CURAMERICAS/GUATEMALA
CENSUS-BASED, IMPACT-ORIENTED CHILD SURVIVAL PROJECT
OCTOBER 1, 2002 – SEPTEMBER 30, 2007

FINAL EVALUATION REPORT

Municipalities of San Miguel Acatan, San Rafael La Independencia, and San Sebastian Coatan
Department of Huehuetenango, Guatemala

Dates: August 21 – September 7 - 2007

Elvira Beracochea, Evaluation Team Leader and External Consultant
Mario Valdez, Child Survival Program Director, Curamericas/Guatemala
Henry Perry, International Program Coordinator, Curamericas Global Headquarters/USA
Nancy Nix, Senior Program Specialist, Curamericas Global Headquarters/USA
Gina Stracuzzi, Evaluation Team Assistant, Volunteer

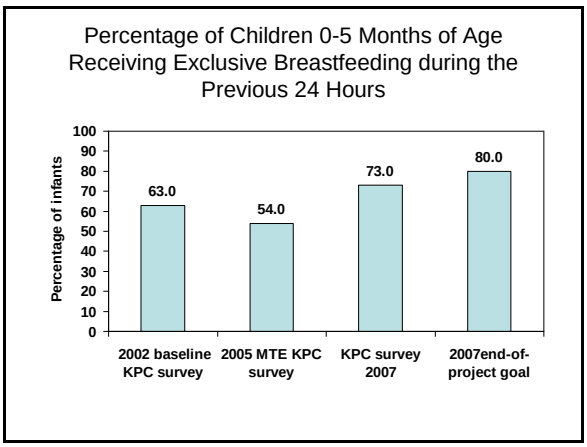
This Final Evaluation was completed in compliance with Cooperative Agreement
HFP-A-10-02-00034-00

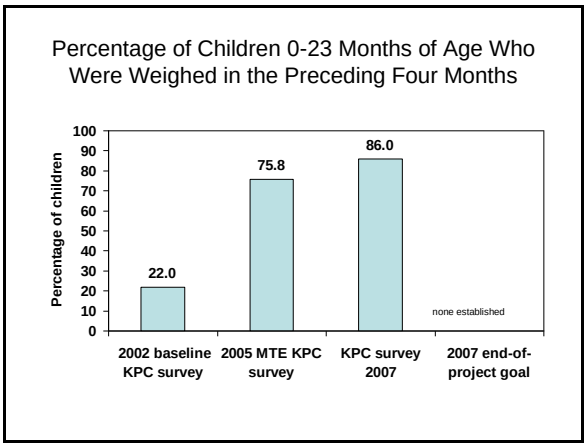
Submitted to:
USAID/GH/HIDN/NUT/CSHGP
U.S. Agency for International Development, Ronald Reagan Building,
1300 Pennsylvania Avenue NW, Room 3.7-74, Washington, D.C. 20523-3700

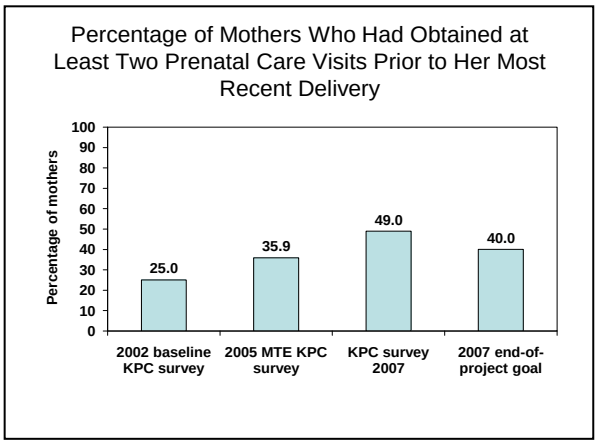
Submitted by:
Curamericas Global, Inc., 2245 North Hills Drive, Suite E, Raleigh, NC 27612
Telephone: 919-510-8787 Fax: 919-501-8611

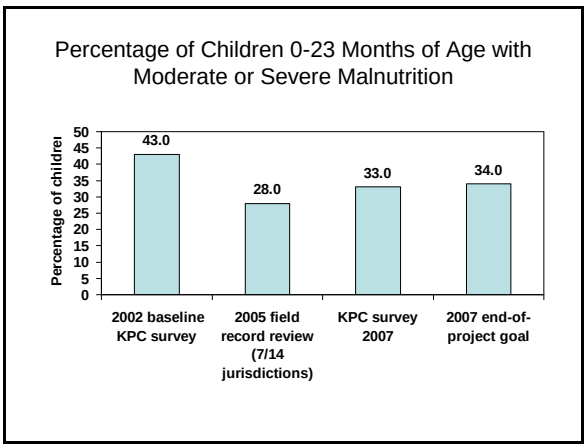
[February 20, 2026]

