and plantation managers acknowledged that this had been the case. The current norms, activities and plans of the MSPAS specifically for attending migrant health needs and, the commitment of the plantations in supporting the Basic Health Units (BHUs) is testament to a major attitude shift. The attitude change is not wholly due to the influence of this CS project, however. A cholera outbreak on the plantations of Quetzaltenango further spurred MSPAS interest in migrant health. The plantation owners have begun to see the migrant work force disappear due to migration out of the country, former migrant families' reluctance to pull their children out of school to migrate, and because the extremely low wages offered in recent years during the "coffee crisis" forced former migrants to seek other means to augment their income. Facing a good harvest and rising prices now, some plantation owners feel pressed to improve living and working conditions in order to compete for the decreasing pool of migrant coffee pickers and to gain accreditation for entry into special marketing programs such as Fair Trade. The project has taken advantage of both the cholera outbreak and the labor concerns of plantation owners to promote the need to improve health services and conditions for migrants.

As the second major accomplishment, the project has succeeded in greatly improving access to basic health services for the residents and migrants on and near the coffee plantations of the Boca Costa of southwestern Guatemala. This was accomplished through the establishment and continuation of 152 Basic Health Units (BHUs) on or near the coffee plantations in the three Departments of San Marcos, Quetzaltenango, and Suchitepequez as well as in one municipality of Retalhuleu Department. The final evaluation team believes the potential for sustainability of the BHUs is good due to the fact that the project-trained promoters are motivated to continue indefinitely, half of the plantations are providing material support and all BHUs are linked either to the MSPAS health centers, to the Guatemalan Social Security Institute (IGSS) or to one of the NGOs which have

contracts with the MSPAS to provide rural health services. The level of supervision being provided to the BHUs is commendable.

Additionally, as a third major accomplishment of the extension phase, the project has facilitated the training of 904 health workers of the MSPAS, the IGSS of Suchitepequez, and the NGOs Funcafe, ADISS, and the Guatemalan Red Cross in greatly improved and standardized care through institutionalization of Essential Maternal and Newborn Care (AMNE), Integrated Management of Childhood Illness (IMCI) and 183 community health promoters/workers known as promoters in Community IMCI (C-IMCI). As a part of the capacity-building component, teams of Master Trainers with impressive skills in adult learning have been established in each of the three MSPAS Areas and in IGSS Suchitepequez. Each of these teams has trained additional health workers beyond the project intervention municipalities. (For an explanation of the Guatemalan health delivery system, please see Annex D.)

Highlights from the comparison of the baseline and final KPC surveys

The improvements in coverage, health behaviors and knowledge among the Boca Costa residents are impressive. Nearly all targets, although set quite high in the DIP, were met or exceeded. The percentage of children completely immunized nearly doubled while the percentage of women who received two doses of Tetanus Toxoid (TT) quadrupled as did the percentage of women who had three or more prenatal visits. Significantly more mothers initiated breastfeeding in the first hour after birth and the percentage of those offering exclusive breastfeeding to their infant under six months of age increased from 79 to 87 percent. Three times as many mothers now recognize symptoms which indicate the need to take a sick child to medical care and more mothers could name danger signs during pregnancy and post-partum. At the mid-term only 8.4% of women could name two symptoms of sexually transmitted illness (STI) but this jumped to 62.5% by the end of the project. Knowledge of ways to prevent HIV increased from 17% at baseline to nearly 80%.

While a quantitative final KPC survey of migrants only was not possible due to the seasonal absence of the migrant workers on the plantations, a mini-survey was conducted with a convenience sample of 68 migrant families in their communities of origin (nine families had actually just arrived on one plantation). Knowledge and behaviors among the migrants seriously lag behind those of residents. For example, 47 out of the 68 migrant women interviewed answered that nothing could be done to prevent HIV or did not know. Only five of the sixty-eight migrant mothers recognized symptoms of pneumonia while 38% of the resident mothers did. On the other hand, prenatal care coverage with a minimum of one visit was higher among migrants than among residents.

The health facilities and BHUs in the target Areas have begun to track coverage, morbidity and mortality separately for migrants. This data is being included in the national HIS, which now includes a column specifically to identify migrants. Some health districts have altered their hours of operation to be available in the evening for migrants, but more could be done on this as well as promotion of services to the migrants. All health Area offices reported they are now providing additional medicines to the health districts to cover the increased case loads (of migrants) during the coffee harvest season. District health directors confirmed that supplies are stable and sufficient.

Based on the interviews with Area and district health teams, with plantation administrators and with RHPs, the potential for sustainability seems quite good. More than 50% of plantations are paying a salary to the RHP and/or supplying medicines for the BHU. The Area health offices have

established norms and have plans in effect to continue immunization visits to the plantations, and to support the RHPs and BHUs. RHPs are receiving monthly supervision and regular in-service training. Three other Health Areas in Guatemala which have large seasonal influxes of migrants have expressed interest in replication. The National Coordinator for Migrants from the central MSPAS, who has been deeply involved in this project, will play a key supportive role in any replication in other Areas.

Priority conclusions of this evaluation

Positive Outcomes:

- Direct coordination established between and has become routine between the MSPAS, and IGSS at the national, Area, and local levels. On-going coordination now exists between these institutions and the National Association of Coffee Producers (ANACAFE) as well as with plantation administrators and owners at the local level.

- Involvement of plantation owners and administrators in support of health services and education for migrant workers, and of a growing number in improving living conditions for migrants on the plantations. Such improvements have occurred on about 20% of target plantations during the life of the project and it is hoped that this initiative will spread to other plantations in the near future, spurred by the rising price of coffee, labor shortage, and a desire to compete in the world market through mechanisms such as Fair Trade.

- Implementation of 152 Basic Health Units with very good potential for sustainability to serve migrants and residents dependent on coffee plantations. This has significantly improved access to health care for these families.

- Operationalization of the national policy for health care for migrant populations which was established during Phase I of the project. This has been accomplished by each of the three Area Health Offices and by IGSS Suchitepequez with the support of Project HOPE.

- Implementation of norms for providing health care to migrants, including collecting and using data on migrants. Each Area Health Office and each target district how have operating plans and procurement allotments which take into account the migrant population.

- Institutionalization of IMCI and AMNE in the target districts of the three Departments and in San Felipe. This has resulted in significant improvement in quality of care through application of standardized procedures and improved provider/patient communication skills.

- Formation of teams of Master Trainers in each Health Area and in IGSS, who will continue to provide high quality training and follow-up to health personnel and RHPs.

Weaknesses:

- As found during the mid-term evaluation, the weak part of the program, particularly for migrants, is the behavior change communication strategy which was not successful in reaching the migrants with urgently needed health information and support necessary to change behaviors. The initial proposal for CS XIII laid out some potential strategies for reaching migrants in their communities of origin but these strategies were only tacitly implemented, if at all.

- While the project did some impressive monitoring of certain aspects of the project, including periodic LQAS surveys of residents, synthesis of migrant coverage data, BHU use, etc., there is a lack of pre and post evaluation of health worker skills. Assessments of BHUs and the application of IMCI were conducted in 2003 and again in 2004. However, it would have been useful to have repeated both prior to the final evaluation. The project did not follow the suggested monitoring plan laid out in the DIP which might have enabled them to better discern the lack of behavior change among migrants early on in the extension project.

- The DIP for this CSXVII project did not include indicators for measuring attitude changes resulting in policy and practice changes among health personnel and plantation management, or behavior change indicators for migrants, even though the project specifically targeted migrant health as its primary purpose. The evaluation team acknowledged that measuring behavior change on a transient population is not easy, but that more effort should have been made.

- The RHPs were trained in AINM-C, but, without scales, cannot implement the approach. Some plantations have purchased scales, but neither the project nor the MSPAS had funds to supply the needed scales for most of the RHPs.

Recommendations:

1. For the Ministry of Health Area Offices and IGSS Suchitepequez:

   a. Sustain the BHUs through maintenance of current levels of supervision and supplies and annual assessment of RHP skills.
   b. Seek outside funding and lobby the central MOH for funding to continue training of district staff, TBAs and RHPs.
   c. Maintain communication and coordination with currently supportive plantations and work to engage others.

2. For Project HOPE:

   The quality of this project, including management and technical capacity, has been exceptional, and Project HOPE headquarters should proactively seek additional funding to replicate this project in other areas of the country. Alternatively HOPE could implement similar capacity-building activities for the MSPAS or ECSP contractors in these departments or others in other technical areas such as HIV/AIDs, family planning or, in the Highlands, Infant and Young Child Feeding.

B. Assessment of Results and Impact of the Program

1. Results: Summary Chart for KPC Surveys of Residents of the Boca Costa

Indicators For Resident Women	Target	Baseline (2001) %	Final (2005) %	Comment
1. Percentage of children 12 to 23 months completely immunized.	70%	42.1	80.8	Nearly doubled
2. Percentage of children 6 to 23 months that have received a dose of Vitamin A in the 6 months previous.	50%	15.7	68.7	Greatly exceeded
3. Percentage of children that received breast milk within first hours after birth.	75%	62.5	75.0	Met target
4. Percentage of children 0 to 6 months exclusively breast fed.	70%	79.2	87.3	Significantly exceeded
5. Percentage of children under age 2 malnourished (< -2 sd weight/age).	Decrease by 10%	24.6	20.2	Some improvement
6. Percentage of mothers or child caretakers that can name at least two danger signs that indicate a child should be seen by a trained health care provider.	Increase by 50%	34.4	90.9	Greatly exceeded
7. Percentage of mothers that offered equal or more breast milk, liquids and/or food during the child's last episode of diarrhea.	Increase by 60%	34.9	84.3	Exceeded target
8. Percentage of mothers or child caretakers that sought help from a trained health care provider during child's last episode of diarrhea.	34.9	44.4	84.3	Nearly doubled
9. Percentage of mothers that can mention at least two health messages they have heard on the radio in the previous month.	60%	6.1	53.4	
10. Percentage of mothers that received at least two doses of tetanus toxoid before the birth of their last child.	60%	22.6	49.4	Much improved, but fell short of target
11. Percentage of mothers that received at least 3 prenatal care visits from a health professional during their last pregnancy. (not including TBAs.)	50%	11.1	35.2	Improved but fell short of target.
12. Percentage of mothers able to report at least two maternal danger signs during pregnancy or post-partum period.	50%	12.3	46.0	Significant increase, but short of target
13. Percentage of mothers with at least one post-partum visit after their last pregnancy. (TBA visits not counted.)	40%	13.2	26.0	Improved.
14. Percentage of non-pregnant women that do not desire to have children in the next two years that are using family planning methods.	40%	15.1	52.8	Significantly increased
15. Percentage of mothers that recognize at least two signs and symptoms of Sexually Transmitted Disease (STD) in men or women.	50%	0.0	62.5	Exceeded
16. Percentage of mothers of children 0 to 23 months old that can identify at least two ways to avoid HIV infection.	70%	17.3	79.5	Exceeded

2. Results: Technical Approach

a. Project Overview

The overall goal of this extension project was to provide better health in a sustainable manner for women and children residing in or migrating to coffee plantations in three departments and one additional municipality of Guatemala's Boca Costa Region. This has involved achieving tripartite collaboration among employers, government, and NGOs. In terms of strategic approach, the focus has been 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, service delivery, training and supervision, logistics and outreach along with collaboration with the plantations and their communities. Project HOPE did not engage in the delivery of health care services to residents or migrants in the target area nor in direct health education or training.

The project provided 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 provided technical, management, financial, research, monitoring, and evaluation support to its local partners, the MSPAS, IGSS, and three NGOs, who were directly responsible for carrying out the interventions.

Through the project, these partners have built professional relationships with 94 coffee plantations which have resulted in improved access to the plantations to:

a. conduct periodic immunization and Vitamin A supplementation campaigns;
b. establish, supply, and monitor Basic Health Units; staffed by RHPs
c. conduct inspections of sanitary and living conditions for migrant workers;
d. implement health education activities.

In addition, the project targeted four municipalities in the Highlands of San Marcos Department from which many migrants come. The project used match funding from the International Labor Organization (ILO) to assist the San Marcos Area Health Office to train and supervise existing RHPs in health promotion, and funded training in IMCI and AMNE for health personnel from those districts. These activities took place during the first two years of the project and the results were reported in the mid-term evaluation.

In an attempt to reach migrants from other Departments with minimal health education, the project taped and disseminated messages via 50 radio stations, in Spanish, Ki'che and Mam languages. The project also shared supplies of the educational materials produced for use by RHPs with the Area Health Offices in the Departments of Hueheutenango and Quiche.

The extension project focused on forming and strengthening the training teams in each Health Area and IGSS, particularly in the use of adult learning methods to improve the quality of training and in follow-up supervision. Through the training teams, virtually all employees in the targets area (from health facilities to health posts to regional hospitals) were trained in IMCI, AMNE, and AINM-C. Particularly notable, is the fact that the project introduced IMCI to IGSS, which had not previously considered adopting the approach. The IGSS hospital in Suchitepequez is also applying AMNE. There is potential for IGSS to scale up these approaches in other parts of the country.

Outputs of CS XVII Extension Phase

Health Area	No. of Active RHPs	Total No. UBS Functioning	Highland Communities	Plantations Involved
San Marcos	182	106	69	37
Quetzaltenango	18	18	NA	18
Suchitepequez	39	40	NA	39
Totals	239	152	69	94

Training Outputs of CSXIII and CSXVII

Topic	CSXIII	CSXVII	Highlands of San Marcos	Totals (accum-ulative)
Clinical IMCI	136	494	30	660
IMCI/AINM-C in health facilities	238	377	30	645
AMNE, Family Planning, STIs/HIV/AIDS	-	410	30	440
Community IMCI and AINM-C for RHPS	150	183	-	333
Promotion and prevention for RHPs	650	964	150	1764
MNC, FP, STIs/HIV/AIDS for TBAs	679	783	175	1637
TOTALS	1853	3211	415	5479

b. Progress report by intervention area

It should be noted that Project HOPE's role in interventions was that of capacity building of partner service delivery. Project HOPE facilitated establishment of the BHUs and training of RHPs in C-IMCI to improve coverage, promoted policy changes affecting migrant services at the district and Area levels, promoted formation of and trained MSPAS and IGSS training teams in IMCI, Integrated Maternal and Child Attention (AINM-C) and in Essential Maternal and Newborn Care (AMNE), funded cascade training and follow-up, and coordinated communication between MSPAS, IGSS, the NGOs, and the plantation administrators. Project HOPE provided educational materials and paid for development of radio spots, but did not engage in any direct community education. As match, Project HOPE supplied some essential medicines and Vitamin A, but devoted efforts to assuring that the MSPAS now has plans and systems to permanently supply the districts, and through them, the BHUs.

NOTE: All indicators from the DIP presented in the following discussion on interventions were written for resident women living permanently on or near the coffee plantations. The DIP did not include any indicators for migrant women, even though they are a primary target of the project. The results from a mini-KPC survey of a convenience sample of migrant women (see Annex B) are presented for comparison in some key areas.

IMMUNIZATIONS – 5% of effort

Indicator	Baseline	Final
Percentage of children 12 to 23 months completely immunized.	42.1	80.8

The project succeeded in motivating the MSPAS personnel and, in Suchitepequez, the IGSS staff, to undertake regular immunization campaigns on the targeted plantations, including one campaign on each plantation in their jurisdiction during the harvest season when migrants are there. In many cases, the plantation administrators provided transportation or fuel for the immunization teams to come. In Suchitepequez, the MSPAS provided the vaccine and logistics while the IGSS doctors and nurses went to the plantations. This represents a level of coordination that was unimaginable prior to this project.

These campaigns and implementation of clinical IMCI, which includes checking the child's immunization status, are the factors which enabled the project to achieve complete coverage. Another factor affecting this indicator is the strategy the project employed prior to the final KPC survey of alerting all community members (via community leaders and RHPs) to have their children's immunization cards available in case they were among the households selected for the survey. This resulted in 98.8% of families having the card on hand at the time of the interview.

Conclusion/Lesson Learned: Increasing the level of collaboration between the health delivery system and the plantations is an effective way to implement periodic immunization campaigns thereby significantly increasing vaccination coverage on plantations that could be scaled up with other plantations and in other Health Areas.

NUTRITION, BREASTFEEDING and MICRONUTRIENTS – 20%

Indicators	Baseline	Final
Percentage of children 6 to 23 months that have received a dose of Vitamin A in the 6 months previous.	15.7	68.7
Percentage of children that received breast milk within first hours after birth.	62.5	75.0
Percentage of children 0 to 6 months exclusively breast fed.	79.2	87.3
Percentage of children under age 2 malnourished (< -2 z weight/age).	24.6	20.2

The dramatic increase in Vitamin A distribution is due to the same campaigns on the plantations employed to increase immunization coverage, and to Vitamin A supplied by Project HOPE to the MSPAS. Also, the MSPAS has made a more concerted effort from the national level down in recent years to rejuvenate the Vitamin A supplementation program. The increases in immediate initiation and in exclusive breastfeeding are commendable considering that there was no specific activity targeting these behaviors other than the education and counseling from the health workers and RHPs trained in IMCI and AINM-C.

After the project extension was approved and before the DIP was written, the government approved a new program for community level called Integrated Maternal and Child Attention at the Community Level (AINM-C). This uses growth monitoring and nutrition counseling as the entry point for caregiver education, leading into the other maternal and child health counseling. Project HOPE supported the training of all the RHPs in AINM-C, but did not have the budget to provide Salter scales. Some few plantations went ahead and purchased scales, and the BHUs which have been absorbed by the ECP now have scales.

There was no improvement in nutritional status possibly due to factors beyond the project. Economic, and hence, food security of resident families has been affected throughout the life of the project by the low coffee prices, which resulted in less work and layoffs.

Additionally, when the percent of children with inadequate weight for age is relatively low to begin with, as it was in this case, reducing malnutrition significantly requires very concerted efforts targeting individual families with counseling and support. Therefore, an on-going growth monitoring is essential to detect each malnourished child. This is a premise of AINM-C.

Finding:
While resources were invested in training RHPs in AINM-C, very few have been able to apply the training due to the lack of scales. There is no plan, yet, for the MSPAS to acquire the needed scales.

Behavior change was achieved in nutrition-related practices including early initiation and exclusive breastfeeding, and feeding frequency. Nutritional status did not change significantly among resident children.

Lesson learned:
When a detailed budget is developed, great care should be taken to make sure that all of the materials and supplies essential to each intervention are budgeted for.

PNEUMONIA – 15%

Indicator	Baseline	Final
Percentage of mothers or caregivers who can name at least two danger signs that indicate a child should be seen by a trained health care worker.	34.4	90.9

The indicator above refers to signs of any child illness. Due to the way this question is now formulated in the KPC 2000+, it is difficult to relate the response specifically to pneumonia, which takes the most lives. In looking at the detailed frequencies on the final KPC, only 39% of mothers mentioned difficult or rapid breathing (signs of pneumonia) as signs that the child needs medical care. Mothers are most likely to mention that the child has a fever or that the child is not eating or drinking. For some reason, the project did not choose to measure the number of mothers who sought care when their children had signs of pneumonia as an indicator, a key health behavior for child survival. Seventy-five percent of the mothers whose children had signs of pneumonia in the two weeks prior to the final KPC survey had sought medical care, most going directly to health centers. This increased significantly from 41% at baseline.

The field investigations revealed that the medical personnel and promoters (13/15) are well-trained to use the respiratory timers they received as a part of IMCI training. They expressed strong appreciation for their new skills in diagnosing pneumonia. Furthermore, deven of the fifteen promoters interviewed were able to correctly explain how to administer the antibiotic. They have been trained to give the first dose and make referrals to the health facility. District health records and promoters' monthly reports show that the referral system is working well. Twelve of the fifteen BHUs, that received unannounced visits during the final evaluation, had supplies of essential antibiotics for children and reported no recent stock-outs during the past two months. The other three had some, but not all, required medicines.

The districts convene monthly meetings of the RHPs to which the RHPs must bring their completed report forms. Those attending with completed forms are re-supplied with medicines. This has served well to get the RHPs to attend the meetings which include case reviews, and additional training on themes important to the season. The three BHUs visited by the evaluation team that reported shortages of essential drugs were ones where the RHP had missed one or more meetings or a monthly meeting had been postponed.

Findings:

- Although not a project indicator, the increase in care-seeking when a child has signs of pneumonia is significant and points to some effectiveness of community education or one-on-on counseling by health personnel and RHPs and/or increased confidence in health facilities.
- Final evaluation team observations of approximately ten percent of the promoters trained in C-IMCI documented correct use of the timer, knowledge of respiration rates and correct dosage of antibiotics to prescribe.

Lessons Learned:

- Linking RHP attendance at monthly meetings is an effective strategy to avoid stock-outs and motivate regular attendance.
- The reformulation of the standardized KPC survey does not permit the accurate measure of knowledge of danger signs as it relates to pneumonia.

DIARREAL DISEASES – 10%

Indicators	Baseline	Final
Percentage of mothers that offered equal or more breast milk, liquids and/or food during the child's last episode of diarrhea.	34.9	84.3
Percentage of mothers or child caretakers that sought help from a trained health care provider during child's last episode of diarrhea.	44.4	93.7

As with pneumonia, this intervention was addressed by IMCI and C-IMCI training for health personnel and for RHPs respectively. According to the final KPC, care-seeking behavior had greatly improved with 93% of resident mothers seeking care for a child with diarrhea. Sixty-three percent sought care at the BHU and sixty-five percent gave their sick child ORS. However, 75% of mothers reported giving their sick child medicine to treat the diarrhea.

Forty-three out of the sixty-eight migrants interviewed also said they give medicine to children with diarrhea while only 14 mentioned giving any oral rehydration solution.

Findings:

- Care-seeking behavior for diarrhea greatly increased and caregivers are using ORS. (a conclusion would be something like; the approach used to address diarrhea case management was effective.)
- Most care-givers are seeking care for diarrhea at the UBS.
- Too many mothers are still treating diarrhea with medicines.

MALARIA / DENGUE -5%

The project did not establish any indicators for malaria, possibly because the only activity was strengthening health worker skills to diagnose and treat malaria through the IMCI training. The KPC survey included a question about symptom recognition to which 64% of mothers know any signs of malaria. To a question the project added to the KPC asking for signs of dengue fever, seventy-two percent of mothers were able to mention some signs of dengue, which is seasonally endemic in the Boca Costa and more common than malaria, particularly among children.

RHPs were trained to recognize these illnesses as a part of their C-IMCI training and to make referrals. Evaluation team reviews of their records showed that they are making appropriate referrals. RHPs were also trained to promote the use of locally available mosquito nets. The final survey showed little change from the baseline survey (thirty-two percent.) Forty percent of the households report having one or more nets, and in all these homes, the child sleeps under the net. In 63% of the households having one or more nets, the mother also sleeps under the net.

As a result of the greatly enhanced coordination between plantations and health services, many plantations are now inviting the Vector Control officer of the health district to come and fumigate on the plantation prior to the arrival of the migrants. This use of residual spray for mosquitoes is fully in line with MSPAS policy and is likely preventing vector borne illnesses. There is, unfortunately, no way to document this possible impact.

Findings:

- The RHPs trained during the project are able to recognize malaria or dengue and make referrals.
- Vector control officers are now allowed to spray on the plantations near migrant living quarters.

MATERNAL NEWBORN CARE – 20%

Indicators	Target	Baseline	Final
Percentage of mothers that received at least two doses of tetanus toxoid before the birth of their last child.	60%	22.6	49.4
Percentage of mothers that received at least 3 prenatal care visits during their last pregnancy.	50%	11.1	35.2
Percentage of mothers able to report at least two maternal danger signs during pregnancy or post-partum period.	50%	12.3	46.0
Percentage of mothers with at least one post-partum visit after their last pregnancy.	40%	13.2	26.0

The DIP targets for the maternal health indicators were set quite high considering the very low levels in the baseline, so it is not surprising that none were wholly achieved. In rural Guatemala, this is only the second generation of women who have had access to maternal care from health professionals. Women's confidence in, and comfort with, traditional birth attendants remains high.

The project collaborated closely with the USAID-funded Maternal Newborn Project which was implemented in Guatemala by JHPIEGO. Project staff members were trained by JHPIEGO, which provided the project with the training curriculum for Essential Maternal and Newborn Care

(AMNE), now a national protocol. The project trained an AMNE training team in each Area and one for IGSS, and through them, trained 410 health professionals and 783 traditional birth attendants. In addition to training, project staff helped the partner institutions implement a supervision system which enables the health personnel to maintain close working relationships with the TBAs, strengthening timely referrals for complications and for prenatal care.

The project assisted the partners to conduct a skills assessment of the trained TBAs. The assessment showed a big gap between knowledge and practice, and resulted in revamping the training to emphasize recognition of danger signs and making timely referrals; rather than the many topics formerly taught. IGSS, which previous to this project had never worked with TBAs, took on TBA training and support as a part of their new community outreach program in Suchitepequez. They coordinate closely with the MSAP health facilities in this endeavor. IGSS took the training a step further, bringing TBAs into the maternity ward to observe and practice.

The DIP did not include an indicator for measuring knowledge among mothers of neonatal danger signs, and hence, this was not emphasized in the health messages. Considering that approximately half of infant mortality occurs in the neonatal period and that more than half of deliveries occur at home with unskilled attendants, this was an unfortunate oversight.

Evaluation team members questioned TBAs, some RHPs, and plantation staff about the availability of emergency transport. Plantations generally provide transport for their residents and migrants when the need arises. For communities off the plantations, emergency transport is a serious concern, which the project did not address, even though the lack of emergency transport and distances to health facilities were spelled out in the DIP. Project staff did not have the experience or training in community mobilization necessary to undertake building the capacity of the MSPAS staff and promoters in order for them to undertake this. The headquarters technical staff did not have this expertise either.

Findings:

- Insufficient attention may have been given to educating families and TBAs on newborn danger signs.

Conclusion:

- The project had time to implement a limited community mobilization effort to have communities develop emergency transport plans which would enhance the survival chances of both mothers and newborns in time of emergency. Project staff would have needed some additional technical assistance to enable them to promote community mobilization. A suggestion has been made to the partners to pursue the idea of community plans for emergency transport.

Lesson Learned:

- When the baseline data survey confirms that a behavior is quite low, be careful not to set overly ambitious results objectives.
- Future projects that focus on maternal & newborn care should contain an indicator regarding appropriate care of the neonate.

CHILD SPACING – 15%

Indicator	Baseline	Final
Percentage of non-pregnant women who do not desire to have children in the next two years or are not sure that are using family planning methods.	15.1	52.8

Besides promotion of child spacing through the RHPs and TBAs, the project trained 60 community-based distribution agents in the Department of Suchitepequez, who are linked to the national IPPF affiliate known as APROFAM. They are trained to provide counseling and to promote family planning besides selling contraceptives. They are functioning independently to sell methods with a slight profit margin. Health personnel and TBAs received refresher training on family planning and materials to use for education and promotion. They make referrals to the health centers.

While the increases in family planning use among residents are significant, the migrants have not been reached. Among the 68 migrant women interviewed, 23 could not name a single family planning method. Only 13 of the 68 are currently using any family planning method. (See the Behavior Change section below for analysis of the educational efforts with migrants.)

Conclusion:

- Family planning promotion through community health workers was effective with residents.

Lesson learned:

- A specific strategy was needed to reach migrants with family planning promotion.

STI/HIV/AIDS – 10%

Indicators	Baseline	Final
Percentage of mothers that recognize at least two signs and symptoms of Sexually Transmitted Disease (STD) in men or women.	0.0	62.5
Percentage of mothers of children 0 to 23 months old that can identify at least two ways to avoid HIV infection.	17.3	79.5

The STI/HIV/AIDS intervention consisted of raising awareness through IEC activities carried out by the RHPs and TBAs and radio spots. TBAs and the health staff of partner institutions received training on self-protection and prevention. It must be noted that the government and NGOs all over the country are conducting awareness campaigns, largely via mass media, about HIV/AIDS which may be as responsible for the improvements in knowledge as any of the project effort.

During the final evaluation, many RHPs mentioned their personal concern for educating their neighbors about HIV/AIDS and how to prevent it. TBAs and health workers also expressed gratitude for training in self-protection as they go about their work.

Conclusion:

- While there were significant improvements in knowledge related to HIV/AIDS, this is a probable cumulative effect of project efforts combined with national media campaigns.

c. New tools and approaches that the program used

This project was among the "pioneers" in using Personal Digital Assistants (PDAs) to collect KPC survey data. Project staff were trained to use the PDAs for the mid-term survey and later used them for Year 4 LQAS monitoring and again for the final survey. Both the project and MSPAS staff who participated in data collection had an easy time learning to use the PDAs. This included a long-time project driver who has never used a computer or other digital device. While the use of the PDAs may have facilitated data collection and eliminated the time required for data entry, project staff had concerns about possible errors in transfer of data to other programs for analysis. Project HOPE will have to evaluate the outcome of the PDA use across other projects before definitely adopting the methodology.

3. Cross-cutting approaches

a. Community Mobilization

The project design did not include community mobilization. As mentioned above under the maternal-newborn intervention, a limited community mobilization effort to assure emergency transport plans for off-plantation communities might have contributed to reducing maternal and newborn mortality.

There was mobilization of plantation owners and administrators to participate in the project. As evidenced by the participation of so many plantations, and the requests of others to participate, this was obviously effective. The approach included sharing health data with the Associations of Plantation Administrators in each Department and, then, convening regular meetings between the administrators and district health leadership to plan BHUs, campaigns and other activities. There is obviously demand from them to continue as 63% of the plantations have committed to continued funding for the RHPs and/or medicines. A small but significant number of plantations are making serious improvements in the living conditions of migrant workers and more can be expected to do so if coffee prices continue to regain strength and the labor shortage continues.

Conclusion: The mobilization of plantation owners was effective.

b. Communication for Behavior Change

The rather traditional approach of using prepared flip charts to teach mothers groups coupled with emphasis on individual counseling during health contacts appears to have been sufficient to bring about a number of important behavior changes among residents, as shown by the KPC results presented earlier in this document. Most of the targets for behavior change were met. The project participated in the national-level inter-agency task force to define health messages, and acquired additional private funding to develop educational materials. The project had outside technical assistance to conduct operations research and then use the results to develop attractive "mother reminder materials". The project, however, did not have a behavior change strategy which targeted specific families with specific messages according to their needs, nor identified secondary recipients for learning activities.

Since the communities on and near the plantations are generally quite small, RHPs have frequent contact with mothers as neighbors and relatives, and said that most message dissemination was through informal channels. Plantation administrators were helpful in giving workers time off to attend more formal educational sessions. During the evaluation, many community members mentioned that one way they support the RHP is by attending the health education sessions.

Improved counseling skills of health workers through IMCI and AINM-C training were noted by mothers during the client satisfaction surveys the project conducted. The project placed special emphasis on applying principles of adult learning during both training and community education.

The final evaluation team assessed the capacity of the RHPs to use the educational materials and found it to be satisfactory. It will be up to the RHPs, supported by the district health personnel, to continue to reinforce the behavior changes amongst the mothers. Since the RHPs enjoy good support from the health districts or ECP-implementing NGOs, it is likely this reinforcement will continue and that the work of the RHPs will be sustained. Furthermore, since all messages and behaviors are related to national initiatives, residents will receive reinforcement via radio, billboards, and posters in the health centers.

The best measure of the effectiveness of the behavior change approach is the comparison of results of the baseline and final KPC surveys. The effectiveness of the limited BCC interventions for migrants (radio spots and counseling at health contacts while on the plantations) was measured by a LQAS sample during the mid-term evaluation and the mini-KPC conducted as part of the final evaluation (see Annex B). The results of this survey of a convenience sample showed that migrants are not being reached with health messages.

Knowledge and Behavior of Migrants According to Two Separate Surveys

KPC Questions	**LQAS 2003***	**Convenience Sample 2005****	
		Huehuetenango	**Total**
No knowledge of danger signs during pregnancy	43.0%	27/41	37/68
Recognition of signs of pneumonia in child	0	2/41	5/68
Care seeking for child with pneumonia signs	54.5%	6/9	10/16
Have heard of HIV/AIDS	32.9%	7/41	17/68
Know at least one way to prevent HIV/AIDS	23.7%	1/41	12/68
No knowledge of family planning methods	48.7%	16/41	23/68
Currently using a modern FP method	8.5%	11/41	13/68
Have recently heard radio spots on health	1/75	24/41	36/68

*Survey of migrant women on plantations. ** Survey of women mostly in communities of origin.

During the initial phase, the project attempted to conduct the standard health education sessions for groups of migrants using the "flip chart talk" method. This was not at all successful for many reasons. First of all, the priority of all migrant adults is to work as much as possible while on the plantations, since the earnings are their only cash income for the year. Since they are paid by the amount picked, they did not want to take time off to go to a health education session. Secondly, the migrants on a single plantation may come from various areas of the country and speak entirely distinct languages from each other and from the RHPs or health workers. Print messages are of little use as migrant women are among the most uneducated in the country according the project surveys and the national demographic surveys. (See project proposals for data.) Faced with these

realities, the project and MSPAS staff abandoned attempts at health education for migrants on the plantations.

Despite the fact that the CSXIII project struggled without success to reach and impact the migrant population, the DIP for the extension project did not include any innovative approach to achieve this, other than directly targeting 4 Highland municipalities of San Marcos, during the first two years of the current project. Project staff needed outside technical support from headquarters or a consultant to "think out of the box" and come up with alternative ways to disseminate health messages to migrants on the plantations.

The proposal for the CSXIII project had proposed coordinating closely with the NGOs working in communities of migrant's origin and with the MSPAS in those Departments. Aside from the provision of educational materials to the Area Health Offices in Quiche and Huehuetenango, this did not happen in either the original project or the extension. During the final evaluation, the team learned that it is quite possible to identify specific communities of origin. When requested, the plantation administrators were able to verbally name the municipalities from which their migrants normally come and some administrators produced lists of contractors with names of specific *aldeas*. This enabled evaluation team members to travel directly to those communities of origin to interview the migrants. If the project had identified the communities of origin in this manner from the outset, they could have then worked with the MSPAS or NGOs in those particular areas to target potential migrants in their own languages and context with important BCC activities.

The project missed an opportunity to evaluate the sustainability of behavior change. They had conducted a baseline KPC survey in the Highland communities and a final survey in 2003 after the two years of intervention ended. If funding had been available, it would have been interesting to have conducted the survey again as part of this final evaluation to assess maintenance of behavior change two years after. (Activities have been continued by the MSPAS and RHPs.)

Findings:

a. The behavior change education for residents was quite effective based on KPC results.
b. Migrants still lack essential health information and care-seeking or preventive behaviors.

Lesson learned:

1. It would have been possible and desirable to track migrants back to communities of origin and then, work more closely with NGOs and MSPAS in those municipalities to assure effective BCC outreach and monitoring there, rather than on the plantations where they are dedicated to picking coffee.

2. In projects implemented in phases, subsequent phases should be used to assess the effectiveness of activities/initiatives carried out during earlier phases and improve on them.

c. Capacity Building Approach

i. Strengthening the PVO Organization

Project HOPE has learned many lessons from the Guatemala Child Survival Project (GCS) and this has strengthened the agency's capacity in several ways. For example through the GCSP, HOPE deepened their understanding of how to partner with the private sector and this in turned spawned other projects in other countries where the one of the partners was from the private sector. The GCSP helped HOPE focus more effectively on sustainability the agency to adopt a more mentoring role in this project such that local organizations, including the coffee plantation owners and insurance agency, would be obliged and aided in taking responsibility for health provision to plantation workers – both migrant and local. Some of these lessons learned have been shared during HOPE's 2005 leadership conference and there are plans to share these lessons more widely with the CORE community via vclass in early December 2005.

Project HOPE Guatemala received technical support from PACT to undertake an internal assessment using a tool called Evaluation of Organizational Capacity (ECO). The process included self-analysis of many different aspects of HOPE/Guatemala, and all Project HOPE/Guatemala employees were actively involved. This led to strong identification of the employees with Project HOPE Guatemala, and to development of a four-year strategic plan to strengthen certain aspects of the organization such as administration, accounting, personnel policies, performance appraisals and job descriptions, and adult learning methodology. Project staff and management feel they have fully met or exceeded the planned improvements.

Project HOPE headquarters has built capacity in monitoring and evaluation through the application of LQAS sampling and the use of PDAs for data collection, using this project as a laboratory.