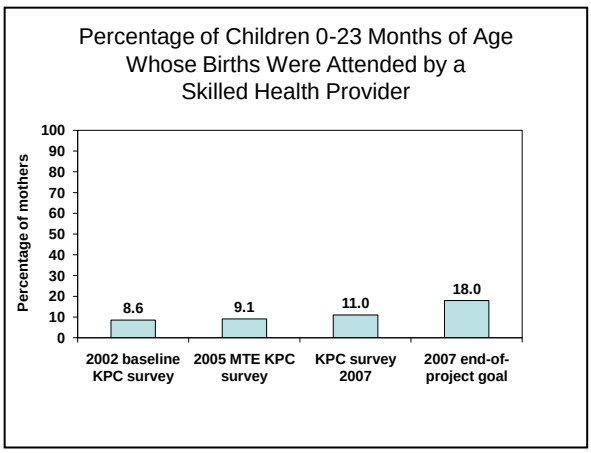
Major Project Achievements

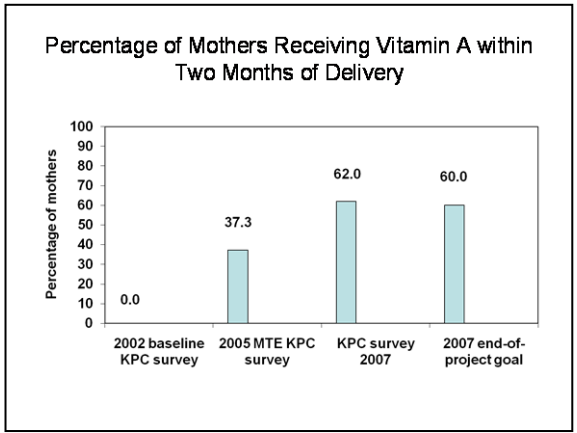




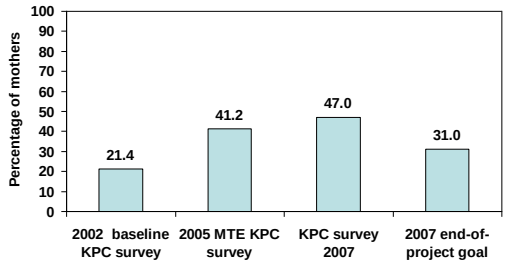




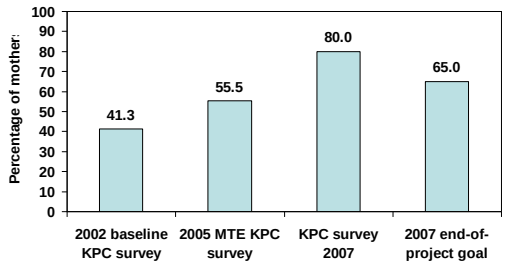




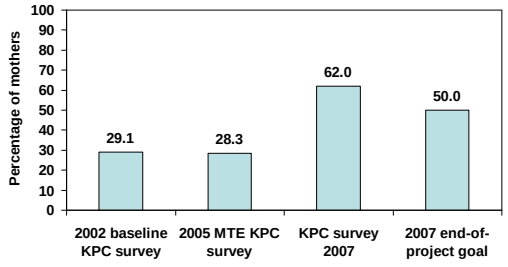
Percentage of (Non-Pregnant) Mothers Who Desire No More Children in the Next Two Years (or Who Aren't Sure) Who Are Using a Modern Method of Child Spacing



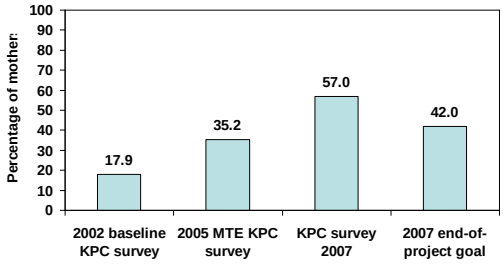
Percentage of Mothers of Infants Who Know at Least One Place Where She Can Obtain a Method of Child Spacing



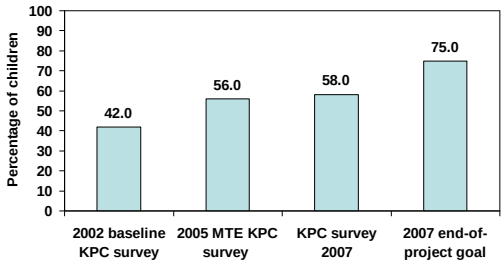
Percentage of Children 0-23 Months of Age with Cough and Fast/Difficult Breathing Who Were Taken to a Health Facility or Who Received Antibiotics from an Alternative Source



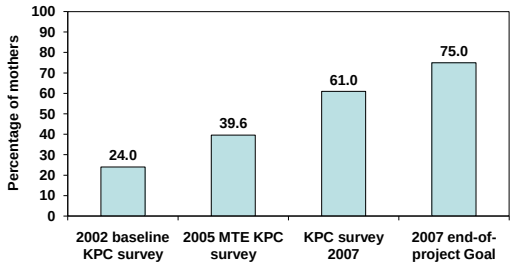
Percentage of Children 0-23 Months of Age with Diarrhea Who Received Oral Rehydration (ORS) and/or Recommended Home Fluids (RHFs)



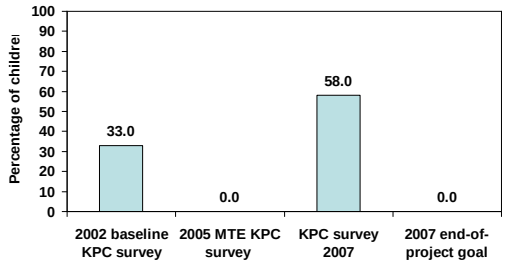
Percentage of Children 13-23 Months of Age Completely Vaccinated before 13 Months of Age



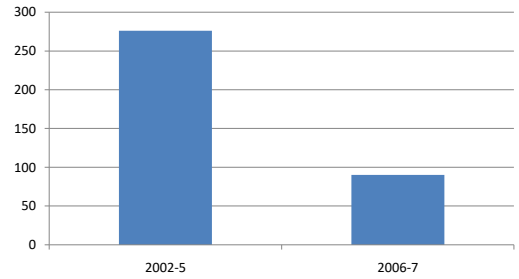
Percentage of Mothers of Children 0-23 Months of Age Who Know at Least Two Signs of Childhood Illness Which Indicate the Need for Treatment



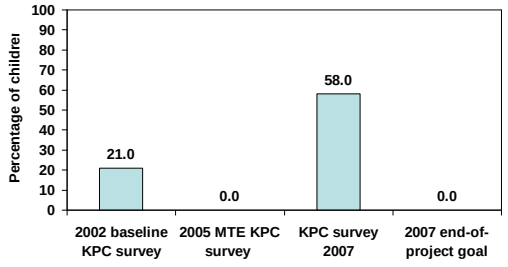
Percentage of Mothers that Recieved or Purchased Iron Tablets During their Last Pregnancy.



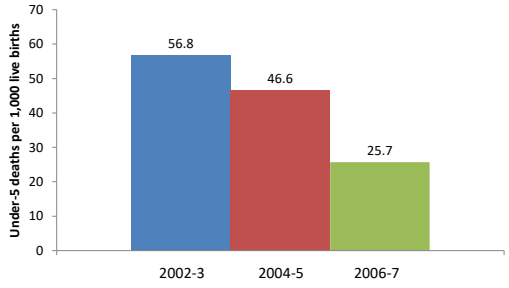
Maternal Mortality Ratio by Year, 2002-2007



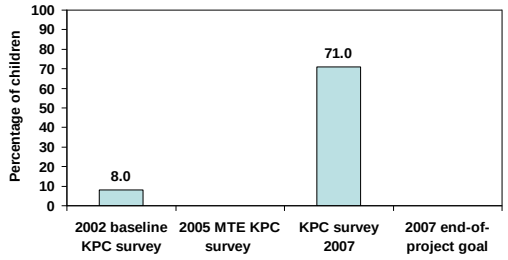
Percentage of mothers that know at least two danger signs of children's illnesses



Trends in Under-five Mortality Rate by Municipality and Year, 2002-2007, San Sebastian



Percentage of Mothers of Children 0-23 Months that Received Health Education in the Last 3 Months



Percentage of Mothers Receiving at Least Two Tetanus Toxoid Immunizations Prior the Birth of Her Child

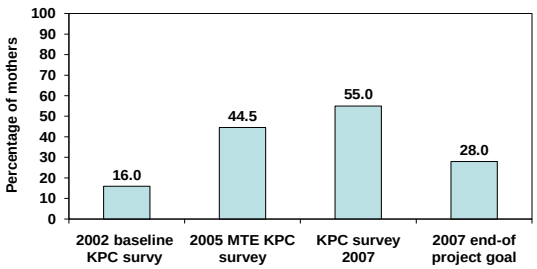


TABLE OF CONTENTS

Acknowledgements

Dr. Elvira Beracochea, the External Evaluator would like to give thanks to the Curamericas/Guatemala CBIO Child Survival Project Team members -- and especially Dr. Mario Valdez -- for their hospitality and hard work and to the people of the Project area for their participation and cooperation in the preparation of this report. We are also very grateful to Henry Perry (International Program Coordinator, Curamericas-Global, Inc.) and Nancy Nix (Senior Program Specialist, Curamericas-Global, Inc), and Gina Stracuzzi, (Evaluation Assistant, Volunteer) for their participation in the evaluation and their assistance with the evaluation analysis and the preparation of this report.