Conclusion:

- ECO appears to have been a very effective tool for helping Project HOPE Guatemala assess and improve internal systems.

ii. Strengthening Local Partner Organizations and Health Facilities Strengthening

The capacity building efforts of this project focused on the MSPAS health districts, IGSS Suchitepequez, and the NGO partners, and consisted not only of the training in and institutionalization of IMCI and AMNE (see below), but also in training and mentoring in supportive supervision, monitoring and evaluation, and strengthening of reporting, administration, and logistics. While the improved capacity in health worker performance is documented through the monitoring system, there were no pre and post assessments of capacity in the other areas.

The project conducted performance assessments, client satisfaction surveys, and a health facility assessments of the BHUs during 2003 and early 2004, all of which resulted in identifying weaknesses and taking corrective actions through improved supervision, adjustment of training methods or content, additional refresher training, and taking RHPs to the health centers to work alongside the nurses and physicians to improve skills.

To help strengthen FUNCAFE, the partner which is ANACAFE's development arm responsible for health care delivery on a number of plantations, Project HOPE tried to replicate the ECO process but the FUNCAFE leadership was not comfortable with the self-analysis methodology and the process was discontinued.

During the final evaluation, partner staff were asked which capacity-building activities were most useful and have had immediate application in their routine work. They identified learning LQAS, use of PDAs for data collection, and skills in supervision as elements of the capacity building which are most useful.

Lesson learned:

The project could not measure improved capacity in the partners due to lack of a pre and post assessment. The DIP should have included a plan for this.

iii. Strengthening Health Worker Performance

The approach for strengthening health worker performance through training in standardized protocols and procedures (described below under training) was very effective. The training was accompanied by monitoring, actually performance-based supervision. Project HOPE introduced the supervision tools (created and tested by JHPIEGO and PAHO with the MSPAS) and mentored supervisory staff of the partners in their use. Project HOPE accompanied the training teams/master trainers on initial supervision visits, but quickly phased this completely over to the trainers. The results of the monitoring visits were tracked by both Project HOPE staff and the partner training teams. Reinforcement of skills was provided by the partner training teams, as needed through in-service training and supervision.

Project HOPE had support of JHPIEGO staff, particularly in San Marcos Regional Hospital and the IGSS Hospital in Mazatenango, to implement the supervision/monitoring system for AMNE. In both, they implemented a baseline assessment of skills prior to the training, and a follow-up assessment some months later to observe improvements in the target health facilities. JHPIEGO developed a very detailed tool for this purpose.

During the final evaluation, district and Area health staff expressed their confidence in being able to continue the level of supervision implemented under the project. Supervision at the health centers and hospitals has been strengthened by the tools, and will continue. The Master Trainers assumed this responsibility for a time immediately post-training, but once district staff learned to use the monitoring tools, the Master Trainers turned over the responsibility to the district and Area health staff.

District health staff are currently making supervision visits once a month to the RHPs and also convening a monthly meeting at the health center will them. Transportation for supervision does not seem to be an issue as the district staff have access to some motorcycles or vehicles or can frequently ride with the vehicle going out to do immunizations. None of the health staff interviewed felt that lack of transportation would be a barrier to continued monthly supervision.

The monitoring tools are sensitive enough to measure changes in performance over time. The project also verified skills application by conducting separate performance assessments of both

health workers and RHPs. MSPAS staff were pleased to learn how to do this and are currently continuing such assessments. One was underway in IGSS during the final evaluation visit.

Finding:

Health worker and RHP performance has been enhanced through quality training and follow-up monitoring and assessments, the use of which appears to have become internalized in the Area and District health services.

iv. Training

The cascade training strategy led by the Master Training Teams was very effective. Project HOPE began to form the training teams during the first phase of the project and they became a major focus of the extension project. Each Area (four) now has a training team made up of 10-12 persons, including personnel from the Area Health Office and districts. IGSS has separate teams for IMCI and for AMNE made up of hospital and regional management staff. The members of the training teams are called Master Trainers. Each team has operating rules which specify their role: detection of training needs, training of health workers in initiatives of the central MSPAS, coordination of training with partner institutions, performance monitoring and supervision, and provision of reinforcement of skills application.

The trainers are still motivated and could cite examples of how adoption of adult learning strategies has greatly improved training outcomes. Project HOPE staff followed the training down the cascade to assure continued quality and found that quality was maintained even under difficult circumstances.

Project staff had considerable support from the Project HOPE Regional Health Educator, based in Lima, Peru, who was largely responsible for the emphasis on adult learning. The project also benefited from highly evolved and tested training curriculums developed at the national level for IMCI, AINM-C, and AMNE.

The training objectives (see table in Section B Results above) were largely met, except in the case of TBAs where the target was set unrealistically high. In addition, the training teams have taken the training program to other districts outside the project target area. The universal application of the IMCI algorithm and the AMNE protocols is evidence of the effectiveness of the training.

The confidence the training inspired in health workers is notable. Staff at all levels feel they now have the capacity to not only implement the new skills in care provision, but also to train and support others.

The institutionalization of the Master Training teams and district-level trainers bodes well for sustainability of the training approach. The teams do need to do additional planning regarding training new personnel and to replacing training team members when one retires or leaves the area.

Unfortunately, funding for future training and refresher training remains elusive. So far, it is not included in Health Area budgets, which are limited due to decisions made at the central level by the Ministry of Finance. The Area Office of Quetzaltenango has taken the step of approaching the

Social Investment Fund (of the government) for the needed funding. If they are successful, this may be an option for the other Areas to pursue.

Findings and conclusions:

1. The quality of training and the cascade approach has been very effective.
2. The training teams have been institutionalized and are motivated.
3. Funding for future training is a serious limiting factor for sustainability.

d. Sustainability Strategy

The chart below shows the sustainability indicators found in the DIP and what has been accomplished.

Accomplishment of Sustainability Objectives

Objectives	Indicators	Accomplishment
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.	This was accomplished at both the Area and District levels within the MSPAS, largely through the efforts of the National Coordinator for Migrant Health and project advocacy.
Revolving drug funds operating on low-access plantation and municipalities	Number of new revolving drug funds (RDF) providing essential drugs.	This idea was dropped at the mid-term due to improved supply from MSPAS and lack of a source of drugs for the RDF.
Health areas/districts /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.	Training targets were met, but funding came from Project HOPE. Areas and districts do not have future funding for training.
Data inform decision-making at all levels	Review of health data integral component of all routine meetings.	Data is available, but use is still less than hoped for.
Plantation BHU 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.	BHU data is fully incorporated by all districts.
HU promoter supervision/ refresher meetings conducted monthly at closest MOH facility.	At least 80% of promoters supervised monthly at health facility.	Reports and interviews showed that this is happening in 90% of districts.
MOH health campaigns and preventive activities on plantations during harvest.	All larger plantations receive at least one MOH health campaign for immunizations and Vitamin A per harvest season.	Campaigns are taking place as scheduled with plans to continue indefinitely.
Plantation HUs have continuous supply of essential drugs and supplies.	90% of HUs report no stockouts during the harvest season.	RHPs reported few stockouts last season. 17 out of 19 promoters visited had sufficient supplies.
Plantation owners and municipal directors meet at least quarterly to address	8 plantation owner networks meeting quarterly with municipal level MOH/IGSS staff.	Meetings are held less frequently, but the administrators and district staff have frequent contact.

plantation health issues.		
Plantations include cost of maintaining promoter and HU in annual budget	60% of plantations can report line item for health activities at final evaluation. Plantation networks provide guidance on level of contribution to health.	Sixty-three percent of plantations visited during the final evaluation have funds to contribute to BHU and RHP.
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.	This was not measured by the final KPC.
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	A total of 152 Health Units are functioning.
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	The Area Health Councils are functioning, but municipal health councils were not a success. Only 3 of them remain functional.

The project had a solid plan from the beginning of CS XIII, which continued in this extension phase, to undertake all activities through the partners, hence did not create independent activities to be phased over. The project did fund training activities and production of materials, and, as always, the government's ability to find other funding to continue this level of effort is questionable. This limitation can only be addressed by bi-lateral donors working with the Ministry of Finance and central MSPAS to re-order priorities.

The Area Health offices do not feel they need continued technical or management assistance for this particular initiative. They expressed confidence in their ability to continue to implement IMCI, AMNE, and support to the BHUs, RHPs, and TBAs.

Conclusions:

- The BHUs, having support of the MSPAS, NGOs, and plantations, have excellent prospects for sustainability.
- The current level of monitoring and supervision of RHPs is very adequate to sustain good performance and to encourage volunteers to continue.
- The intensity of training will not be sustained unless the Area Health offices obtain outside funding or there is a major change in funding for the central level MSPAS.

C. Program Management

1. Planning

The DIP planning process included workshops with stakeholders in each of the Health Areas and preparation of the DIP in-country, both of which resulted in a very practical DIP work plan and a sense of program ownership by the project partners. Partners, at the time of the final evaluation, felt responsible for the project outcomes.

As mentioned previously, the DIP's monitoring and evaluation plan was weak; specifically the lack of indicators to measure behavior change among migrants and to measure attitude changes among health providers. Furthermore, there were no plans for pre and post assessment of health facilities and health worker skills. Project staff were not aware of these deficits until the final evaluation process when they became aware of the lack of data to show outcomes.

2. Staff Training

The following chart shows the training of project staff. The improvements in project administration, ability to conduct two KPC surveys and annual monitoring using LQAS and PDAs, and the impressive application of adult learning theory in training curriculums are all evidence of how well the staff has applied their new skills within the project and shared them with partners. It appears that adequate resources were devoted to staff training, and it is commendable that Project HOPE has experimented with the use of technology like V-Class to reduce the cost of training as well as enable staff to learn from other staff in the Latin America region.

Since nearly all program staff entered this phase of the project with 4 years of experience in project implementation, they had clear ideas of what additional training was needed and those needs seem to have been met.

Staff Training Activities

Staff	Period	Topic
Dr. Anabela Aragon, Project Coordinator	Sept. 2002 Sept. 2003	Leadership Week at HOPE center.
Delia Urrutia, Administrator	August 2003	Exchange visit to HOPE Honduras: Strengthening administrative systems
Lic. Giovanni Rodriguez, Project Health Educator	August 2003	Exchange visit to HOPE Peru: Workshop with HOPE Regional Health Educator
Lic. Julieta Afre, Project Investigator	October 2003	CORE Group regional workshop in KPC methodology using EPI-INFO for Windows
Dr. V. Calderon, Director; Karina Galvez, Project Nurse Health Educator	March 2002	CORE Group regional workshop in Nicaragua: Advances in IMCI
Dr. Enrique Ventura, Project Supervisor; Brenda Yes, Project Nurse	October 2003	ECO technical support workshop in Nicaragua

Health Educator		
9 HOPE Staff	March 2002	Develop Clinical Skills course AMNL HOPE MSP y JHPIEGO
2 Doctor 1 nurse	June 2002 MSP May 2002	Training Session AIEPI, HOPE Personnel
13 HOPE Staff	March 2002	Training session about Situational ward
5 HOPE Staff	March 2002	Workshop of Transfer Methodology of ECO PACT. Washington
12 HOPE Staff AIEPI - AMNE	February 2003	Community IMCI/AINM-C and Maternal Newborn Care
Project Health Educator and Trainers	March 2003 and Monthly session by V-Class	Creating Training Plans – by Marta Arce Health Educator for Project HOPE
Reproductive Health Team Child Survival Team	April 2003	Follow-up and supervision of IMCI/AINM-C
HOPE Health Education Trainer	January 2004	Workshop Methodology of Adult Education
Project HOPE and partner staff	July 2003	Workshop: Use of PDAS, KPC and LQAS Methodology by V-CLASS from HOPE Nicaragua and Juan Carlos Alegre , HQ M&E specialist
One project staff member Workshop of EPI-INFO	October 2003	Workshop on EPI-INFO by CORE
12 HOPE Staff	February 2004	Workshop on Dealing with HIV/AIDS stigma by HOPE Honduras staff
Project HOPE	March 2004	Workshop on HIV/AIDS by MSPAS National Program of HIV/AIDS

In the past year, refresher courses in technical areas have been provided to staff in-house by the appropriate technical staff specialist (i.e. child survival, maternal and neonatal care, or adult education). This was done on a monthly basis and is considered by field staff to be a very appropriate and useful activity.

Project HOPE has undertaken a regional focus to improve staff training facilitation skills and IEC capacities. A regional health educator has been employed (based in Lima, Peru) and has provided training and follow-up with Project HOPE staff in Guatemala several times during the life of the project. All staff can clearly describe new attitudes and skills they have acquired through this training and consider this to be an excellent source of technical assistance to further their transformation from direct implementation to a capacity building focus.

A project health educator was hired in December 2002 and has focused to-date on assisting field staff in more carefully organizing and preparing for training activities. Recently, a tool was developed jointly by staff and is being used to observe and assess trainings and provide immediate feedback.

3. Supervision of Program Staff

Project staff felt that they received adequate and timely supervision. The project manager is supervised by the country director. In turn, she supervises the field supervisor to whom the field staff reported. The field supervisor spent at least one day per month accompanying each of the field staff and also reviewed their paperwork, providing immediate feedback and suggestions for improvement. The quality of their work and the evident job satisfaction resulting in nearly 100% retention of staff during eight years, are testimony to good supervision. Each of the field staff explicitly stated this during the final evaluation. Because Project HOPE's involvement is ending and staff are not continuing with HOPE, there is no need for maintenance of the supervision.

The concepts of performance-based and frequent supervision have been passed on to the partners, particularly the MSPAS. Project HOPE staff spent much of the second half of the project modeling good supervision and mentoring the MSPAS staff in monitoring/supervision. The MSPAS and NGOs have been maintaining monthly supervision of RHPs for two years.

4. Human Resources and Staff Management

For Project HOPE, there was very minimal field staff turnover during the eight years of project. Only two of the technical positions had to be replaced when physicians left to pursue private practice. This is an impressive achievement and is testimony to good supervision and management, the excellent morale and team spirit among staff. While impossible to document, such low staff turn-over and commitment to the project and organization has contributed to the project's success, particularly the relationship-building and training capacity.

As the project draws to a close, some of the project staff have been moved to Project HOPE's micro credit program and others are being absorbed by the partner NGO ADISS. Still others are currently seeking new positions, with strong letters of reference from Project HOPE.

The MSPAS and ECSP partners have the necessary personnel and personnel policies in place to continue the expanded services to residents and migrants of the Boca Costa. Project HOPE is not continuing involvement.

5. Financial Management

The project staff stated satisfaction with their local financial management system and its adequacy to monitor spending, for timely transactions, and to produce reports. During the life of the project, there was considerable turn-over in the Finance Department of HOPE HQ which resulted in slow or inaccurate reports of the state of the HQ portion of the budget and match accounting. The latter resulted in an overspending of field funds because the final year budget of the field staff was predicated on more match funding than was actually available. This confusion ultimately resulted in Project HOPE HQ using additional private funds to cover the excess spending, and thus, an over-match. It also meant that most staff had to be terminated before the end of the project (up to three months early) and that management staff expended additional time on re-budgeting.

The project has discussed future financing for supporting the training and BHUs with the Area Health offices, but the government cannot make financial plans at the Area level. The implications for sustainability were discussed above.

During the final evaluation, the evaluation team specifically asked the plantation owners about their intentions to continue or increase financial support. With coffee prices rising, most were confident they would be able to increase financial support of the BHU and/or RHP and that the improved coffee price combined with need to compete for labor would lead them to make improvements to the living conditions for migrants.

6. Logistics

The project logistics system and procurement was quite unrelated to the on-going logistics and procurement of the partners. Project staff all feel that their logistics system functioned very well and there were no difficulties which impeded project implementation. They were also pleased with the handling by HQ of shipments of donated pharmaceuticals. This arrived once a year, was cleared through customs by a long-time HOPE partner the Knights of Malta (who received 10% of the goods for their effort) and was transported to the Quetzaltenango office by a truck belonging to one of the plantations. They were then packaged by Project HOPE logistics staff for equitable distribution to the health districts and HBUs.

The final evaluation interviews revealed that the Area Offices of San Marcos and Quetzaltenango have better systems for logistics and procurement than other Area Health Offices, entirely unrelated to any project intervention, due to their capable pharmacology committees. Starting at the beginning of 2005, there has been a crisis in the country due to issues with MSPAS procurement of pharmaceuticals and pending legislation regarding the procurements. While other Health Areas and the national hospitals suffered complete stock-outs for lengthy periods, the two above-mentioned Health Areas foresaw the emerging problems and planned ahead, increasing normal procurement quantity, and hence, have had sufficient drugs all the time. This bodes well for the future stocking of the BHUs.

7. Information Management

Overall, the project information system was good at collecting on-going monitoring data, utilizing reports from the BHUs and district health offices and periodic LQAS surveys. This data was used to adjust project activities to improve outcomes and make decisions regarding prioritization of budget and activities. The program staff became skilled in using LQAS sampling, data analysis, data collection using PDAs, and performance monitoring.

The project conducted a number of assessments related to health worker capacity and quality of services. These are summarized in the chart below. The results of the assessments were used to improve training and supervision.

Assessment or Study	Date	Use of Results
Evaluation of the results of TBA training on safe, clean deliveries.	11/03	Training curriculum revised to focus on danger signs and referrals.
Exit interviews with mothers leaving clinics about common childhood illnesses	12/02	Results used to tailor IEC messages.
Qualitative study of mother's perceptions of danger signs in sick children under two years.	6/03	Information was used to develop the "mother reminder" materials.
Evaluation of the effectiveness of the "mother	6/04	No revisions were necessary.

reminder" materials		Printing and distribution were expanded.
Evaluation of the knowledge and performance of institutional personnel in the standard management of cases	10/04	Results used to identify topics for reinforcement training and as a part of the final evaluation.
Evaluation of the performance of RHPs	6/03	Identified areas of weakness in training and the need for practical training.
Annual LQAS sample to monitor behavior changes in resident population	Annual	Results used to strengthen health education and counseling.
Focus groups with Highland residents to learn local health practices.	12/02	Used for developing health education messages and materials.
Study of the actual situation of BHUs	7.04	Developed comprehensive plan for maintenance and support
Monitoring of skills of RHPs	8/03	Reinforced supervision.
Client satisfaction of users of UBS	10/04	Decision was made to provide additional training on health worker interpersonal skills.

The project worked directly with the partners to assure that they track and display data on service delivery and coverage for migrants. This is now done routinely and was observed posted in most health facilities. Various district staff showed evaluation team members the type of reports they can generate from the computer (hardware and training provided by Project HOPE in CS XIII.) The data is used to justify requests for pharmaceuticals and supplies to the Area Health Offices. They have not yet reached the level of analyzing the data to make other kinds of decisions regarding their service delivery.

Data from the project and from the MSPAS HIS were routinely shared with the Area Health Councils and Area and district health staff. Various stakeholders were involved in the final evaluation or were interviewed as a part of that process. All were able to articulate the achievements of the project. The results of the final evaluation were shared in a presentation to representatives of all partners on August 19 and a separate presentation was made to the USAID/Guatemala on August 23.

8. Technical and Administrative Support

Virtually all of the technical assistance for this project came from within Project HOPE in the region or from consultants hired locally in Guatemala to help with assessments. (Please see the chart under staff training.

During the project, the HOPE HQ MCH Unit, responsible for providing technical backstop to the project, experienced significant staff turnover. As a result, the project did not benefit from adequate technical support, especially during the last two years. No one from HQ participated in the mid-term or final evaluations and no field visits were made to the project during the final years of the project. Needless to say a follow-up visit from HQ after the MTE would have been very useful in helping local staff decide how to implement recommendations and might have been key to helping them "think out of the box" to come up with truly effective approaches to BCC for migrants.

The M&E specialist from HOPE Center has provided excellent TA via e-mail and V-Class. He has arranged for cross visits from the Nicaragua project to train in PDA and LQAS and sent a project staff person to Nicaragua to learn EPI INFO. The regional health educator has also been very helpful and has been meeting with the staff monthly via V-Class.

9. Management Lessons Learned

Conclusions:

1. At the field office level, the project was very well managed. Staff morale was high, there was extremely low turn-over, and the staff was satisfied with logistics, supervision, and leadership.

2. Staff found the ECO capacity-building exercise to be very useful and applied the results of the process to improve administration, personnel management, and educational methodology.

3. Due to changes at HOPE Headquarters, the project did not have sufficient technical or financial backstopping from headquarters during the final half of the project. Headquarters staff did not participate in either the mid-term or final evaluation, missing opportunities to learn of achievements and lessons learned first-hand.

D. Other Issues Identified by the Team

No other issues were identified by the team.

E. Conclusions and Recommendations

1. Based on the data from the baseline and final assessments, presented in the summary chart on page 9, the project was successful in achieving the indicators set for resident mothers. More importantly, based on results for the objectives for sustainability and capacity-building shown in the relevant sections above, the project was very successful in facilitating the improvement of health service delivery for migrants and residents.

2. The one constraint which affected project performance was the dramatic decline in coffee prices which resulted in plantations either closing, laying off all workers, or withdrawing from the program. This affected the original goal of the number of BHUs to be established.

Achievements:

- Direct coordination established and has become routine between the MSPAS, and IGSS at the national, Area, and local levels. On-going coordination now exists between these institutions and the National Association of Coffee Producers (ANACAFE) as well as with plantation administrators and owners at the local level.

- Involvement of plantation owners and administrators in support health services and education for migrant workers, and of a growing number in improving living conditions for migrants on the plantations. Such improvements have occurred on about 20% of plantations during the life of the project and it is hoped that this initiative will spread to other plantations in the near future, spurred by the rising price of coffee, labor shortage, and a desire to compete in the world market through mechanisms such as Fair Trade.

- Implementation of 152 Basic Health Units with very good potential for sustainability to serve migrants and residents dependent on coffee plantations. This has significantly improved access to health care for these families.

- Operationalization of the national policy for health attention to migrant populations which was established during Phase I of the project. This has been accomplished by each of the three Area Health Offices and by IGSS Suchitepequez with the support of Project HOPE.

- Implementation of norms for providing health care to migrants, including collecting and using data on migrants. Each Area Health Office and each target district how have operating plans and procurement allotments which take into account the migrant population.

- Institutionalization of IMCI and AMNE in the target districts of the three Departments and in San Felipe. This has resulted in significant improvement in quality of care through application of standardized procedures and improved communication skills with patients.

- Formation of teams of Master Trainers in each Health Area and in IGSS, who will continue to provide high quality training and follow-up to health personnel and RHPs.

Lessons learned:

The challenging task of effecting behavior change in a specific population is made all the more difficult in the absence of a detailed behavior change strategy. A monitoring system is needed to track the impact of the behavior change strategy in specific populations. Creativity is required to reach special populations with differing languages and customs from the mainstream, and who have to give economic needs priority.

When seeking to build the capacity of health care providers, it is useful to do a baseline to assess health worker skills/performance and health facility operations and to reassess periodically and at the end of the project.

Projects that focus on capacity building of health care providers need to have specific outcome-level indicators that measure changes in attitudes and practices at baseline and at the end of the project. All projects need to have indicators that effectively measure changes amongst the different target audience. Challenging situations require very creative solutions.

When designing a project, a detailed analysis should be conducted regarding the material (and other) requirements of key interventions. Once identified, project designers need to identify mechanisms to ensure that these essential materials and supplies will be available in a timely manner and in adequate quantity. If deficiencies are identified mid-way through a project, creative solutions should be generated to address the deficiency (or redefine the problem) rather than suffer the consequences.

Projects, even those with very capable staff, benefit from repeat visits of outside or HQ technical support, which can assist with identifying and analyzing challenges and then generating solutions.

Participation of HQ technical staff in the mid-term and final evaluations not only enhances their understanding of the project and context but also enables them to provide needed follow-up.

When there is significant HQ input into the DIP, the HQ staff need to follow-up with the field office on the implementation of best practices and other HQ ideas that were incorporated.

3. Recommendations:

A. For the Ministry of Health Area Offices and IGSS Suchitepequez:

a. Sustain the BHUs through maintenance of current levels of supervision and supplies and annual assessment of RHP skills.
b. Seek outside funding and lobby the central MOH for funding to continue training.
c. Maintain communication with currently supportive plantations and work to engage others.

B. For Project HOPE:

The quality of this project, including management and technical capacity, has been so exceptional, that Project HOPE headquarters should proactively seek additional funding to replicate this project in other areas of the country or implement similar capacity-building

activities for the MSPAS or ECP contractors in these departments or others in another issue such as HIV/AIDs, family planning or, in the Highlands, Infant and Young Child Feeding.

Project HOPE will take the lessons learned as recorded in this final evaluation report and circulate them to other child survival projects and projects within the Health of Women and Children portfolio, so that those project managers and their staff can also learn from the Guatemala experience.

4. There is demand for replication of the health delivery services part of project in the other Health Areas (approximately four) which have numbers of coffee plantations with influxes of seasonal migrants. While the national MSPAS Coordinator for Migrant Health is committed to this, any such effort would require external donor funding.

The MSPAS is in the process of scaling up the IMCI/AINM-C training throughout the country. They are receiving technical support from USAID through the *Calidad* Project being implemented by University Research Corporation.

F. Results Highlight

Reaching the Poorest Mothers – Improved Health Seeking Behavior and Knowledge

As a part of her doctoral research for Tulane School of Public Health, Keiko Yamaguchi evaluated the impact of the introduction of C-IMCI on the health seeking behavior (HSB) of resident mothers when their children have signs of diarrhea, pneumonia, or are due for immunizations. Project HOPE supported the Ministry of Health to introduce C-IMCI as a part of this Child Survival project, training a total of 333 community rural health promoters to use the approach.

In a carefully designed study, she interviewed 2,258 mothers with children under age five from three project target districts and one comparison district which was not part of the project. Ms. Yamaguchi used a validated instrument called Health Seeking Survey as follow-on to a Rapid Anthropological Assessment.

In general, there was no difference in knowledge of danger signs of common childhood illnesses between communities where this Child Survival project intervened and those of comparison communities where the project did not intervene. However, the study showed significant differences in care-seeking behavior by socio-economic status and education level.

The study concludes that mothers with 2 years or less of schooling from communities where Project HOPE and the MOH had trained promoters in C-IMCI and established a Basic Health Unit were more likely to seek care for a sick child than those in communities where the project did not intervene.

Secondly, mothers of the lowest socio-economic level in communities where the project introduced C-IMCI were more likely to seek care for a sick child and immunizations than mothers of a higher socio-economic level in the same communities.

Both of these findings indicate that the Child Survival project was successful in reaching the poorest resident families and those with low levels of education. Yamaguchi will continue analysis to determine why this occurred with the intention of sharing the key to this success through her dissertation to be submitted to Tulane early next year.

ANNEXES:

- **A. Evaluation Team Members and their titles**
- **B. Evaluation Assessment methodology**
- **C. List of persons interviewed and contacted**
- **D. Description of Guatemalan Health Delivery System**
- **E. Final KPC report**
- **F. Project Data Sheet form – updated version**

ANNEX A: EVALUATION TEAM MEMBERS

ANNEX A: EVALUATION TEAM MEMBERS

Dr. Juan Chojoj	Epidemiologist	Dirección Area de Salud Quetzaltenango
Juan Manuel Mejía	Coordinator of Rural Health Technicians	Dirección Area de Salud Quetzaltenango
Joel Sarat	Rural Health Technician	Health Center Pueblo Nuevo Suchitepéquez
Licda Juanita Xuruc	Nursing Supervisor	Instituto Guatemalteco Seguridad Social (IGSS) Suchitepéquez
Dr. Renato Umaña	Epidemiologist	Instituto Guatemalteco Seguridad Social Suchitepéquez
Dr. Jorge Lorenzana	Migrant Program Coordinator	Ministry of Health Guatemala
Dr. Mariano Navarro	Municipal Health Coordinator	Malacatán San Marcos
Miguel Pérez	Rural Health Technician	Dirección de Area de Salud San Marcos
Luis Quemé	Rural Health Technician	Dirección de Area de Salud San Marcos.
Dr. Victor Calderón	Country Director	Project HOPE Guatemala
Brenda Yes	Health Educator	Project HOPE Guatemala
Anabela Aragón	Assistant Director	Project HOPE Guatemala
Marco Vinicio Cifuentes	Computer Specialist	Project HOPE Guatemala
Judiann McNulty, DrPH	Consultant	
Sandra Guzmán, Secretary Antonio de León, Driver and interviewer	Logistical Support	Project HOPE Guatemala

ANNEX B: FINAL EVALUATION METHODOLOGY

ANNEX B: FINAL EVALUATION METHODOLOGY

The final evaluation included quantitative and qualitative components. The first quantitative part was the KPC survey conducted in July. The survey used Lot Quality Assurance Sampling (LQAS) and the same instrument that was applied in the 2001 baseline survey. Full details of the methodology and results are given in the report in Annex E.

Since the July survey focused on residents on and near the plantations, the Final Evaluation team decided to augment those findings with a short survey of migrants. Because the coffee harvest has not yet begun, the team had to use a convenience sample of migrants who were found in their communities of origin, and a small group of migrants which had already arrived on one plantation. The details of this survey are found in Annex F.

For the qualitative part of the evaluation, Project HOPE assembled a team made up of staff and of representatives from collaborating institutions. (Annex A.) The evaluation team was led by external consultant Judiann McNulty, PHD, who is very familiar with the project context. The schedule of activities for the final evaluation follows and the list of persons interviewed is found in Annex C. The team was able to go to all but one of the Boca Costa municipalities which have been involved in the project. Numerous interviews by multiple team members made it possible to corroborate findings. The plantations, UBS, and promoters to be interviewed were selected just prior to the field work, did not expect the evaluation team, and thus, could not "stage" something for the team.

The evaluation team used semi-structured interviews during seven days of field work In addition, the team asked all promoters interviewed to demonstrate the use of a respiration timer, explain the rates for each age group, and to explain the use and dosage of a randomly selected antibiotic. The team also observed the kinds and quantities of medicines and equipment available in the BHUs.

Interviews	**Total Number Interviewed**
Area Health Officials and training teams	3
District health directors and teams	17
Plantation administrators	17
Community health workers (Promoters)	20
Focus Group of Trained TBAs	1
IGSS Suchitepequez officials and training team	1

In late 2004, Project HOPE and staff from the MSPAS and IGSS conducted an assessment of the skills of all the health promoters in applying C-IMCI and of the clinical facilities and the trained traditional birth attendants in understanding and application of AMNE. These results were taken into account as part of the triangulation of data for reaching conclusions in this final evaluation.
The C-IMCI assessment was undertaken using the monitoring tool for C-IMCI refined by the MSPAS with support from the Pan American Health Organization. The detailed assessment tool for AMNE was developed by JHPIEGO during their five years of implementing the Maternal Newborn Project for USAID in Guatemala.

All findings of the final evaluation were triangulated and all conclusions and recommendations were reached through consensus of team members during a group exercise following data collection and consolidation.

SCHEDULE OF ACTIVITIES
Project HOPE Guatemala Final Evaluation
Child Survival Project

Date	Location	Activity	Participants
Monday, August 8	HOPE Office Quetzaltenango	Evaluation Planning Workshop	Evaluation Team Members
Tuesday, August 9	HOPE Office Quetzaltenango	Evaluation Planning Workshop	Evaluation Team Members
Wednesday, August 10	Columba	Validation of Instruments Field Qualitative Data Collection	Evaluation Team Members
Thursday, August 11	San Marcos	Field Qualitative Data Collection	Evaluation Teams 1, 2, 3*
Friday, August 12	Suchitepeques Retahuleu Coatepeque	Field Qualitative Data Collection	Evaluation Teams 1, 2, 3
Saturday, August 13	Suchitepequez	Field Qualitative Data Synthesis	Team Leader
Sunday, August 14	Pueblo Nuevo	Migrant Mini-KPC Surveys	Team member
Monday, August 15	Suchitepequez Columba	Field Qualitative Data Collection Migrant Mini-KPC Surveys	Evaluation Teams 1, 2 Evaluation Team 3
Tuesday, August 16	Suchitepequez Huehuetenango	Field Qualitative Data Collection Migrant Mini-KPC Surveys	Evaluation Teams 1, 3 Evaluation Team 2
Wednesday, August 17	San Marcos Huehuetenango	Migrant Mini-KPC Surveys Workshop Preparation	Evaluation Teams 2, 3 Evaluation Team 1
Thursday August 18	HOPE Office Quetzaltenango	Workshop – Consolidation and Analysis of Field Work	Evaluation Team Members
Friday, August 19	HOPE Office Quetzaltenango	Preparation and Presentation of Results	Evaluation Team Members

*The evaluation team members were divided into 3 smaller teams for field work.

Detailed Field Schedule

Sub-team No.	Vehicle	MOH Facility	Plantations	USB	Other activity
Wednesday, August 10					
I- Quetzaltenango	Montero Verde	CS Colomba	La Bolsa	1	
II – Quetzaltenango	Prado		Carmen Amalia Sta. Anita (Colomba)	2	
III – Quetzaltenango	Pick Up	CS San Martin	Sn. Fsco. Pie de la Cuesta Las Violetas (Colomba)	2	
Thursday, August 11					
I – San Marcos	Montero Verde	DAS	Malacatan Finca San Luis San Pablo, Finca Ucubuja	1 1	Health Promotor Meeting
II – San Maqrcos	Pick Up	 CS El Quetzal	Finca Concepcion Candelaria. (La Reforma), Finca Ona	1 1	
III – San Marcos	Pick Up BCS	CS El Rodeo CS El Tumbador	Comunidad la Industria. Finca Nueva Granada, El Ferrol.	1 2	
Friday, August 12					
I - Quetgo/Suchi.	Montero Verde	CS El Palmar PS Sn. Fsco. Zap.	C. Calahuache	1	
II – Quetgo.	Pick Up BCS	CS Coatepeque CS Genova, CS Flores			Health districts
III - Retalhuleu	Pick Up		(San Felipe) Rosario Pecul (San Felipe) Patio Bolas	1 1	
Sunday, August 14					
I Suchitepeques	Pueblo Nuevo		Finca Hamburgo		Migrant Surveys
Monday, August 15					
I - Suchitepequez	Montero Verde	DAS	(Santo Tomas) Santa Isabel, San Jaime.	2	
II - Suchitepequez	Prado	PS Samayac PS Cuyotenango	(Samayac) Parrache (San Fsco. Zap.) Margaritas, Blanca Flor.	1 2	
III - Columba	Pick Up	Finca Las Victorias			Migrant Surveys
Tuesday August 16					
I - Suchitepequez	Montero Verde	CS Chicacao IGSS Mazate.	El Medellin Valle de Oro	1	Family Planning Distributor
II - Altiplano	Pick Up	Department of Huehuetenango Communities of Origen			Migrant Surveys
III - Suchitepequez	Pick Up BCS or Prado	CS Patulul, DAS CS Santa Barbara	Horizontes Panama	1 1	TBA training Training team
Wednesday, August 17					
II	Pick Up	Department of Huehuetenango, Communities of Origen			Migrant Surveys
III– San Marcos	Pick Up	San Miguel Ixtahuacan, Communities of Origen			Migrant Surveys

DAS – Area Health Office UBS – Basic Health Unit

Participatory Planning Workshop

Time:	Activity	Facilitator
Monday, August 8		
9:00-9:30	Welcome and Introduction of Evaluation Team	Dr. Calderon
9:30-10:30	Presentation of the Project	Dra. Aragon
10:45 – 11:30	Presentation of KPC Results	Marco
11:30 – 12:30	Overview of the Evaluation Requirements	Judiann
1:30- 3:30	Definition of Evaluation Objectives by Team	Judiann
3:30-4:30	Evaluation Matrix	Judiann
Tuesday, August 6		
8:30 – 9:00	Formation of Evaluation Sub-teams	Brenda/Judiann
9:00 – 9:30	Development of Field Work Schedule	Dra. Aragon/Brenda
9:30 – 4:30	Development of Instruments	Group work
Wednesday, August 12		
morning	Validation of Instruments	All sub-teams
3:00 – 5:00	Revision of Instruments	HOPE staff

Consolidation of Findings, Results, and Conclusions

Thursday, August 18		
9:00 – 9:30	Review of Evaluation Objectives	Judiann
9:30 – 12:30	Group work – triangulation of findings	
1:30 – 4:30	Participatory exercise to reach consensus on all conclusions and recommendations	Judiann
4:30 – 5:30	Review of migrant mini-KPC results Verification of findings for each evaluation objective	Judiann

ANNEX C: PERSONS INTERVIEWED AND CONTACTED

ANNEX C: PERSONS INTERVIEWED AND CONTACTED

Area Health Directors and IGSS Administrator:

1. Quetzaltenango	Dr. Diego Manríquez
2. San Marcos	Dr. Albar Pérez
3. Suchitepèquez	Dr. Guillermo Sánchez Benet
4. IGSS	Lic. Juan José Campo Díaz

District Directors Interviewed:[°]

QUETZALTENANGO

1. Coatepeque.	Dr. Abrahán Pérez.
2. Flores Costa Cuca.	Dra. Alba Díaz
3. San Martín Sacatepéquez.	EP. Jova Santizo
4. El Palmar.	Dr. Marcos López Enrique.
5. Génova Costa Cuca.	EP. Hilda País.
6. Colomba Costa Cuca.	Dr. Rolando Zúñiga

SUCHITEPÉQUEZ:

1. Cuyotenango.	EP. Verónica Fernández.
2. Chicacao.	Dr. Hugo Armas.
3. Santa Bárbara.	Dr. Víctor Manuel Sánchez.
4. San Francisco Zap.	TC. Henry Xiloj.
5. Samayac	Dra. Gudielmy Porres

SAN MARCOS:

1. El Tumbador.	EP. Miriam Miranda.
2. El Quetzal	Dr. Armando Mazariegos
3. San Pablo	Dra. Mirna de Valdez
4. El Rodeo	Dr. Hanrry de León
5. San Rafael Pie de la cuesta	Dr. William de León.