Acronyms and Definitions

ANC	Antenatal Care
ARI	Acute Respiratory Infection
BCC	Behavior Change Communication
CBIO	Census-Based, Impact-Oriented
CDD	Control of Diarrheal Diseases
CG	Care Group
CI	Confidence Interval
CS	Child Survival
DHS	Demographic Health Survey
DIP	Detailed Implementation Plan
DPT	Diphtheria, Pertussis and Tetanus (Immunization)
EOP	End of Project
EOC	Emergency Obstetric Care
EBF	Exclusive breastfeeding
EPI	Expanded Program of Immunizations
CF	Community Facilitator (*Facilitador/a Comunitaria/o*)
FE	Final Evaluation
IF	Institutional Facilitator (*Facilitador/a Institucional*)
GM/P	Growth Monitoring and Promotion
HFA	Health Facility Assessment
HIS	Health Information System
HH	Households
HQ	Headquarters
IMCI	Integrated Management of Childhood Illness
KPC	Knowledge, Practice and Coverage
LQAS	Lot Quality Assurance Sampling
MCH	Maternal and Child Health
MOH	Ministry of Health
MTE	Mid-Term Evaluation
NGO	Non-Governmental Organization
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PD	Positive Deviance
PHN	Population, Health, and Nutrition
PVO	Private Voluntary Organization
QIV	Quality Improvement Verification
RHFs	Recommended Home Fluids
SIAS	*Sistema Integral de Atención de Salud* (Integrated System of Health Care, a government program)
TBA	Traditional Birth Attendant
TT	Tetanus Toxoid (immunization)
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WAZ	Weight-for-age Z score
WRA	Women of Reproductive Age

A. Executive Summary

This report presents the final evaluation of the Curamericas/Guatemala Census-Based, Impact-Oriented (CBIO) Child Survival Project. The project started on October 1, 2002 and ended on September 30, 2007. It has served three very isolated districts or municipalities in the Department of Huehuetenango in northwest Guatemala. Within these municipalities, Curamericas chose the most isolated communities with the highest mortality rates. The terrain is very rugged, and although new roads are being built at this time, there are still communities that cannot be reached by vehicle. The rainy season and consequent mudslides make most roads impassable.

In addition to infrastructure challenges, each district has different cultural backgrounds and uses different languages. Akateko is spoken in San Miguel Acatan and San Rafael La Independencia, and Chuj is spoken in San Sebastian Coatan. The health facilities network and the degree of development of community-based services were very different in each district. By the time the project started, the population of the district of San Sebastian Coatan had had over ten years of experience working with various community-based providers, while the populations in the district of San Rafael La Independencia had had none and the district of San Miguel Acatan was in the middle of this spectrum. The three districts have also suffered from the long tradition of distrust of community development activities, a remnant of a 30-year civil war, which ended only one decade ago. Language and culture differences posed various implementation challenges that the project addressed by hiring staff and engaging community workers from those communities that spoke the local language, and by developing communication materials in Spanish and the local language.

The target population has decreased over the life of the project due to outward migration. At the time of the mid-term evaluation (MTE), there were 12,281 children 0 to 59 months of age and 14,272 women of reproductive age (WRA). At the time of the final evaluation (FE), there were 11,134 children and 11,123 WRA. The total population of the project area at MTE was 66,381 persons. At the time of the final evaluation, there were 62,428 in 118 villages (*aldeas*) of which 49 are in San Sebastian Coatan, 21 in San Rafael La Independencia and 48 in San Miguel Acatan.

In this context, the Project partnered with the Ministry of Health (MOH) and the communities to provide well-known and effective child survival interventions and assigned a level of effort according to the magnitude of the problems: Nutrition (including breastfeeding promotion) had 30% of the level of effort (LOE); Maternal and newborn care, 25%; Childhood pneumonia, 15%; Control of childhood diarrhea, 10%; Child spacing, 10%; and Immunizations had 10%.

The project objectives were to:

- Improve the scope and the quality of preventive and curative care provided to children and pregnant women through household visits, outreach, and improved facility-based care; and,

- Improve the prevention of childhood illness in the home, as well as improve the home recognition, treatment and care-seeking for illness when it occurs.

Overall Technical Approach

To reach these objectives, the Project combined the Census-Based, Impact-Oriented (CBIO) Methodology with the Care Group Model. The Care Group Model included the training and support of a network of village health volunteers, which included 321 Health Communicators (*Comunicadoras en Salud*), who were each responsible for 10-15 surrounding households. It was projected the number of *Comunicadoras* would reach over 400 but resistance from husbands and family prevented involvement of a number of mothers who had expressed interest to join the project at the beginning. At first, the *Comunicadoras* hardly reached 200 but resistance has decreased and now more mothers want to join. The Health Communicator held mothers' group meetings, called Self-Care groups (*Grupos de Autocuidado*) with those living in households in her jurisdiction and made home visits, according to the health needs of each family. By the end of the project, there were over 300 active Self-Care Groups, each lead by one Health Communicator.

The network of community workers also included 62 project-paid Community Facilitators (CFs, or *Facilitadores Comunitarios*), who had additional training to support the work of the Health Communicators. Community Facilitators were paid an average of 500 quetzales (about US$80) depending on the number of communities they served. These facilitators also provided services at preventive care facilities called "*Centros de Convergencia.*" Groups of ten Health Communicators form a Care Group (*Grupo de Cuidado*), which met monthly with a Community Facilitator for continuing education and reporting of project activities, including reporting of births and deaths; the Community Facilitators were trained and supported by three Health Educators, one in each municipality. The Health Educator was also in charge of observing and supervising the CFs to ensure the quality and consistency of their work and of the health messages.

To improve facility-based care, the project trained and supported 15 Institutional Facilitators (IFs, or *Facilitadoras Institucionales),* who staffed equal number of minimum health facilities (*Unidades Minimas*). The IF, usually an auxiliary nurse, was responsible for all the health activities in the jurisdiction. The IF planned, implemented and monitored all the Project's child survival (CS) indicators in his/her jurisdiction according to the project work plan. The IF also conducted focus group discussions and collected data for operational research and Knowledge, Practice and Coverage (KPC) surveys. He or she also built the capacity, supervised the CFs in his/her jurisdiction and accompanied the CFs in selected home visits that the CF had identified. The IF also gathered the vital events information provided by the CFs in his/her jurisdiction.

The CBIO Methodology was one of the most important reasons -- if not the main reason -- for the success of this project. It involved determining local health priorities as defined both by locally acquired epidemiological information and by the local people

themselves. The CBIO approach was strongly community-based because of the community partnerships, which emerged in the process of gathering vital information and defining health priorities as well as in the process of program implementation and evaluation. The mid-term evaluation (MTE) revealed that the CBIO Child Survival Project had made strong progress towards meeting End of Project (EOP) objectives. Then, the Project had also made remarkable progress in building partnerships with the communities, mapping the communities to identify all households and conducting a census of all the identified households. This was a major effort, particularly in light of the isolation and difficult terrain of the Project area and the initial distrust and suspicion encountered in the communities. In the final evaluation, the CBIO Methodology also demonstrated to be a simple, and at the same time, effective approach to improve CS indicators based on reliable census information.

In fact, one of the advantages of the combination of the CBIO and Care Group methodologies used in the Project was that they included the registration of vital events and monitoring of mortality rates, which allowed the continuous assessment of project impact. At the point of MTE, community participation was still low and coverage of vital events registration was still incomplete. Therefore, baseline levels of under-five and maternal mortality were based on incomplete reporting of vital events. Thus, there was no objective statistical evidence yet concerning mortality impact. During the final evaluation mortality impact was assessed. It was then possible to determine that the project had a significant impact on improving recording and on mortality rates. The mortality curve shows that the project had particular significant impact in the last two years, when reporting and verbal autopsies became routine. This also suggests that it takes time to reach mortality impact and it may need a certain critical mass in terms of the number of families reached and of mothers whose behaviors changed.

The final evaluation was a participatory exercise that took place from August 27 to September 7, 2007. The evaluation methodology consisted of three days of field visits throughout the Project area, numerous discussions with the Project staff, interviews with key informants, including USAID and Curamericas Global HQ staff, focus groups in the communities, review of the July 2007 Mini-KPC survey, and analysis of field records for part of the Project area.

The final evaluation team first discussed the steps taken to respond to the recommendations of the MTE, and we found that the project had perceived the recommendations as excellent opportunities to improve their work and had addressed them all. One of the recommendations from the MTE was to improve health education practices based on what appeared to be an over-reliance on didactic and written teaching methods, and a lack of full engagement among those being taught. The project team gathered “adult education” materials and studied various methodologies in order to modify its educational approach to be more participatory and interactive. The improved educational methodology was rapidly scaled up to all three project sites.

Major Findings

The Project has reached 20 of its 24 ambitious indicators. The remaining four were achieved in several jurisdictions but not in the Project as a whole. However, given the current trend, it is expected that within a year, all districts would be would be reaching all indicators.

The Project improved nutrition practices, including exclusive breastfeeding, in all three municipalities, and the percentage of malnourished children decreased from 43% to 33% beyond the EOP target (34%). It was also reported that improvements in nutrition were related to improvements in newborn care. Immediate and exclusive breastfeeding increased from 54% in the MTE to 73% in the final KPC, but below the 80% of the EOP target. However, this target was exceeded in all three jurisdictions of San Miguel, in some cases reaching 90% and 87%. The operational research conducted by the project team showed that the baseline survey had probably overestimated the prevalence of exclusive breastfeeding and mothers were afraid to say they preferred the use of baby bottles. Consequently, the practice of providing other liquids was underestimated. Mothers also reported they discarded colostrum because they believed this first milk was "weak" and was just the result of breast impurities collected during the pregnancy. Educational materials were adjusted to address this belief and the number of mothers that gave exclusive breastfeeding in the first 24 hours of life has increased.

The provision of vitamin A to post-partum mothers increased from zero at baseline to 67%, exceeding the EOP target (60%) in the project area. Mothers reported that they value receiving the vitamin right after birth. The perceived value of vitamin A facilitated birth reporting because mothers wanted to receive the vitamin as soon as possible.

Maternal health has also improved and the project exceeded the EOP target (40%) reaching 49% of mothers that had two or more antenatal visits. The percentage of mothers that received iron tablets has increased from 33% to 58% as well. Delivery by a skilled attendant has increased but is still low, not reaching the EOP target. The lack of delivery facilities open 24 hours and the rugged terrain make it very hard for mothers to access a skilled attendant. The project has trained Traditional Birth Attendants (TBAs), though, and has worked with the communities to build maternity waiting homes. One was successfully opened in San Sebastian where the community is very active and involved. The project also partnered with local NGOs to provide clean newborn kits to expecting mothers.

The management of childhood pneumonia and diarrhea has improved remarkably. The percentage of mothers that sought care for children with cough and fast/difficult breathing increased to 62%, also exceeding the 50% EOP target. The percentage of children that received Oral Rehydration Solution (ORS) or Recommended Home Fluids (RHFs) increased to 57% exceeding the 42% EOP target. The percentage of mothers that were able to report at least two danger signs of children's illnesses which indicate the need for treatment increased from 24% at baseline to 61% but did not reach the EOP target of 75%. This indicator was reached and exceeded in selected jurisdictions, though.

Birth spacing practices using a modern method have greatly increased and exceeded EOP target (31%), reaching 47% of the mothers who do not want to have a child in the next two years. The number of mothers that know where to obtain child spacing methods has reached 80% and far exceeded the EOP target (65%).

Immunization coverage, defined as the percentage of children 13-23 months of age with all the recommended immunizations obtained before reaching 13 months of age, has reached 58% from 42% at baseline, but it is below the 75% EOP target. Only one jurisdiction in San Sebastian exceeded the EOP target by reaching 84% coverage, thus demonstrating it is possible with high community involvement and participation. It is important to note that the project has focused on education and mobilization of mothers and not on the provision of vaccines, which is the MOH's responsibility. Furthermore, the MOH guidelines do not allow a child to receive measles immunization until the child is 12 months of age, so there is only a one-month "window" for children to be fully immunized according to the criteria for this indicator. Coverage of tetanus toxoid immunization (TT) of mothers was 55%, double the EOP target of 28%.

The mothers that participated in the focus group discussions showed a high level of interest and participation in the Project activities, particularly in San Sebastian, where over 50 mothers came in the middle of heavy rain to participate in the focus group discussions. This was not surprising because San Sebastian is the municipality with the highest participation and longest exposure to community-based MCH activities and where Curamericas is highly respected. Mothers reported satisfaction with the knowledge gained about how to keep their children healthy and about when to get them immunized. They also valued improvements in the quality of care received and reported to have observed fewer child deaths. They expressed concerns about maternal deaths and the lack of medicines and care when they are sick, particularly after-hours and on weekends, but all reported to have perceived fewer children dying now.