RETALHULEU:

1. San Felipe	Dr. Jesús Arriaga

Members of Master Training Teams:

SAN MARCOS	5 members
SUCHITEPEQUEZ	5 members
QUETZALTENANGO	7 members
IGSS Suchitepequez	8 members

[°] At all health districts, other staff, such as nurses, sanitary inspectors, and rural health technicians, involved in the project were also interviewed.

PLANTATION ADMINISTRATORS – 17

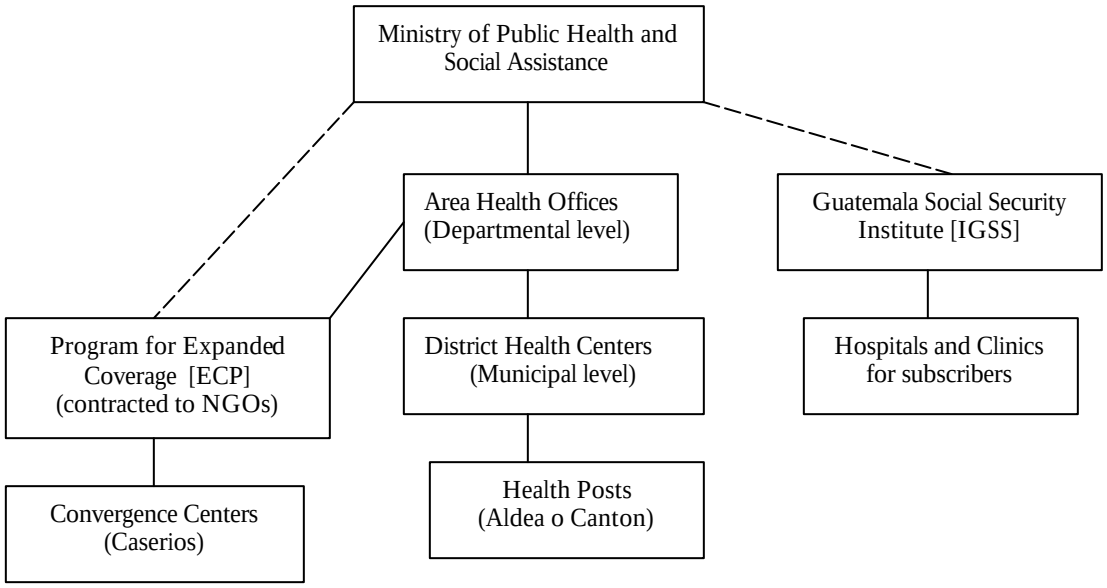
RURAL HEALTH PROMOTORS – 20

TRADITIONAL BIRTH ATTENDANTS – 9 (as a group)

FAMILY PLANNING DISTRIBUTOR – 1

ANNEX D: GUATEMALA HEALTH DELIVERY SYSTEM

ANNEX D: GUATEMALA HEALTH DELIVERY SYSTEM



Administratively, Guatemala is divided into seven Departments which are equivalent to provinces or states. Each Department is divided into multiple municipalities which consist of a main city or town and the surrounding area including small towns (aldeas), hamlets (caserios), and/or populated areas with no settlement (cantons).

The Ministry of Public Health and Social Assistance (MSPAS) has seven administration Areas, which correspond roughly to each Department. For many years, all health services were delivered directly by the MSPAS through the Health Centers and Posts or through IGSS.

IGSS, though under the MSPAS, has always been largely autonomous. It is an employer-paid health insurance system with its own hospitals and clinics in each Department. Theoretically, all employers pay into IGSS for their employees, but few plantation owners have fully complied. In the Department of Suchitepequez only, IGSS has recently begun community outreach activities,

In 1997, the government began the Expanded Coverage Program (ECP) to better serve residents of rural areas. The ECP is delivered through contracting municipalities or NGOs to cover a certain rural geographic area with all primary care services. Most NGOs contract medical personnel who rotate through the area, convening patients at locations convenient to several caserios or cantons. These are known as convergence centers. The BHUs started by Project HOPE on or near 35 plantations have now been absorbed into this system, receiving, supplies, supervision, and periodic physician services from a contracting NGO.

ANNEX E: FINAL KPC SURVEY REPORT

PROJECT HOPE

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

CS-17 Cooperative Agreement No. **FAO-A-00-97-00030-00**

FINAL KPC SURVEY REPORT

Project Location: Region of Southwestern Guatemala

Submitted to:
U.S. Agency for International Development
Child Survival and Health Grants Program (CSHGP)
USAID/GH/HIDN/CSHGP
Ronald Reagan Building
1300 Pennsylvania Avenue
Washington, DC 20004-3002

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

August, 2005

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EXECUTIVE SUMMARY

From June 13-29, 2005 Project HOPE, with the participation of the Ministry of Health, and the Guatemalan Social Security Institute (IGSS), implemented the final Knowledge, Practice and Coverage (KPC) survey of its Child Survival (CS-17) project. The survey was implemented in the southwestern (Boca Costa) region of Guatemala that includes the departments of San Marcos, Quetzaltenango, and Suchitepequez.

The purpose of this final quantitative survey was to: 1) collect final results about the prevalence, knowledge, and practices regarding child survival and reproductive health interventions among mothers with children under two years of age and women of reproductive age in the project target area, and 2) to assess whether quantitative benchmarks set in 2001 by the Detailed Implementation Plan (DIP) of this CS-17 project had been reached.

The final KPC survey was implemented by Project HOPE field staff, MOH, IGSS and with technical support from Project HOPE's headquarters in Millwood, Virginia.

The final KPC survey used the same survey instrument used at baseline (2001), which was developed based on the KPC 2000+ rapid survey tool developed by the CORE Group and the Child Survival and Technical Support Project (CSTS+) for Private and Voluntary Organizations (PVOs) implementing CS projects funded by USAID's Child Survival and Health Grants Program (CSHGP). Wording and names of foods used in the survey instrument were revised to be culturally appropriate in the project target areas.

The final KPC survey was conducted using the Lot Quality Assurance Sampling (LQAS) methodology, which defined seven supervision areas (SAs) within the project catchment area for this particular final survey. Parallel sampling was used to include mothers of children under two years of age, and women of reproductive age. The local staff from Project HOPE/Guatemala provided all training for the implementation of the survey. Twenty-five interviews were conducted for each sample group–mothers and women of reproductive age–in each of the seven SAs. A total of 176 mothers of children under two and 176 women of reproductive age were surveyed.

An assessment of progress between baseline (2001) and final (2005) key indicators noted significant progress in immunization coverage among children aged 12-23 months, proportion of children with a health card, early breastfeeding and complementary feeding, a slight increase in exclusive breastfeeding rates for the first six of months after birth. Survey results also revealed significant improvements in vitamin A supplementation coverage, ORT use rate, home fluids use rate during diarrhea, knowledge and use of child spacing methods, proportion of mothers with maternal cards, and proportion of mothers with children under two who received at least two tetanus toxoid vaccines before the birth of their youngest child.

On the other hand, survey results indicated no progress in reducing the proportion of children malnourished (WFA, -2Z) and a slight decline in the proportion of mothers with children under two whose last birth were attended by a trained health provider.

I. INTRODUCTION

A. Background

Project HOPE was awarded a four-year extension to expand its successful CS-12 project aimed at improving the health of women and children migrating to or residing in or near (and dependant upon) coffee plantations in the Boca Costa region of southwestern Guatemala. The target population is 330,000 beneficiaries, including 162,304 children under age five and 171,959 women of reproductive age, providing benefits to migrants and residents in the target area through capacity building of Ministry of Health (MOH), Guatemala Institute of Social Security (IGSS), 3 local NGOs involved in the national Integrated System for Health program (*SIAS*) in the target area (ADISS, Red Cross and Funrural, the development organization linked with ANACAFE, the coffee growers' national association), and community partners.

The project worked with technical staff and a nucleus of Master Trainers in four Health Areas, equivalent to geographic Departments: San Marcos, Quetzaltenango, Retalhuleu and Suchitepequez. IGSS had outreach responsibilities in the Department of Suchitepequez. The project assisted these partners in replicating training in several national health strategies -- Integrated Management of Common Childhood Illness (IMCI) in the clinical setting, IMCI/*AINM-C* at the community level, and Maternal and Neonatal Care (MNC, promoted by JHPIEGO) -- with health staff and community volunteers through all health units in 28 municipalities[2]. These trainings target 1,000 Rural Health Promoters, 1,000 Traditional Birth Attendants, and 100 Community Based Distribution Agents of family planning methods. In this way the extended project continued to support sustainable primary health care for children while increasing a focus on integrated reproductive health and strengthening capacity-building for sustainability of key project actions.

The project provided more direct support to Rural Health Promoters (RHPs) active in Basic Health Units (BHUs) established within coffee plantations with owner and administrator moral and financial support. Despite the fact that many plantations closed production or drastically reduced personnel due to the dramatic drop in coffee prices in the last few years, the project worked with a total of 183 of the originally proposed 200 coffee plantations (this target was revised in 2002 in the 1st annual report submitted to USAID's CSHGP). In each coffee plantation there is one BHU. Out of the 183 active BHUs, 108 are located within coffee plantations; and the rest (75) active BHUs are located in adjacent communities. All of these BHUs are managed by trained RHPs, who are provided with essential medicines appropriate for IMCI/AINM-C services, including antibiotics, through the district Health Centers that oversee their activities. Project HOPE medical personnel, MOH local health personnel and, in Suchitepequez, IGSS health personnel provided periodic health campaign outreach services on plantations, especially between the months of October to February of every year when migrants are present for the coffee harvesting season.
The project is in line with Project HOPE strategies to evolve from direct

[2] The DIP mentions 30 municipalities; the only municipality programmed for entry in Solola Department was Santiago, which became covered by an organization contracted under the national *SIAS* extension of health services shortly after the DIP was prepared. The complementary HOPE/ILO project in the highlands from which migrants originate has been active in 4 of the 5 municipalities cited in the DIP.

implementation to a greater emphasis on partnership and facilitation. Besides MOH and IGSS partners, the project also partnered with JHPIEGO to extend the Maternal and Neonatal Care (MNC) approach, and with local NGOs (ADISS, Red Cross, the Suchitepequez branch of Funrural - the development organization of ANACAFE, the coffee grower's national association) to extend coverage of primary health care services to rural areas in accord with national strategies of the Integrated Systems of Health program (*SIAS*).

The level of project effort was directed towards 5% for immunization, 10% nutrition and 5% breastfeeding, 3% Vitamin A and 2% micronutrients, 15% acute respiratory infections, 10% control of diarrheic disease, 5% malaria, 20% maternal and newborn care, 15% child spacing and 10% HIV/AIDS.

B. Objectives of the Survey

The main objective of the final KPC survey was to assess knowledge, practices and coverage rates related to child health and reproductive health in the targeted communities. (See Appendix B for a list of performance indicators). With such available quantitative data, Project HOPE would be able to assess progress and change on key child health and maternal health indicators set at the DIP in 2001. These quantitative results would serve to provide overall conclusions and recommendations during the final evaluation of this CS-17 project.

C. Location/Population

A total of seven supervision areas (SAs) or "lots" were defined within three departments in Southwestern Guatemala: Quatzaltenango, Suchitepequz, and San Marcos, all of them located in the Boca Costa region. The surveyed area included coffee plantations and nearby communities in the Boca Costa region. See Appendix D for a detailed list of SAs and the departments, municipalities, and communities that were sampled as part of this final KPC survey.

D. Schedule of Activities for the Final KPC survey

Table 1: Schedule of Activities

Date	***Activities***
April	Planning of this activity with the communities for the months of May, June, July and August.
May 1-25	Survey Planning -organization and selection of the communities -routes and dates to communities planned
May 25-30	Revision of survey materials and survey training
June 1-13	Final adjustments - copying of questionnaire - distribution of survey materials
June 13-29	Survey implementation
July 1-15	Review of data collected, and data entry into the computer
July 16-30.	Preliminary data analysis and development of conclusions. Debriefing of USAID Mission in Guatemala.
Aug. 9-19	External Evaluation of the CS project
Aug. 20-30	Development of Report with conclusions and assessment of project outputs and progress.
Aug 30	Dissemination of Final KPC Report

II. METHODOLOGY

A. Questionnaire

The final KPC survey of Project HOPE's CS-17 project in Southwestern Guatemala

used the same questionnaire that was used in the previous KPC surveys conducted at baseline (2001) and midterm (2003). Such an instrument was developed based on the KPC 2000+ survey questionnaire, a rapid assessment tool developed by the CORE Group's Monitoring & Evaluation Working Group and the Child Survival Technical Support Project (CSTS+) for Private and Voluntary Organizations (PVOs) implementing CS projects funded by USAID's Child Survival and Health Grants Program (CSHGP).

Wording and names of foods used in the original survey instrument (2001) at baseline were included in the survey to be culturally appropriate in the project target areas. The MOH and IGSS staff reviewed the survey instrument and gave their approval. All same survey questions from 2001 were included because:

a) They were aimed to assess if the quantitative targets set in the DIP were met;
b) Were included in order to calculate Rapid CATCH indicators as required by CSHGP to all PVO grantees.

B. Determination of Sample Size

Project HOPE's CS-17 project in Southwestern Guatemala used the Lot Quality Assurance Sampling (LQAS) methodology to conduct the final KPC survey. Seven supervision areas (SAs) or "lots" were previously identified within the four target departments in Southwestern Guatemala: Quetzaltenango, Suchitepequez, and San Marcos.

In each of the SAs, the survey interviewed 25 mothers of children under two years of age as well as 25 women of reproductive age.

Such a sampling methodology reflects a statistical certainty of at least 95% (Z=1.96) with a margin of error of 10%.

In order to achieve statistical significance through the calculation of 95% Confidence Intervals (C.I.) for certain project indicators, this final KPC survey increased the recommended 19 interviews per SAs in cross-sectional household surveys that use LQAS as a sampling methodology to 25 interviews per SA.

In addition, the final KPC survey made use of parallel sampling by interviewing 25 mothers with children under two years of age and 25 women of reproductive age. Thus, one questionnaire was used to interview mothers, and another questionnaire was used to interview women of reproductive age. However, both questionnaires were the same as the ones used for conducting the baseline assessment (2001) and the mid-term evaluation (2003).

C. Selection of Surveyed Communities

The probability of selection was proportional to the population of communities to be selected in the Departments of Quetzaltenango, San Marcos, and Suchitepequez,. See Appendix D with the complete list of SAs, municipalities, and communities randomly selected for this final KPC survey.

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 under 24 months of age. 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 SA. 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 five-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, revision of survey questions and appropriate interviewing techniques. A written guide was also supplied to the field team. As same survey instruments were used from previous KPS surveys validation of questions and a pilot test of the survey instrument was not necessary.

G. Interviewers

The actual survey was conducted over 17 days: June 13-29, 2005 (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 Project HOPE/Guatemala office in Quetzaltenango. An administrative assistant entered the data in seven days. The project HIS staff who was previously trained in EPI INFO and who has knowledge in data analysis conducted the initial analysis. Such a preliminary analysis was further reviewed and completed by Project HOPE headquarters technical staff.

The exact age of the child was calculated subtracting the date of birth from the actual date of the interview. Anthropometric indeces, WAZ (Z-score for weight-for-age), HAZ (Z-score for height-for-age), WHZ (Z-score for weight-for-height) were calculated along with 95% confidence intervals using Epinut directly from EPI INFO.

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

III. RESULTS

For the CS-17 survey a total of seven supervision areas (SAs) were surveyed, with the aim of including a total of 175 mothers of children under two years of age and 175 women of reproductive age. However, actual survey tallies registered 176 interviewed mothers and a similar number of interviewed women of reproductive age.

Table 2. Distribution of the sample.

CS-17 Surveyed Area		
Department	*Supervision Areas*	*Number of Interviews*
San Marcos	3	MC:76 WRA: 76
Quetzaltenango	2	MC: 50 WRA: 50
Suchitepéquez	2	MC: 50 WRA: 50
Total	**7**	**MC: 176 WRA: 176**

MC: mothers with children under 2
WRA: women of reproductive age

A. CS-17 Target Area

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

A total of 176 mothers were surveyed and the results are presented below. As in the baseline, mothers were young (26.4 years old mean age). The proportion that had attended school was pretty much the same found at baseline (69.3% for year 2005), and the average number of schooling years was also about the same. The main languages spoken at home were Spanish and Mam, followed by Quiche. More than two-thirds (69.9%) of mothers did not work outside their home, while the number of mothers working in farms decreased from 21.6% at baseline (2001) to 8.5% at final (2003).

a. Breastfeeding and Weaning Practices

As shown in Figure 1, early initiation of breastfeeding has improved from 62.5% (2001) up to 75.0% (2003), which was the final benchmark set at the DIP.