The most significant change identified by the surveyed project staff was the increase in women's participation and their desire to learn more about how to prevent diseases. This single factor was reported to be the main contributor to the differences in project performance in the three municipalities. The role of women is also valued more and women are perceived to be taking charge of their health and that of their families. One of the most significant life-changing stories is that of one of the mothers who joined the project first as a mother, then as a *Comunicadora*, then as a CF and now is one of the most recognized health educators in the Chuj communities. She recorded the project's radio health messages in Chuj and mothers recognize her voice and ask her to come to talk to them about how to prevent diseases.

Good project design and consistent and systematic implementation permitted the rapid retrieval of information and documentation of project results during the final evaluation. The project has effectively demonstrated the use of monitoring data, particularly mortality and vital events to plan activities and to use project performance indicators to improve its operations. There are also a number of CS best practices that

Curamericas has incorporated to add value to "*Sistema Integrado de Asistencia de Salud" (SIAS)* which will sustain USAID's investments in improving the quality of life in these three districts. The SIAS is a nationwide program funded by the Government of Guatemala, USAID and other donors. This program provides grants to local organizations to deliver a package of basic health services. Another success of the Project is that it has been able to enter into the SIAS program in order to achieve sustainability of project operations.

Conclusions and Recommendations

The CBIO Methodology and the Care Group Model have demonstrated to be effective in improving Child Survival. In addition to a very high return on the investment in this project, USAID also has a very good child survival model that has demonstrated to work even in very remote areas. The Project also produced several self-standing effective tools and procedures that already add value and that are being easily incorporated into SIAS. In fact, these tools should be incorporated in other CS projects worldwide. These project tools and procedures will sustain and help scale-up services access and delivery. The permanence of Curamericas/Guatemala will allow that these successful models help strengthen CS activities nationwide.

The project has achieved 20 of the 24 indicators. However, to appreciate the real impact of the project at the time of the final evaluation, these indicators need to be disaggregated by jurisdiction. There are jurisdictions that have achieved all 24 indicators and some which have not. Jurisdictions new to child survival interventions consistently scored lower than those with longer exposure to maternal health education, and other child survival interventions. These variations observed by municipality in the EOP indicators suggest that the arbitrary five-year grant period is insufficient, and that further significant child survival impact can be achieved with longer involvement. A 10- to 15-year commitment to child survival interventions seems to be required to achieve impact as demonstrated by the differences between municipalities and jurisdictions. We recommend that Curamericas identify funding to initiate and sustain child survival activities for 10- to 15-years to achieve consistent and institutionalized results in the new areas and help them achieve the same level of success as the others. It was evident that a number of jurisdictions are just about to reach the tipping point and require further input in order not to lose momentum.

We want to highlight the following important conclusions:

1. The Project has achieved 20 of its 24 targets and made considerable progress in the remaining four targets.
2. The CBIO and Care Group methods were effective and suited for this project area. However, because of certain mitigating circumstances the relatively short five-year program length was not sufficient for some jurisdictions to reach targets, particularly for San Rafael La Independencia, which is a municipality that had no previous experience with community-based services and distrusted outsiders until this project started.

3. The Project achieved significant mortality impact. Mortality monitoring and verbal autopsies allowed the Project to focus on weaker jurisdictions and villages.
4. The community component consisting of Care Groups was instrumental in organizing the demand for services and in reaching the Project's results.
5. Women's participation increased and was pivotal to the increased coverage of child survival interventions.
6. The staff is highly committed, hard working and competent; there is a strong team spirit.
7. Curamericas/Guatemala is sustaining its progress and continues to advance building on the Project's achievements through SIAS.

Here are the immediate recommendations for the Curamericas team:

1. Share lessons learned to strengthen the community component of SIAS.
2. Continue to use and scale-up the CBIO Methodology, Care Group Model, and lessons learned and tools.
3. Continue mortality monitoring and verbal autopsies.
4. Develop the emergency obstetric care referral network for the region.
5. Implement community-based treatment of pneumonia.
6. Strengthen pharmaceutical logistics and implement community-based distribution of contraceptives.
7. Identify bridge funding for the Municipality of San Rafael La Independencia.

In sum, Curamericas Global has established themselves as leaders in Child Survival through this project. They have demonstrated the CBIO approach is a cost-effective, evidence-based approach to implementing well-known child survival interventions. When combined with the Care Group Model, the CBIO approach empowers women and communities to participate actively in the process of health care delivery and achieves significant results in relatively short periods, even within remote populations. We recommend that Curamericas Global promote and disseminate this flagship approach for which, we predict, they will soon become globally recognized.

B. Assessment of Results and Impact of the Project

This final evaluation assessed the achievements made by Curamericas/Guatemala in the implementation of its five-year child survival grant, which began on October 1, 2002 and ended on September 30, 2007. This final evaluation is based on: extensive discussions with the Project staff in Guatemala and HQ, MOH staff, community leaders and mothers; visits throughout the Project area; analyses of information from the Project's Health Information System (HIS); and, the preliminary findings of the Project's July 2007 KPC Survey.

B.1. SUMMARY OF RESULTS

The Curamericas Child Survival Project achieved 20 of its 24 indicators and has achieved significant impact in reducing maternal and infant mortality rates. Although the Project did not achieve four indicators, these summary indicators overlook differences by jurisdiction that showed these four indicators were indeed achieved in some jurisdictions. In addition, the Project has always been aware of the difference in performance by jurisdiction and monitored and analyzed these differences throughout the life of the project (LOP) to take appropriate action and target resources. The Project also achieved unique milestones in community organization and women's participation (see Attachment 6, Best Practice) that showed levels of participation never before achieved in these communities. The Project also developed a cadre of motivated, committed and competent community-based workers, some of whom have left the project to pursue nursing or medical careers, or are joining other projects. The role of women as Health Communicators (*Comunicadoras en Salud)* cannot be overstated. Some of them have even moved on to become facilitators and health educators.

B.2. TECHNICAL APPROACH

B.2.a. Overview

The overall approach has not changed since the Project's MTE. It is based on the Census-Based, Impact-Oriented (CBIO) approach and the Care Groups Model. The CBIO model includes identifying all mothers and children in the Project area, making maps of each community and taking a census of all community residents. The census ensured that Project interventions reached every beneficiary, using local data to define priority activities and those in greatest need, and by monitoring vital events to assess mortality impact.[1,2] The census complements the community diagnosis that provides the epidemiological basis to select the most important health problems to be addressed by the Care Group Model.

[1] Perry H, N Robison, D Chavez, O Taja, C Hilari, D Shanklin, J Wyon. 1999. Attaining Health for All through community partnerships: Principles of the census-based, impact-oriented approach developed in Bolivia, South America. *Social Science and Medicine* 48: 1053-1067.

[2] Shanklin D, D Sillan. 2005. *The Census-Based, Impact-Oriented Methodology: A Resource Guide for Equitable and Effective Primary Care*. Raleigh, North Carolina, USA: Curamericas and the Child Survival Collaborations and Resources Group (CORE).

The Care Group Model[3] involved identifying, training and supporting community volunteers, in this Project they were the previously mentioned *Comunicadoras en Salud*, with one *Comunicadora* for every 15 households. Each Comunicadora lead a group of mothers (*Grupos de Auto-Cuidado*). A group of ten *Comunicadoras* in a community met together as a Care Group. Some Care Groups may have had fewer *Comunicadoras* if there were not enough people living in a community to necessitate ten *Comunicadoras*. The Care Groups met once a month with their CF and usually started their meetings with a discussion of vital events, particularly a maternal or infant death. In the Care Group meetings, the *Comunicadoras* learned one or a small number of health messages, which they shared with the 15 women for which they were responsible during the following month.

Using these methodologies, the Project has built partnerships with the Ministry of Health and with the communities to improve maternal and child health. Each intervention was managed and monitored as a program with specific objectives. The specific interventions or programs and their relative emphasis in the Project were the following:

Nutrition (including breastfeeding promotion):	30%
Maternal and newborn care:	25%
Childhood pneumonia:	15%
Control of childhood diarrhea:	10%
Child spacing:	10%
Immunizations:	10%
Total:	100%

B.2.b. Project Results by Project Area

The Project was located in three municipalities or districts of the northwest region of Guatemala in the Department of Huehuetenango: San Miguel Acatan, San Sebastian Coatan and San Rafael La Independencia. The largest town in the area, where the Project had its headquarters, is San Miguel, which has a population of approximately 24,865 people (Figure 1).

[3] Laughlin M, K Bradbury, P Ernst, R Heidkamp, W Long, M Morrow, L Nghtsane, O Wollinka. 2004. *The Care Group Difference: A Guide to Mobilizing Community-Based Volunteer Health Educators.* Baltimore, Maryland, USA: World Relief and Child Survival Collaborations and Resources Group (CORE).

Figure 1. San Miguel Acatan

At the EOP the population[4] of these three municipalities was 62,428 people, including 11,134 children aged less than five years and 11,204 women of reproductive age (Table 1). Thus, the number of beneficiaries from this Project was 22,338 women and children at the time of the FE. This number has decreased since the time of the MTE, mostly due to migration, mostly to the US and Mexico.

Table 1. Curamericas Child Survival Project Population in Northwest Guatemala (Department of Huehuetenango)

Population group	Municipalities Served by the Project						Total	
	San Miguel Acatan		San Rafael La Independencia		San Sebastian Coatan			
	MTE	FE	MTE	FE	MTE	FE	MTE	FE
Children (under-five years of age)	5,214	4,591	2,886	2,613	4,181	3,930	12,281	11,134
Women (15-49 years of age)	6,060	4,129	3,354	2,625	4,858	4,450	14,272	11,204
Total number of beneficiaries	11,274	8,720	6,240	5,238	9,039	8,380	26,553	22,338
Total population	28,184	24,865	15,599	15,050	22,598	22,513	66,381	**62,428**

The Project population is composed almost entirely of indigenous people who are members of the Akatekan and Chuj tribes. They speak the Akateko and Chuj languages, which are dialects of what was once the Mayan language.

[4] See attachment 8 for the population by municipality.

The terrain of the Project is entirely mountainous with no flat land. The mountains range from approximately 3,000 feet above sea level in the lower valleys to approximately 10,000 feet at the peaks. Until recently, there were hardly any passable roads in the Project area, and most communities were accessible only by foot or donkey. During the past several years, the government has constructed new gravel roads on steep mountainsides, making many communities accessible by four-wheel drive vehicle (Figure 2). However, a number of the communities are still only accessible by foot or donkey, and many of them are 2-3 hours away from the road.

Figure 2. Road network in project area.

Almost all of the families earn their livelihood from subsistence agriculture (growing corn and raising animals, mostly sheep). There is some limited coffee growing in the area, but not on a large-scale commercial basis. The Project area was a central focus of the Guatemalan civil war. During this conflict, approximately half of the population of the Project area migrated to the United States. There is still considerable migration into and out of the United States from the area. As a result, the main source of income in the area is remittances from family members living in the United States.

Results of the Final Evaluation

Results and Outcomes in Comparison to Baseline

The Census-Based, Impact-Oriented Child Survival Project's overall program goal was to improve significantly the health and the nutrition of children under-five years of age and women of reproductive age. In particular, there was a focus on reducing perinatal, infant and maternal mortality in the rural communities and town centers of San Miguel Acatan, San Rafael La Independencia and San Sebastian Coatan through improvements in health care and health promotion access as well as through improvements in quality and coverage.

The Project's general objectives were to:

- Improve the scope and the quality of preventive and curative care provided to children and pregnant women through household visits, outreach and improved facility-based care.
- Improve the prevention of childhood illness in the home, as well as improve the home recognition, treatment and care-seeking for illness when it occurs.

The Project has reached 20 of the 24 baseline targets and made considerable progress in the remaining four. The progress since baseline has been different in each of the project municipalities because not all have had the same access to child survival services.

The Project proactively addressed all MTE recommendations.

The final evaluation team first discussed the steps taken to respond to the recommendations of the MTE (see Box 1), and we found that the project had perceived the recommendations as excellent opportunities to improve their work and had promptly addressed them all. At that time, the most notable concern arising from the MTE was what appeared to be, based on the observations of educational sessions, an over-reliance on didactic and written teaching methods, a lack of creativity in educational approaches, and a lack of full engagement among those being taught. The Project team gathered "adult education" materials and studied various methodologies in order to modify its educational approach to be more participatory and interactive. The improved methodology was rapidly scaled up to all three project sites with improved results, particularly in nutritional status. The Project also strengthened community partnerships by not only working closely with local health committees, but also by working with Development Municipal Committees called "COMUDES" (*Comisión Municipal de Desarrollo*). The COMUDES represent a number of Development Community Committees called "COCODES." The Project team met monthly with the COMUDES in each municipality (*municipio)*, which worked with the Municipal Health Committee to develop the first ever "municipal health diagnosis" and assisted to create a number of health sub-committees: emergency, water and sanitation, maternal and child health and nutrition.