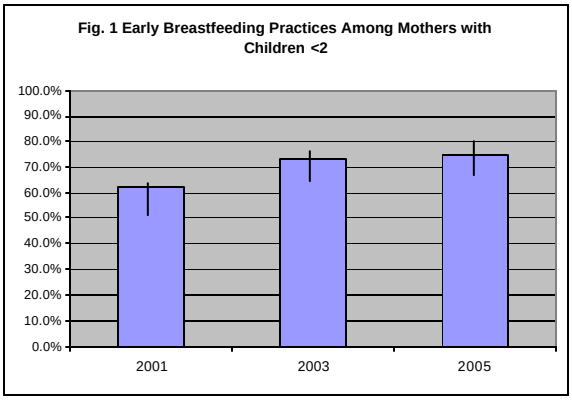
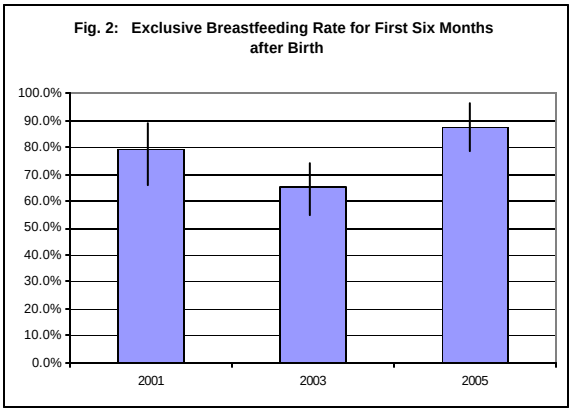
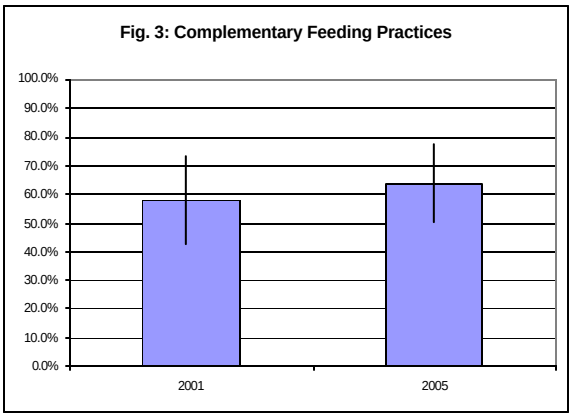


Figure 2 shows the proportion of children under 6 months of age that are exclusively breastfed. The change (from 79.2% in 2001 to 87.3% in 2005) is not statistically significant due to the fact that this variable uses a small sub-sample and the improvement was not large enough. Yet, the proportion of exclusive breastfeeding rate may have experienced a small increase from the baseline rate.

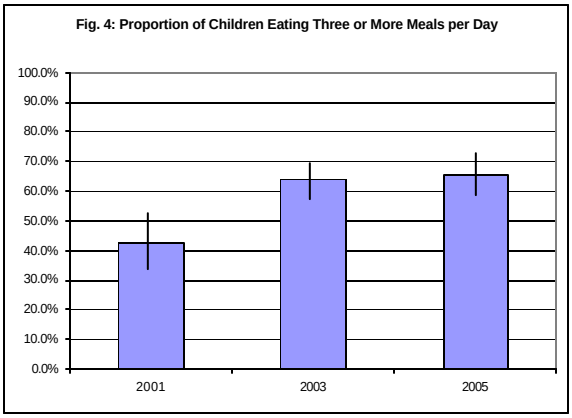


The proportion of children 5- 8.9 months receiving complementary feeding is shown

in Figure 3. In spite of apparent increase, the difference is not statistically significant.

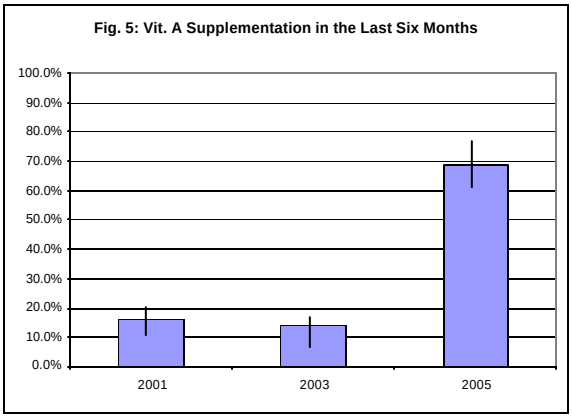


The proportion of children eating three or more meals per day did significantly increase from 43.0% at baseline (2001) up to 65.6% in the final KPC (2005), an increase that is statistically significant as shown in Fig. 4 with their respective 95% confidence intervals.



Children start complementary foods mostly 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. However the proportion of children eating meat has increased up to 29% compared to very few at baseline (2001), with still fewer children eating green leaves.

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



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 more than 2/3 of the children according to the family/child health cards (Fig. 5). This is a significant increase over baseline as only 1/6 of children received Vit. A in 2001.

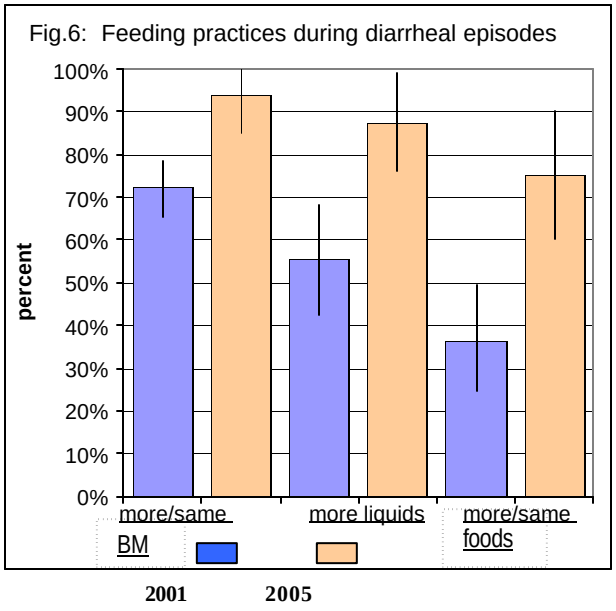
b. Nutritional status of children

While 3.0% (C.I. = 1.1 - 7.2) of the children were wasted (WFH, Z<-2), 36.3% (C.I. = 29.1 – 44.1) were stunted (HFA, Z<-2), and 24.4% (C.I. = 18.4 – 31.6) were malnourished (WFA, Z<-2). These nutritional indicators revealed no major progress in children's nutritional status from similar baseline indicators in 2001.

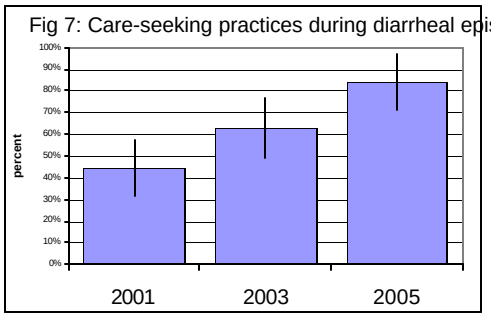
c. Diarrhea Case Management

Management of diarraheal cases improved among mothers with children under two. While 38.8% of children with diarrhea in the past two weeks preceding the survey received oral rehydration therapy (ORT) at baseline (2001), 53.1% reported receiving ORT at final (2005).

As for feeding practices during diarrheal episodes, mothers increased overall active feeding practices from baseline rates (see Fi. 6). The proportion of mothers who gave more breastmilk during a diarrheal episode increased from 72% at baseline to 93.7% at final; the percentage of mothers who gave more fluids during diarrhea also increased from 55.6% (2001) to 87.5% (2005); and the percentage of mothers who gave the same or more solid foods during diarrhea increased from 36.5 (2001) up to 75.0% (2005).



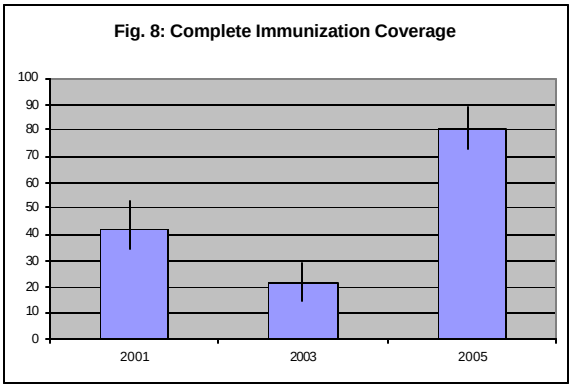
The percent of mothers whose children had diarrhea and sought help significantly increased (Fig. 8) from 44.4% (2001) up to 83.0% (2005) among mothers who sought care from a trained provider either at the basic health unit, health center or health post.. The benchmark of the DIP (60% care seeking for cases *with dehydration*) was reached.

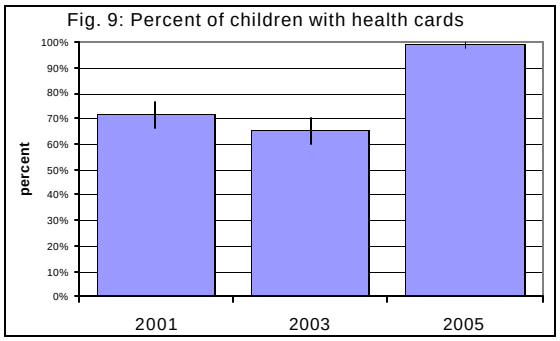


Looking at utilization rates for the basic health units in the plantations, the proportion of mothers with children under two who sought help at the BHU doubled from 43.5% at baseline (2001) to 97.2% at final (2005)

d. Immunizations

Over 80% of children between 12-23 months of age have complete immunization coverage, which reveal a significantly increased coverage from baseline (42.1% in 2001). Almost all (99.0%) of children <2y had received BCG, while 82.1% had received measles immunization. Both of these immunization rates were also significantly higher from baseline rates, which indicates an overall significant increase in immunization coverage rates.





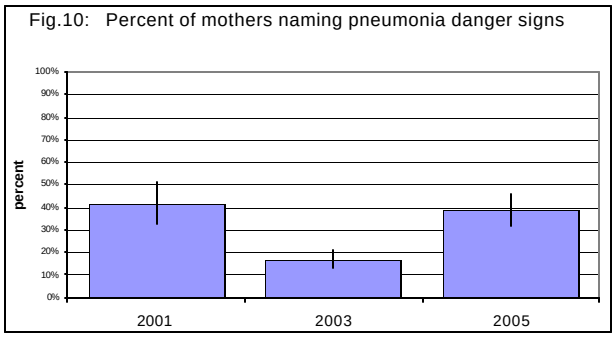
80.8% of the children (12-23 months) had received a complete set of vaccinations, compared with 42.1.1% at baseline (Fig. 8). To be completely immunized, the child needs to have at least received BCG, DPT3, OPV3, and a measles vaccine by the first birthday. The DIP target (80% of coverage) was achieved.

The percent of mothers who know the age when a child should get the measles vaccine has changed from 21.4% in baseline to 51.7% final). The DIP benchmark (50%) was achieved. Recent changes in immunization regulations, including the use of MMR administered after the first birthday.

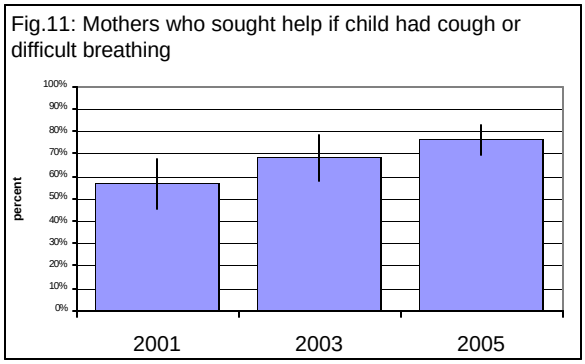
The percent of children (12-23m) with measles immunization, when counting all children in the denominator (Rapid CATCH) was 82.1% .

e. Acute Respiratory Infections (ARI)

The percent of women that can name danger signs for pneumonia was 38.6% (Fig. 10). The target set in the DIP (40%) was not achieved.



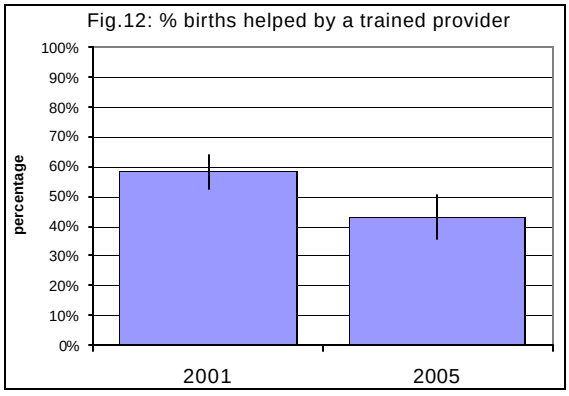
The percent of mothers that sought help for cough or difficult breathing –as specified in the DIP- was increased from 56.6% at baseline (2001) to 76.0% at final (2005). This difference is statistically significant and the target set in the DIP was met.



2. Maternal health

a. Place of birth

Of the 176 women interviewed, 44.3 had their last birth assisted by a trained provider –not counting TBAs- in comparison with 58.3% at baseline, see Figure 12.



b. Antenatal care

The proportion of women seeking antenatal care in their last pregnancy remained mostly

the same: 53.8% at baseline (2001) and 52.0% at final (2005).

The percentage of women with at least two doses of tetanus toxoid (TT) vaccine increased significantly from 22.6% in 2001 to 50.6 in 2005

The proportion of women able to show a maternal card increased significantly from 23.3% at baseline (2001) to 52.8 % at final (2005).

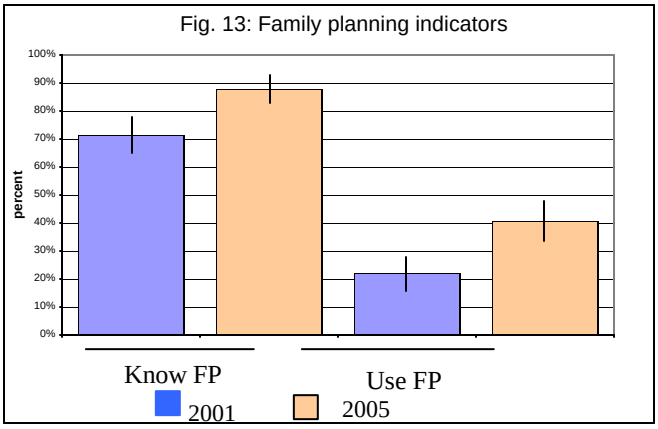
c. Post partum care

As for post partum care, the survey revealed an important increase in the proportion of women who had at least one post partum visit: from 13.2% at baseline (2001) to 22.0% at final (2005).

d. Child spacing

The percent of women that can name a family planning (FP) method increased from baseline (71.2%) to 87.5). The use of FP methods also increased significantly (21.6% a 40.4%).

Fig. 13: Family planning indicators



Child spacing methods most frequently mentioned by women in 2005 were injectables and oral anovulatories (pills) Knowledge of pills, injections, vasectomy, rhythm, and condoms 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, 68.2% 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)

C. Survey of women of reproductive age

The final KPC also interviewed 176 women of reproductive. Average age was 28 years, with a standard deviation of 7.518. Only 11.4%were pregnant at the time of the survey. 76.7% of these women had attended school, and the average number years of schooling was 4; of the respondents that spoke Spanish at home was 86.4%; and 42.6% were working outside the home, 15.3% of these in agriculture.

STD/AIDS knowledge: 85.2% acknowledged having heard about HIV/ AIDS, 56.8% mentioned condoms as a way to prevent AIDS, and 60.2% mentioned monogamy.

Over 44.9 of the women do not know about signs and symptoms of STDs in males, 7.4% mentioned weight loss as a sign. They mentioned more signs of STDs affecting women: abdominal pain (17.6%), vaginal discharge (52.8%), pain when urinating (20.5%), and weight loss (8%).

Family planning: Most frequently recalled methods were anovulatories –oral (76%) and injectable (80%)- followed by female sterilization (17%) and condoms (33%). While 50.6% of women said they wanted another child in the following two years, only 36.4% were using a FP method. Methods used most frequently were injections (23.9%) and female sterilization (6.8%).

Personal hygiene: 92% of women reported handwashing before handling foods, 80.1% after going to the latrine, 66.5% before feeding the infant, and 38.6% after handling baby feces. The latter is consistently with local beliefs that baby stools are not harmful. 92.6% of women use a flush toilet or latrine consistently because they have one at home.

Radio messages: 68.2% recalled education messages disseminated by radio, mainly about child health, family health and 75% 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 5.7% of surveyed women had visited a plantation HU in the last year. The same percentage would visit the unit again.