Box 1. MTE Recommendations

- Modify its educational approach to be more participatory and interactive;
- Continue to strengthen community partnerships;
- Continue to delegate more responsibilities to the *Comunicadoras* while ensuring at the same time that they do not work more than 2-3 hours a week;
- Reduce the workload of the Project staff members by reducing their involvement in curative care;
- Focus on weaker-performing jurisdictions within the Project area and on weaker-performing staff members;
- Work with the communities and the MOH to establish a first-level referral center for obstetrical emergencies; [The maternity waiting home that the project helped to establish was not a place where EOC could be provided, but simply a place where complications could be identified rapidly and presumably rapid transport to a facility where quality care is provided could be initiated.]
- Give priority to working with the communities, community leaders, local authorities, and the MOH to ensure that as many of the Project's activities as possible continue after September 2007 if external funding stops at that point;
- Carry out Mini-KPC Surveys at least every quarter and ensure that all indicators are measured at least every six months until the Project ends in September 2007; and,
- Improve the quality of mortality impact assessment by collecting retrospective information to provide baseline mortality data and by developing dual vital events registration systems to be able to assess the completeness of reporting of vital events data.

This top-down approach with the COMUDES worked well with some mayors that supported their COMUDES, but not with some of the newer mayors. For this reason, in addition to working with COMUDES, the Project team also worked with the local development committees, COCODES. In the Calhuitz village in the San Sebastian Municipality, the COCODES and the community have donated land and labor to build a maternal waiting house. With the help of a private foreign donor, the community and US volunteers, the house has been built and has started to function. Inspired by this success, this COCODES is now working on a "maternal insurance" scheme to provide for emergency transport.

The COCODES have also assisted with the creation of sub-committees to address emergencies, hygiene and sanitation, garbage disposal and nutrition. Various community projects are underway: ambulance and emergency transport; garbage sorting and recycling; and strengthening of exclusive breastfeeding and reduction of the use of baby bottles.

Another change since the MTE is that the responsibilities of the *Comunicadoras* have been prioritized to ensure they do not work more than 2-3 hours a week. Their role has been focused on nutrition education and recording of vital events. The *Comunicadora* reports to the local CF when there is a birth or death, and assists to conduct verbal autopsies. Over 400 verbal autopsies of children's and maternal deaths have been conducted in the life of the Project.

Since the introduction of SIAS staff in the Project area, the Project staff no longer provide immunizations and has been able to reduce their workload by reducing their involvement in curative care as well. They have also been able to focus on the weaker-performing jurisdictions of Coya, Lajxolaj and Quixic within the Project area and on supporting weaker-performing field staff.

The Project has improved its monitoring and information systems and the quality of mortality impact assessment. The Project staff carried out three mini-KPC surveys at least every quarter and ensured that all indicators were measured at least every six months until the Project ended in September 2007. A full-blown KPC survey was conducted in August 2007.

Mortality monitoring was improved by collecting retrospective information to provide baseline mortality data and by developing various sources of information to be able to assess the completeness of reporting of vital events data. The Project staff gathered vital statistics from each municipality, collected community-based data and conducted verbal autopsies. The official records always tend to underestimate mortality because there are several barriers to reporting births and deaths. For instance, there is only a week to report a death and with mourning rituals, and travel and weather barriers it is difficult to meet this deadline. After a week, families wishing to register the death need to pay a fine and present a letter legalized by a lawyer. The legal fees are expensive and therefore, most families choose not to report.

The Project team has regularly conducted monthly mortality workshops to analyze mortality data and the results of the verbal autopsies. Pneumonia remains the main cause of infant and child mortality. Emergency Obstetric Care (EOC) continues to be a challenge and its absence contributed to a large number of maternal deaths. The Project has succeeded in educating women and communities about the danger signs in a pregnancy. In fact, the three mothers that died this year all sought out care in a timely manner, but care was just too far away... In any case, it was beyond the Project's resources to establish a first-level referral center for obstetrical emergencies. The waiting house in the Calhuitz community is the first step towards that, though. The closest EOC facilities are two hours away in Soloma (where there is a private clinic) and four hours away in Huehuetenango City, where the MOH Departmental Hospital is located.

The Project gave priority to working with the communities, community leaders, local authorities, and the MOH to ensure that as many of the Project's activities as possible continue after September 2007. At this time, Curamericas has won two MOH grants to provide services in San Miguel Acatan and San Sebastian. It is expected that a similar grant will be awarded to continue support to the municipality in most need, San Rafael La Independencia starting in January 2008. These grants provide funds to enable NGOs to provide basic health services in designated geographic areas and are renewable annually assuming adequate performance. Given the demonstrated record of accomplishment of Curamericas/Guatemala, they will continue receiving grants forever!

After reviewing progress from the MTE, the evaluation team visited a number of villages and conducted focus group discussions with mothers and *Comunicadoras*. The evaluation team conducted a rapid survey of the project staff and reviewed the findings of the July KPC survey. (The findings of the July 2007 KPC survey and the indicator data are shown in Attachment 1).

The Project addressed the major health problems of the three municipalities: malnutrition (including micronutrient deficiency), low rates of prenatal care, safe delivery, use of child spacing methods, childhood pneumonia, childhood diarrhea and low immunization coverage. Attachment 1 describes the objectives and indicators achieved by the project from baseline, mid-term evaluation and final evaluation. Attachment 2 describes more specifically the actions carried out to achieve these objectives at the household, community, health facility and district levels. Attachment 2 has in bold letters those activities that currently add value to SIAS and that are ongoing.

In sum, the final evaluation found that the project has reached most of its objectives and made significant progress in several jurisdictions towards the four indicators not yet met. The evaluation also showed that Curamericas has taken steps to institutionalize its lessons learned and sustain its achievements through the MOH's SIAS program and through partnerships with local governments and local organizations.

Factors Affecting Achievement of Project Objectives

The different degree of trust and experience with community-based activities in the three communities showed that it takes time to earn trust and reach the "tipping point" in which most community members accept services and participate. Given the experience of the project, it takes 10 to 15 years to institutionalize most child survival interventions and the arbitrary duration of five years was not enough time. The rugged terrain and the bad condition of roads (which are often made worse by landslides during the rainy season) made it risky and difficult to reach these rural communities, while at the same time making it difficult for the rural community members to reach health facilities. In spite of this, the team has used only one four-wheel drive vehicle and eight motorcycles to regularly reach 118 villages. During our visit, one of the CFs had an accident when his motorcycle slipped on the muddy road. He suffered several superficial injuries when he fell off the motorcycle. We recommend that these vehicles stay with Curamericas/Guatemala to continue to implement SIAS. In addition, if USAID has other vehicles available, we recommend that these be allocated to isolated areas where Curamericas staff work. There are not any other choices. Public transportation is also scarce and risky. Several accidents were reported in which mini-buses went off the road, killing all passengers.

Lessons Learned by Intervention

The nutrition activities of the Project, including breastfeeding promotion, accounted for 30% of the level of effort and had very interesting lessons learned. The other project activities had the following levels of effort: maternal and newborn care program accounted for 25%, childhood pneumonia for 15% and control of childhood diarrhea, child spacing and immunizations accounted for 10% each.