Appendix A:

PERFORMANCE INDICATORS FROM DIP
2005 FINAL EVALUATION
PROJECT HOPE/GUATEMALA

PERFORMANCE INDICATORS FROM DIP	TARGETS %	2001		2003		2005	
		%	95% C.I.	%	95% C.I.	%	95% C.I.
1. Percentage of children age 12–23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday	70	42.1	(33.2 - 51.5)	21.8	(14.9 - 29.0)	80.8%	(72.06 - 89.54)
2. Percentage of children aged 6-23 months who received a dosage of Vit. A in the last six months preceding the survey	50	15.7	(10.7 - 20.7)	13.6	(9.3 - 18.6)	68.8%	(60.77 - 76.83)
3. Percentage of children aged 0-23 who received immediate breastfeeding within the first eight hours after birth	75	62.5	(56.7 - 68.0)	73.4	(67.9 - 78.0	75.0%	(68.60 - 81.40)
4. Percentage of children age 0–5 months who were exclusively breastfed during the last 24 hours	70	79.2	(65.7 - 89.2)	65.3	(55.6 - 74.4)	87.5%	(78.50 - 96.10)
5. 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)	Reduction of 10% from baseline	24.6	(20.1 - 29.9)	19.9	(15.6 - 24.5)	24.4%	(18.4 - 31.6)
6. Percentage of mothers of children age 0–23 months who know at least two signs of childhood illness that indicate the need for treatment	Increase of 50% from baseline	34.4	(29.6 - 40.4)	65.6	(59.7 - 70.3)	90.9%	(86.65 95.15)
7. Percentage of mothers of children aged 0-23 who give the same or more breastmilk, liquids, and/or solid foods during a diarrheal episode	Increase of 60% from baseline	34.9	(23.2 - 46.8)	41.7	(31.4 - 52.6)	84.3%	(71.69 - 96.91)

8. Percentage of mohers of children aged 0-23 who seek care for their children's diarrheal diseases with a trained provider		44.4	(31.9 - 57.5)	34.5	(23.9 - 44.1)	84.3%	(71.39 - 96.91)
9. Percentage of mothers who can mention at least two child health or reproductive health messages heard from a radio station	60	6.1	(2.9 - 9.1)	0	(0.0 - 0.0)	53.4%	(46.03 - 60.77)
10. Percentage of mothers with children age 0–23 months who received at least two tetanus toxoid injections before the birth of their youngest child	60	22.56	(17.3 - 26.7)	10	(5.8 - 12.18)	49.4%	(38.89 - 59.91)
11. Percentage of mothers who had at least three pre-natal visits during the last pregnancy	50	11.1	(6.6 - 13.4)	6.4	(3.4 - 8.6)	35.2%	(23.31 - 47.09)
12. Percentage of mothers who reported at least two danger signs during pregnancy and post-partum	50	12.3	(6.7 - 17.3)	8.4	(3.7 - 12.3)	46.0%	(38.64 - 53.36)
13. Percentage of mothers who have at least one post-partum visit during their last pregnancy	40	13.2	(9.7 - 17.8)	3.9	(31.6 - 72.4)	26.0%	(13.72 - 38.28)
14. Percentage of mothers who are not pregnat, and do not desire or are not sure to have more children in the next two years and who are using a modern family planning method	40	15.1	(10.6 - 19.4)	32.6	(23.9 - 40.1)	52.8%	(45.42 - 60.18)
15. Percentage of mothers who identify at least two danger signs of STIs in men and women	50	0	(0.0 - 0.0)	8.4	(4.5 - 13.5)	62.5%	(55.35 - 69.65)
16. Percentage of mothers with children age 0–23 months who cite at least two known ways of reducing the risk of HIV infection	70	17.3	(12.7 - 21.3)	41.9	(33.3 - 48.7)	79.5%	(73.51 - 85.46)

Appendix B: Rapid CATCH Indicators – Project HOPE Guatemala: CS Project

RAPID CATCH INDICATORS	2001		2003		2005	
	%	95% C.I.	%	95% C.I.	%	95% C.I.
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	(19.2 - 28.9)	19.9	(15.6 - 24.5)	24.4%	(18.4 - 31.6)
2. Percentage of children age 0–23 months who were born at least 24 months after the previous surviving child	53.7	(48.3 - 59.7)	72.3	(67.0 - 76.9)	89.2%	(84.61 - 93.79)
3. Percentage of children age 0–23 months whose births were attended by skilled health personnel	58.3	(52.4 - 63.6)	99.6	(95.5 - 102.5)	44.3%	(36.96 - 51.64)
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	22.6	(17.3 - 26.7)	10	(65.8 - 12.2)	50.6%	(39.99 - 61.01)
5. Percentage of children age 0–5 months who were exclusively breastfed during the last 24 hours	79.2	(68.0 - 89.9)	65.3	(55.6 - 74.4)	87.5%	(77.88 - 96.72)
6. Percentage of children age 6–9 months who received breastmilk and complementary foods during the last 24 hours	57.8	(47.5 - 68.5)	40	(24.8 - 55.2)	64.0%	(47.20 - 84.40)
7. Percentage of children age 12–23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday	42.1	(33.2 - 50.8)	21.8	(14.9 - 29.0)	80.8%	(72.06 - 89.54)
8. Percentage of children age 12–23 months who received a measles vaccine	47.9	(39.1 - 56.9)	21.8	(14.9 - 29.0)	82.1%	(73.59 - 90.61)
9. Percentage of children age 0–23 months who slept under an insecticide-treated net (in malaria risk areas) the previous night	32.7	(27.7 - 38.3)	33.1	(27.8 - 38.2)	40.3%	(33.15 - 47.65)
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	(12.7 - 21.3)	41.9	(33.3 - 48.7)	79.5%	(73.54 - 85.46)

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	(0.3 - 0.7)	55.6	(50.5 - 61.5)	26.1%	(13.41 - 38.79)
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	(29.6 - 40.4)	65.6	(59.7 - 70.3)	90.9%	(86.65 - 95.15)
13. Percentage of sick children age 0–23 months who received increased fluids and continued feeding during an illness in the past two weeks	34.9	(23.2 - 46.8)	41.7	(31.4 - 52.6)	84.7%	(79.61 - 90.19)

Appendix C: Survey Teams – 2005 Final KPC Survey – CS Project, Guatemala

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Appendix D:

LIST OF SUPERVISION AREAS, MUNICIPALITIES, AND COMMUNITIES SELECTED
2005 FINAL KPC SURVEY
PROJECT HOPE GUATEMALA

Departament	Supervisión Area	COMMUNITY	NAME OF COMMUNITIES	No. of interviews
Quetzaltenango	No. 1	Colomba	Colomba (1), Carmen Amalia, (1) La Fama (1), El Jardín (1)	4
		Coatepeque	La Unión (1), Magnolia (1), Nuevo Chuatuj (1) San Rafael Pacaya I (1), San Juan El Horizonte (1) Coatepeque (4) Bethania (1), El Troje (1), Los Cerritos (1) Valparaíso (1), El Jardín (1)	14
		San Martín	San Martin (1), La Loma (1), Tojcoman (1), Santo Domingo (1)	4
		Flores	El Manantial (1), Morelia (1), Galvez (1)	3
	No. 2	Génova	La Paz (1), Morazán (1), El Rosario (1) Sector Méndez (1), Talsachún (2), La Floresta (1) Génova (1), El Reposo (1), Canutillo (1)	10
		El Palmar	El Matasano (1), La Esperancita (1) Monte Margarita (1), San Miguelito Calahuaché (1) La Alianza Miralta (1), San Marcos (1) El Palmar (2)	8
		Zunil	Santa María de Jesús 1	1
		San Felipe	San Felipe (2) Candelaria (1) Guadalupe(1) Nuevo Palmar(1) Tierra Colorada (1)	6
Suchitepéquez	No. 3	Cuyotenango	Cuyotenango (3), Ican (1) Chacalte SIS (1), Chacalte Aparicio No. 1 (1), Guachipilin No. 1 (1) La Máquina centro urbano (2), San Isidro (1) La Máquina (5)	15
		San Francisco Zap	San Francisco Zapotitlán (1), El Rosario (1), Las Nubes (1) Santa Cecilia (1), San José (1), Las Trinitarias (1)	6
		Zunilito	Mi Tierra (1)	1

		Pueblo Nuevo	Pueblo Nuevo (1), Mangales (1), Guadalupe (1)	3
	No. 4	Chicacao	Chicacao (8) El Pito (1), María del Mar (1), San Pedro Cutzán (1) San Bartola Nanzales (1), La Cruz (1), Portezuelo Moca (1)	14
		Patulul	Patulul (1), El Triunfo (1) La Magnolia (1), Santa Luisa (1)	4
		Santa Bárbara	Santa Bárbara (1), La Patria (1) San José El Carmen (1), Toro Pinto Chipo (1)	4
		Samayac	Samayac (2), Parraxe (1)	3
San Marcos	No. 5	El Tumbador	El Tumbador (1), Chamaque (1) El Retiro (1), El Ferrol (1), San Bartolomé Izabal (1) Liberación (1), La Viña (1) Plan de la Gloria (1), Palestina (1)	9
		Nuevo Progreso	Nuevo Progreso (1), Ixcahuin (1), Nueva Escocia (1) Sombrerito Alto (1), Viena (1), Los Cardona (1)	6
		El Quetzal	Rancho Bojón (1), Sintaná (1), Maya (1) Bella Rosita (1), La Unión (1)	5
		La Reforma	La Reforma (1), El Baluarte (1), Punta Arenas (1) Las Palmas (1), Santa Teresa (1)	5
	No. 6	Concepción Tutuapa	Canchoche (1), Huispache (1) La Laguna (1), Sochel (1), Tictucabe (1) Tuininhuitz (1), San Luis (1) Tzanquitzal (1), Chapil (1) 1 más	10
		Sipacapa	Cancil (1), Pie de la Cuesta (1), Independencia Chilil (1)	3
		San Miguel Ixt.	Baljetre Buena Vista (1), Chesil (1), Siete Platos (1) Salitre (1), Ladrillera (1)	5
		Comitancillo	Primavera (1), Chicajalaj (1), Molino Viejo I (1) Sabalique (1), Tuiscajchis (1), Tuilelen (1) Los Bujes I (1), El Porvenir (1)	8

	No. 7	Malacatán	Malacatán (2), El Naranjo (1), La Lima (1) La Central (1), Malacatancito (1), Nueva Colonia (1) San Antonio Socorro (1), San José Petacalapa (1) 11 de Julio (1), Buena Vista (1), Santo Domingo Belén (1)	12
		El Rodeo	El Rodeo (1), La Industria (1) Santa Ana (1), Las Flores (1)	4
		San Pablo	Colima I (1), El Porvenir (1), El Carmen (1) Santa Elena II (1), La Joya (1), Tojoj (1)	6
		San Rafael	San Rafael (1), El Platanillo (1), Santa Julia (1)	3
			Total de encuestas realizadas	175

Note: Mothers with children under 2 years of age and women of fertile age were randomly selected from those selected communities

Appendix E: Survey Questionnaires

Project Hope
Survey for mothers with children under 2 years old
Knowledge, Practices and Coverage (KPC)
Child Survival Project
Guatemala 2005

Identification

Identification No.: __ __ __ __

Department _____	( )	Municipality _____	( )
Community _____	( )	Farm_____	( )

Interview Date:……./……../…….

Day Month Year

Interviewer Name _____	( )
Supervisor ____Dra. Anabela Aragón_____	( )

General Data from Mother

1. Name of the mother being interviewed _____
   First name Last name
2. How old are you exactly? _____ years _____ months
3. Have you ever attended school?
   1. Yes……..……..…… ☐

2. No ↘ (go to question 5)…… ☐

4. What was the last grade you completed in school?_____ grade

5. What is the most commonly used language in your home?

1. Spanish…..……. ☐
2. Quiché…..……... ☐
3. Mam…..…….. ☐
4. Other (please specify) _____

6. What kind of work do you do for gaining money?

1. None (unremunerated domestic services)…….……. ☐
2. Craftsmanship..……...…… ☐
3. Harvest and gathering of fruits……...……...…… ☐
4. Selling of agro products…….…… ☐
5. Selling meals/milky products…… ☐
6. Domestic services (remunerated).……...……... ☐
7. Store owner/street seller……...……. ☐
8. Paid worker…..…….…….. ☐
9. Other (please, specify) _____

7. Who is taking care of your children while not being at home?

1. She herself/ /taking them with her……. ☐
2. The husband..…….. ☐
3. Older kids…….. ☐
4. Another member in the family (please specify) _____
5. Friends/neighbors..……...……... ☐
6. Other (please, specify) _____

Listing of the children less than five years old

8. How many children less than five years old live in your house? _____
9. How many of these kids are yours? ____
10. Please tell us the name, age and sex of each of the children (write data to the table), starting with the data of the younger children.

	Name	Sex	Date of Birth	Months of Age	Index case < than 2 years old
1		M F	___ / ___ / ___ Day Month Year		X **7**
2		M F	___ / ___ / ___ Day Month Year		
3		M F	___ / ___ / ___ Day Month Year		
4		M F	___ / ___ / ___ Day Month Year		

[The index case must be the youngest children]

11. Have you had another pregnancy between the births of your two younger children? (please give the name of the two youngest children)

    1. Yes..…….. ☐
    2. No. ……. ☐

Breastfeeding Promotion and Nutrition of Children

12. Have you ever breast-fed (please give the name of the youngest children or the name of index case)?

1. Yes……..…….. ☐
2. **No ↘(go to question 14)..……..……** ☐

13. How long did you breastfeed (please give the name of the girl/boy index) after birth?
    1. Immediately after birth or within an hour of birth……..…….. ☐
    2. 1-8 hours after birth…….……..……. ☐
    3. 8 hours after birth……...……... ☐

14. Please tell me if (name of the girl/boy index) ate yesterday? (refers today and night, to breakfast, lunch, dinner and refreshments)

INQUIRE ABOUT IT – DO NOT SUGGEST AN ANSWER

	Food or drinks	**Within the past 24 hours**
1	Maternal Milk	
2	Pure drinking water	
3	Other milks: artificial baby milk, canned milk, fresh milk	
4	Fruit Juices	
5	Other liquids: herbal tea, soup/clear soup, soft drinks or aerated drinks, incaparina or cornflour drinks	
6	Purees or solid foods	
7	Foods made with: corn, wheat, oat, cereal, bread, cookies, pasta, "Tortrix" (calories 77, protein 1.1g, carbohydrate 6.8g, fat 5.0g, sodium 148.5mg)	
8	Zucchini, carrot, sweet potato, "ayote" (species of small pumpkin that eats like vegetable)	
9	Other eatable tubercles/roots: potatoes, malanga, yucca	
10	Green leaves: chaya leaves (richier in iron than the spinach and a powerful calcium and potassium source), hierbamora, amaranto (bledo)	

11	Mango fruit, papaya fruit/other yellow fruits rich in vitamin A	
12	Other fruits or vegetables (banana, apple, tomato)	
13	Cow meat, hen meat, fishes and eggs	
14	Foods made with: beans, lentil, soya	
15	Cheese	
16	Fat foods: cream, alligator pear, nuts, food fried with scrambled eggs	

15. How many times did (write the name of the boy/girl) ate/drink anything else besides breast milk yesterday? Include main meals and refreshments [explain "yesterday" refers to day and night _____ number of times]

Maternal Health - Prenatal

16. Did you see anyone for prenatal care while you were pregnant with (name of the girl/boy)?

1. Yes.....…….. ☐
2. **No ↘(go to question 22). ....…….…….** ☐

17. Whom did you see for prenatal care? (you may give more than one answer)

1. Doctor....……. ☐
2. Nurse.……. ☐
3. Health promoter……...…… ☐
4. Midwife……...…… ☐
5. Other (please specify) _____

18. Do you have the control card of your pregnancy? (or other document with the antenatal care registers)

1. Yes÷ ask her to show you it……...……... ☐
2. **No ↘ go to question 22. ……...** ☐

19. Write the number of TDA vacuums applied to the mother

1. One…...…….... ☐
2. Two…...……... ☐
3. More than two……... ☐
4. None……...……... ☐

20. Are there spaces for information regarding the prenatal visits in the card?

1. Yes…….. ☐
2. **No ↘ go to question 22. ……...** ☐

21. How many visits for prenatal care did you have at the Health Center while you were pregnant with (name of the girl/boy)? (see the carnet)

5. One…...…….... ☐
6. Two…...……... ☐
7. More than two……... ☐
8. None……...……... ☐

22. Do you know the danger signs of pregnancy? Please mention them. (Do not suggest the answers).

1. Headache…… ☐
2. Antepartum hemorrhage before labor pain……..……... ☐
3. Face or hand swelling…….. ☐
4. Convulsions……...…….…… ☐
5. High fever……..……...…… ☐
6. ***Palness, breathing trouble……*** ☐
7. Pain or ardency when urinating……. ☐
8. Other (please specify) _____
9. **Don't know ↘ (go to question 26)** ☐

23. Did you have any of these signs before labor began?

1. **Yes……** ☐
2. No ↘ go to question 26. …….. ☐

24. Did you ask for help or advice?

3. **Yes……** ☐
4. No ↘ go to question 26. …….. ☐

25. Whom did you ask for help or advice? (you may give more than one answer)

1. Health Unit located on the farm……... ☐
2. Private Doctor……...…….. ☐
3. Drugstore # l.……... ☐
4. Promoter…..……... ☐
5. Health Center or Health Station of the Ministry of Health……...…….. ☐
6. Health Unit of the NGOs……. ☐

7. Midwife……...…… ☐
8. Other (please specify) _____

Childbirth Characteristics

26. Where did you give birth to (write the name of the girl/boy)?

1. In your own home……...…...…….. ☐
2. In another house…...……... ☐
3. In a health facility……...……... ☐
4. In a hospital……. ☐

Other (please specify) _____

27. Who did assist you in giving birth to (please write the name of the girl/boy)? (you may give more than one answer)

1. Doctor……. ☐
2. **Nurse……..…… ☐**
3. Auxiliary nurse…….. ☐
4. Traditional midwife……...……. ☐
5. Volunteer in your community…..…….. ☐
6. Family member (please specify the family relation) _____
7. Other (please specify) _____
8. Unassisted childbirth...……...……... ☐

28. How was done the cutting of the umbilical cord?

1. New razor……... ☐

2. Scissors..……. ☐
3. Other instrument (please specify) _____
4. Do not know, do not remember ……. ☐

Postnatal

29. Are there spaces for information regarding the postnatal visits in the card? (please verify) **IF APPLICABLE (IF SHE HAS HER CARD)**

1. Yes…...……... ☐
2. **No ↘ go to question 31. ……** ☐

30. How many postnatal visits do you have after giving birth to (name of the boy/girl)?

1. One……..…… ☐
2. Two……..…… ☐
3. Three or more.……. ☐
4. None…….....…… ☐
5. Do not know / Do not remember ……. ☐

31. Do you know the danger signs after delivery? (Do not suggest the answers).

1. ***Severe vaginal bleeding……*** ☐
2. High fever……..……... ☐
3. Foul vaginal odor……...…….. ☐
4. Sharp pain in the lower part of the stomach ……. ☐
5. Other (please specify) _____
6. **Do not know ↘ (go to question 35). …….…….** ☐

32. Did you have any of those danger signs after childbirth?

1. **Yes…….** ☐

2. No ↘ go to question 35. ……

33. Did you ask for help or advice?

3. Yes……..
4. No ↘ go to question 35. ……...……

34. Whom did you ask for help or advice?

1. Health Unit located on the farm……...……...……...
2. Private Doctor…...……..
3. Drugstore……
4. Promoter…...……...
5. Health Center or Health Station of the Ministry of Health.……
6. Health Station of ONGs or ANACAFE /SIAS..……..…..
7. Midwife……..……
8. Other (please specify) _____

Child Immunizations

35. Does (name of the girl/boy) have an immunization record card? May I see it?

1. She shows the immunization record card to the interviewer. …….……
2. **Not available, it was lost ↘ go to question 36..……..……**
3. **She did not have an immunization record card for this boy ↘ go to question 36…….…..**
4. **Does not know, does not answer ↘ go to question 36….……..**

Write down the dates in the table below, exactly as on card

	Day		Month		Year	
BCG						
POLIO 0						
POLIO 1						
POLIO 2						
POLIO 3						
DPT 1						
DPT 2						
DPT 3						
MEASLES						
VITAMIN A						
PENTAVALENT						
TRIPLE VIRAL						

36. At what age should be the measles /SPR vaccine given to child?

1. _____ months
2. Do not know…….……. ☐

Malaria and fastidiousness:

37. What are malaria symptoms in children? (you may give more than one answer)

1. Do not know..……. ☐
2. Fever…...…… ☐
3. Recurring shivers and chills ..…… ☐
4. Headache…….....…… ☐
5. Convulsions……..…… ☐
6. Can not be breastfed……..…….. ☐
7. Other (please specify) _____

38. ¿What are fastidiousness symptoms in children? (you may give more than one answer)

1. Fever…...…… ☐
2. Headache…….....…… ☐
3. Muscular aches and pains……..…….. ☐
4. Bone pain…… ☐
5. Orbit – eye pain…….....…… ☐
6. Uneasy, irritated, crying…….……... ☐
7. Do not know……..……. ☐
8. Other (please specify) _____

39. Do you have mosquito net / bed canopy at home?

1. Yes…...……... ☐
2. **No ↘ go to question 42 ……...…..……...** ☐
3. **Do not know ↘ go to question 42 ……..……...** ☐

40. Who did sleep in a bed covered by a mosquito net / bed canopy yesterday? (you may give more than one answer)

1. **The girl/boy (index case)……..**
2. The mother…...……...
3. Other (please specify) _____

41. Does the mosquito net / bed canopy was treated with an insect-repelling liquid? (do not use an insecticide when use mosquito net / bed canopy)

1. Yes…….…….
2. No…...…….
3. Do not know……..……..……..

Childhood Illnesses and Management of Childhood Illnesses

42. How do you know when your kid is getting sick and needs treatment? (do not suggest the answers)

1. Looks sick, does not play as he/she used to do it……...…….……..
2. Do not eat, do not drink……..……
3. Lethargic, hard to wake……...…….
4. High fever……...…….
5. Rapid or difficult breathing…...……..
6. Frequent vomiting……...……..
7. Convulsions. ……...……
8. Other (plese specify) _____
9. Do not know..……...……...

43. Did (name of the girl/boy) have in the last two weeks any of these symptoms listed below?

Symptom or sign	Long-continued diarrhea or defecates blood	Cough, rapid or difficult breathing	Malaria/ **FastidiousnesS fever or** convulsions	Other: Please describe…………………………… .
A. Did she/he have this symptom	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No, other
B. Did you seek for medical advice or attention when your kid became ill?	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No
C. Whom did you ask for help or advice <u>first</u>?	1. BS Unit 2. Promoter 3. Center or station 4. Private provider 5. Hospital 6. Drugstore 7. Charlatan 8. Family/friend 9. Other……….. 10. None	1. BS Unit 2. Promoter 3. Center or station 4. Private provider 5. Hospital 6. Drugstore 7. Charlatan 8. Family/friend 9. Other……….. 10. None	1. BS Unit 2. Promoter 3. Center or station 4. Private provider 5. Hospital 6. Drugstore 7. Charlatan 8. Family/friend 9. Other……….. 10. None	1. BS Unit 2. Promoter 3. Center or station 4. Private provider 5. Hospital 6. Drugstore 7. Charlatan 8. Family/friend 9. Other……….. 10. None
D. Did anyone else give you help or advice?	1. BS Unit 2. Promoter 3. Center or station 4. Private provider 5. Hospital 6. Drugstore 7. Charlatan 8. Family/friend 9. Other……….. 10. None	1. BS Unit 2. Promoter 3. Center or station 4. Private provider 5. Hospital 6. Drugstore 7. Charlatan 8. Family/friend 9. Other……….. 10. None	1. BS Unit 2. Promoter 3. Center or station 4. Private provider 5. Hospital 6. Drugstore 7. Charlatan 8. Family/friend 9. Other……….. 10. None	1. BS Unit 2. Promoter 3. Center or station 4. Private provider 5. Hospital 6. Drugstore 7. Charlatan 8. Family/friend 9. Other……….. 10. None
E. Was the kid most, equal or less breastfed while she/he was sick?	1. Less 2. Equal 3. Most 4. Not breastfeeding	1. Less 2. Equal 3. Most 4. Not breastfed	1. Less 2. Equal 3. Most 4. Not breastfed 5.	1. Less 2. Equal 3. Most 4. Not breastfeeding
F. Did you give her/him less, equal or more drinks	1. Less 2. Equal 3. More	1. Less 2. Equal 3. More	1. Less 2. Equal 3. More	1. Less 2. Equal 3. More

Symptom or sign	Long-continued diarrhea or defecates blood	Cough, rapid or difficult breathing	Malaria/ **Fastidiousnes S fever or** convulsions	Other: Please describe…… .
while she/he was sick?				
G. Did she/he eat less, equal or more while she/he was sick?	1. Less 2. Equal 3. More 4. Do not eat	1. Less 2. Equal 3. More 4. Do not eat	1. Less 2. Equal 3. More 4. Do not eat	1. Less 2. Equal 3. More 4. Do not eat
H. What treatment did the kid receive? You may mark more than one answer. If she answers a medicament, ask her to show you it.	A. None B. Package of oral re-hydration (serum) C. Home-made beverages D. Medicaments…… . E. Other…	A. None B. Drinks C. Medicaments D. Food…… E. Other…	A. None B. Drinks C. Medicaments D. Food…… E. Other…	A. None B. Drinks C. Medicaments D. Food…… E. Other…

44. Did you bring your kid to the basic health unit at least once in the last year? (this question applies only for bordering farms and communities with basic health units)

1. Yes...…….. ☐
2. No...…… ☐

45. Would you bring her/him again?

1. Yes (↘ go to question 47). ……..…… ☐
2. No …….. ☐

46. Why not bring her/him again?

1. Because it is constantly closed…….. ☐
2. Because of the lack of medicaments.…….....…….. ☐

3. Because services are not delivery all day long……..…… ☐
4. Other (please specify) _____

Personal Hygiene

47. When should you wash your hands?

1. Never……... ☐
2. Before cooking……..…… ☐
3. **Before feeding children…….…… ……..** ☐
4. After defecating……...…….. ☐
5. After cleaning the bottom of a baby or child who had just defecated……..…. ☐
6. Other (please specify) _____

48. Where does (name of the child) usually defecate? (use the regional expression of "defecate")

1. Sanitary or latrine facility…..…..……...…….. ☐
2. On any square or place of the family property……..…..... ☐
3. Open ground..……..……... ☐
4. Directly into rivers, canals or water flowing..……..……. ☐
5. Diaper/Small chamber pot……..……. ☐
6. Other (please specify) _____

49. Do your family have access daily to any sanitary or latrine facility?

1. Yes. …… ☐
2. No. …….. ☐

Radio Messages

50. Do you remember hearing any message regarding child or maternal health on the radio last month?

1. Yes...…….. ☐
2. **No ↘ (go to question 52). ……..** ☐

51. Do you remember the content of those radio messages? (please specify)

1. Do not remember……. ☐
2. Child health (please specify)_____
3. Maternal health (please specify) _____
4. Reproductive health (please specify)_____
5. Family health (please specify) _____

Anthropometry

52. Weigh the child and measure his/her length (lying down). Register the child's weight in pounds. Register the length to the nearest centimeter.

Weigh ☐☐ ☐ Pounds

Length ☐☐☐ ☐ Cm

Age in months ☐☐

Finish the interview

PROJECT HOPE

SURVEY OF WOMEN OF FERTILE AGE

GUATEMALA 2005

Identification No.: __ __ __ __

(It does not include the mothers interviewed with children less than 2 years old)

Department _____	( )	Municipality _____	( )
Community _____	( )	Farm_____	( )

A. Interview Date: ……./……../…….

Day Month Year

Interviewer Name _____	( )
Supervisor ____Dra. Anabela Aragón_____	( )

General Data from Woman of Fertile Age

Name of the woman being interviewed _____

First name Last name

1. Are you pregnant?

    1. Yes. …… ☐
    2. No. …… ☐

2. How old are you exactly? _____ years _____ months

3. Have you ever attended school?

1. Yes …… ☐
2. **No ↘ (go to question 5). ……** ☐

4. What was the last grade you completed in school?_____ grade

5. What is the most commonly used language in your home?

1. Español. …….. ☐
2. Quiché. …… ☐
3. Mam. ……... ☐
4. Other (please specify) _____

6. Do you work out of your house?

1. Yes. …… ☐
2. **No ↘ (go to question 8). ……..……...** ☐

7. What kind of work do you do for gaining money?

1. None…….……..……. ☐
2. Craftsmanship. …… ☐
3. Fruit harvest. ……...…… ☐
4. Selling of agro products. ……. ☐
5. Remunerated Domestic Services…..…… ☐
6. Store owner/street selle……..……...…….. ☐
7. Paid worker. ……..…….. ☐
8. Other (please, specify) _____

STIs/AIDS -Knowledge

8. Have you ever heard of an illness called AIDS?

1. Yes..…….…… ☐
2. **No ↘ Go to question 10. ……** ☐

9. Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS?

1. Nothing….……... ☐
2. Abstinence: not having sexual intercourse……...……... ☐
3. Condom use…….……..... ☐
4. Limit the sexual behavior to one partner, sexual fidelity ……..…….. ☐
5. Limit the number of sexual partners…..…….…... ☐
6. Avoid sex with prostitutes…….…... ☐
7. Avoid sex with persons who have a lot of sex partners……..……. ☐
8. Avoid sex with persons of the same sex…...……..……. ☐
9. Avoid sex with persons who consume drugs……... ☐
10. Avoid blood transfusions……...……..……... ☐
11. Avoid injections..……. ☐
12. Avoid kisses…...……... ☐
13. Avoid mosquito bites ……...……... ☐
14. Search for tradicional medicine……...……. ☐
15. Avoid sharing razors, blades……..……. ☐
16. Don't know…..…….. ☐
17. Other (please, specify) _____

10. When can you think a man may be infected by a sexually transmitted disease?

1. Abdominal pain……...…… ☐
2. Urethral secretion. ……..…… ☐
3. Ill-smelling urethral secretion..……...…….. ☐
4. Pain like ardency when urinating. ……...……... ☐

5. Inflammation of genital area (red, hot and swollen)…….…. ☐
6. Genital ulceration……...……. ☐
7. Genital warts……... ☐
8. Bloody urine……..…….. ☐
9. Weight lost…….. ☐
10. Impotence...……. ☐
11. No symptoms ……..……..……... ☐
12. Don't know …….. ☐
13. Other (please, specify) _____

11. When can you think a woman may be infected by a sexually transmitted disease?

1. Abdominal pain……...…… ☐
2. Vaginal secretion. ……..…... ☐
3. Ill-smelling vaginal secretion. ……...……...…… ☐
4. Pain like ardency when urinating. ……...……... ☐
5. Inflammation of genital area (red, hot and swollen)…….…. ☐
6. Genital ulceration……...……. ☐
7. Genital warts……... ☐
8. Bloody urine……..…….. ☐
9. Weight lost…….. ☐
10. Sterility……...…….. ☐
11. No symptoms ……..……..……... ☐
12. Don't know …….. ☐
13. Other (please, specify) _____

Family Planning

12. What family planning methods do you know or have you heard about?

1. Female sterilization operation……..…...……. ☐
2. Vasectomy/male sterilization operation……..…… ☐
3. Norplant birth control. ……...……. ☐
4. Contraceptive injections.……..…… ☐
5. Pastillas anticonceptivas. …… ☐
6. Intrauterine device/IUD……...……...……. ☐
7. Condoms……..……... ☐
8. Contraceptive foam or gel.…….. ☐
9. Exclusive breastfeeding……..…….. ☐
10. Rhythm or "collar" method.……...……... ☐
11. Abstinence: not having sexual intercourse……...……... ☐
12. Sexual intercourse deliberately interrupted……. ☐
13. Don't know …….. ☐
14. Other (please, specify) _____

13. Do you want to have kids in the next two years?

1. Yes……... ☐
2. No. …….. ☐
3. Don't know/not sure ……..…….. ☐

14. Are you or your sexual partner using now a birth control method or avoiding the risk of having more babies?

1. Yes ……. ☐
2. No (go to question 16). ……. ☐

15. Which method?

14. Female sterilization operation……..…...……. ☐
15. Vasectomy/male sterilization operation……...…… ☐
16. Norplant birth control. ……...……. ☐

17. Contraceptive injections.…… ☐
18. Pastillas anticonceptivas. …… ☐
19. Intrauterine device/IUD……...……..……. ☐
20. Condoms……..……... ☐
21. Contraceptive foam or gel.…….. ☐
22. Exclusive breastfeeding.……..…….. ☐
23. Rhythm or "collar" method……..……... ☐
24. Abstinence: not having sexual intercourse……...……... ☐
25. Sexual intercourse deliberately interrupted……. ☐
26. Don't know…..…….. ☐
14. Other (please, specify) _____ ☐

Personal Hygiene

16. Hand-washing practices. When should you wash your hands?

1. Never..……. ☐
2. Before cooking……..…….. ☐
3. **Before feeding children…..…… ……** ☐
4. After defecating……...…… ☐
5. After cleaning the bottom of a baby or child who has just defecated……...……... ☐
6. Other (please, specify) _____

17. Where do you and your family usually defecate? (use the term used locally for "defecate")

1. Sanitary or latrine facility…..…..…….. ☐
2. On any square or place of the family property……..……... ☐
3. Open ground..……..……... ☐
4. Directly into rivers, canals or water flowing..……...……. ☐

5. Other (please, specify) _____ ☐

18. Do you and your family have access daily to any sanitary or latrine facility?

3. Yes. …… ☐
4. No. …….. ☐

Radio Messages

19. Do you remember if you heard last month any message regarding child & maternal health on the radio?

1. Yes ……...…… ☐
2. No ↘ go to question 21. …….. ☐

20. Do you remember the content of those messages on radio?

1. Don't remember ……...……... ☐
2. Child health (please specify) _____. ...……..... ☐
3. Maternal health (please specify) _____. ……... ☐
4. Reproductive health (please specify) _____. ……..... ☐
5. Family health (please specify) _____. …….…… ☐

Health Services

21. Have you receive the services of the on-farm basic health unit at least once during the last year? (Only for the nearby farms and communities with basic health units)

1. Yes ……...…….. ☐

2. No (finish the interview). …….. ☐

22. Would you come again?

1. Yes (finish the interview).……... ☐
2. No. …….. ☐

23. Why you wouldn't come again?

1. Because it is constantly closed…… ☐
2. Because there aren't enough medicaments……...……...…… ☐
3. Services are not delivered all day long……..…….. ☐
4. **Other (please, specify) _____** ☐

FINISH THE INTERVIEW

ANNEX F: PROJECT DATA SHEET FORM

Child Survival and Health Grants Program Project Summary

Oct-06-2005

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General Project Information:

Field Program Manager Information:

Name: Francisco Torres Address: Project HOPE/Nicaragua
Managua , Nicaragua Phone: 011-505-278-0116, 270 31 24 E-mail: hopenic1@cablenet.com.ni

Alternate Field Contact:

Name: Alejandro Soza Address: Colonia Los Robles No. 72 De la Funeraria
Managua , Phone: 011-505-270-3124 E-mail: hopenic2@cablenet.com.ni

Funding Information:

USAID Funding:(US $): PVO match:(US $)

Project Information:

Description:

Project Partners:
SILAIS Jinotega

General Strategies Planned:

Private Sector Involvement Strengthen Decentralized Health System Information System Technologies

M&E Assessment Strategies:

KPC Survey Health Facility Assessment Organizational Capacity Assessment with Local Partners Organizational Capacity Assessment for your own PVO Lot Quality Assurance Sampling Participatory Evaluation Techniques (for mid-term or final evaluation)

Behavior Change & Communication (BCC) Strategies:

Interpersonal Communication Peer
Communication Support Groups

Groups targeted for Capacity Building:

PVO	Non-Govt Partners	Other Private Sector	Govt	Community
Field Office HQ CS Project Team	(None Selected)	Business	Dist. Health System Health Facility Staff	CHWs

Interventions/Program Components:

Immunizations (7 %)
(IMCI Integration)

Nutrition (13 %)
(IMCI Integration) (CHW Training)
-Comp. Feed. from 6 mos.
-Growth Monitoring
-Maternal Nutrition

Pneumonia (10 %)
(IMCI Integration) (CHW Training)
-Pneum. Case Mngmnt.
-Access to Providers Antibiotics
-Recognition of Pneumonia Danger Signs

Control of Diarrheal Diseases (15 %)
(IMCI Integration) (CHW Training)

-Hand Washing
-ORS/Home Fluids
-Feeding/Breastfeeding
-Case Mngmnt./Counseling

Maternal & Newborn Care (30 %)

(IMCI Integration) (CHW Training)
-Recog. of Danger signs
-Newborn Care
-Post partum Care
-Delay 1st preg Child Spacing
-Normal Delivery Care
-Birth Plans
-Emergency Transport

Child Spacing (10 %)

(IMCI Integration) (CHW Training)
-Child Spacing Promotion

Breastfeeding (10 %)

(IMCI Integration) (CHW Training)
-Promote Excl. BF to 6 Months
-Intro. or promotion of LAM

HIV/AIDS (5 %)

(CHW Training)

Target Beneficiaries:

Infants < 12 months:	8,101
Children 12-23 months:	8,149
Children 0-23 months:	16,250
Children 24-59 months:	43,781
Women 15-49 years:	70,827
Population of Target Area:	254,192

Rapid Catch Indicators:

Indicator	Numerator	Denominator	Percentage	Confidence Interval
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)	18	304	5.9%	2.7
Percentage of children age 0-23 months who were born at least 24 months after the previous surviving child	263	304	86.5%	3.8
Percentage of children age 0-23 months whose births were attended by skilled health personnel	172	304	56.6%	5.6
Percentage of mothers of children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	114	304	37.5%	5.4
Percentage of infants age 0-5 months who were exclusively breastfed in the last 24 hours	31	76	40.8%	11.0
Percentage of infants age 6-9 months receiving breastmilk and complementary foods	41	53	77.4%	11.3
Percentage of children age 12-23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday	123	152	80.9%	6.2
Percentage of children age 12-23 months who received a measles vaccine	124	152	81.6%	6.2

Percentage of children age 0-23 months who slept under an insecticide-treated bednet the previous night (in malaria-risk areas only)	83	304	27.3%	5.0
Percentage of mothers who know at least two signs of childhood illness that indicate the need for treatment	275	304	90.5%	3.3
Percentage of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	21	158	13.3%	5.3
Percentage of mothers of children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	53	304	17.4%	4.3
Percentage of mothers of children age 0-23 months who wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated	34	304	11.2%	3.5

Comments for Rapid Catch Indicator