Lessons learned in nutrition. The Project has improved nutritional practices, including exclusive breastfeeding, in all three municipalities, and has decreased the percentage of malnourished children from 43% to 33% beyond the EOP target (34%). Improvements in nutrition were reported to be related also to improvements in exclusive breastfeeding, which increased from 54% in the MTE to 73% in the final KPC. A lesson learned was the importance of conducting operational research to understand mothers' beliefs and behaviors. The operational research showed that mothers were afraid to say they preferred the use of baby bottles, resulting in an underestimation of the practice of providing other liquids to newborns. Mothers reported to discard colostrum because they believed this first milk was "weak" and just the result of breast impurities gathered during the pregnancy. Another important lesson learned was that by linking a tangible benefit to postpartum care (such as receiving vitamin A), mothers had an incentive to report births and to increase postpartum care.

Food preparation demonstrations helped increase the variety of foods provided to children. The use of local languages was also effective in increasing the acceptance of the new foods and nutrition behaviors. The Project standardized the messages in each of the languages and provided them in written form in the materials. This allowed greater

consistency as CFs would use the same language and expressions to convey the same health messages communicated by the *Comunicadoras* and conveyed in the radio broadcasts. Consistency in communication may be one of the factors accounting for the high retention and application of health messages and for the behavior change achieved in this project.

Maternal health lessons. The project exceeded the EOP target (40%) reaching 49% of mothers that had two or more antenatal care (ANC) visits. The percentage of mothers that received iron tablets increased from 33% to 58%. The Care Groups and Self-Care Groups demonstrated to be an excellent vehicle for sharing information about maternal care and to support behavior change. The CFs reported that the educational modules proved to be useful tools.

Maternal health also proved to be a community matter that needs the support and participation of not only the mothers themselves but also the organized community. Delivery by a skilled attendant has increased but it is still low, not reaching the EOP target. The lack of delivery and EOC facilities open 24 hours within access in the Project area, together with the rugged terrain, make it very hard for mothers to access a skilled attendant. The existence and/or availability of trained TBAs or IFs, 24 hours a day within the community, and an increased availability of waiting houses, would have prevented a number of deaths. A waiting house was successfully opened in San Sebastian where the community is very active and involved. The support of the local government and the community will be required to have available emergency transportation and skilled providers within reach.

Lessons in IMCI. The management of childhood pneumonia and diarrhea has improved remarkably. The percentage of mothers that sought care for children with cough increased to 62%, also exceeding the 50% EOP target. However, there is still delay in reaching a provider and receiving treatment, resulting in pneumonia being the main cause of death. Improvement of the case management of pneumonia should become a project goal. It is urgent that Curamericas/Guatemala starts a trial of effectiveness of the pneumonia treatment. The percentage of children that received ORS or recommended home fluids increased to 57% also exceeding the 42% EOP target. The percentage of mothers that are able to report at least two danger signs of children's illnesses increased from 24% in the baseline to 61% but did not reach the EOP goal of 75%, except in selected jurisdictions. All of these findings confirm the effectiveness of the Care Group Model and that behavior change needs time to become common knowledge and practice.

Lessons learned in child spacing. Child spacing practices using a modern method have highly increased and exceeded the EOP target (31%), reaching 47% of the mothers who do not want to have a child in the next two years. . The number of mothers that know where to obtain child spacing methods has reached 80% and exceeded the EOP target (65%). There is considerable unmet need for child spacing methods and women in focus groups reported they do not want to have a child every year and want to space births. It is hard for them to reach the facility and to rely on the CF to get their supplies. Still some mothers practice family planning without their husbands' knowledge since the

women are afraid their husbands will disapprove. Male involvement should be emphasized in future activities. The majority of CFs are men, which should aid Curamericas in expanding the acceptability of family planning by husbands.

Lessons in immunization. Immunization coverage has reached 58% from 42% at baseline, but it is below the 75% EOP target. Only one jurisdiction in San Sebastian exceeded the EOP target by reaching 84% coverage. It is important to note that the Project has focused on the education and mobilization of mothers and not on the provision of vaccines, which is the MOH's responsibility. In addition, this indicator is calculated for children up to 13-months of age. The measles policy in Guatemala is to give measles immunization at 12-months of age, so there is only a one-month window to reach the "fully-immunized" target. This period is not sufficient to account for all the children who will reach this status at 14- or even 15- months of age. It is still hard for the MOH to reach all villages. It would be best to rely on Curamericas' staff to conduct immunizations and to recalculate this indicator, to include children up to 15- or 18-months of age. EOP coverage of tetanus toxoid immunization (TT) of mothers was 56%, which was double the EOP target of 28%.

Lessons from the focus group discussions with mothers. The mothers showed high level of interest and participation in the project activities, particularly in San Sebastian, where over 50 mothers came in the middle of heavy rain to participate in the focus group discussions. This was not surprising because San Sebastian is the municipality with the longest exposure to community-based MCH activities and with the highest participation. Most focus groups reported the importance of having group support when a child is sick or they need help. Mothers also reported satisfaction with the knowledge gained on learning how to keep their children healthy and when to get them immunized. They also valued improvements in the quality of care received. They perceived fewer babies dying and expressed concerns about maternal deaths and the lack of medicines and care providers when they are sick. Mothers particularly appreciated all they had learned about vaccines, weighing babies and breastfeeding.

Figure 3. Focus Group in Ixi Village

Comments from focus group attendees:

> *"This is great help for us. It is hard to get to the health post. They come to visit us and now we know them and trust them."*
>
> *"I learned it is very important to wash our hands before feeding my baby and washing my baby's hands."*
>
> *"We are very grateful for learning and participating in the group meetings."*
>
> *"Now I do not give the "pacha" [baby bottle] to my son. I know it is not good for him."*
>
> *"The group is good. We now support each other."*

Lessons learned from the project staff survey. The most significant change identified almost unanimously by the surveyed project staff was the increase in women's participation and desire to learn more about disease prevention. This single factor was reported to be the main contributor to the differences in project performance in the three municipalities. Women's participation and desire to learn was also a strong motivating factor for the Curamericas staff as they felt their work was important, valuable and made a difference. This may be the reason for the strong team spirit and commitment that was observed.

Lessons learned about the CBIO Methodology. The CBIO Methodology uses an evidence-based program design, making it easy to evaluate. The good program design and consistent and systematic implementation permitted the rapid retrieval of information and documentation of project results. The Project effectively made use of the data captured through monitoring, particularly mortality and vital events, to plan activities. The continuous monitoring of project performance was also utilized to improve Project operations.

Unexpected Successes and Achievements

The Project succeeded in reducing gender barriers to care. Curamericas/Guatemala has 39 male and 23 female CFs that regularly meet with their Care Groups of health communicators to talk about birth spacing, breastfeeding, and other traditionally "female" topics. The project succeeded in creating male role models that helped numerous families achieve reproductive health goals and meet their family needs. The impact of the male CFs needs to be further documented to help other indigenous communities provide child survival services.

Application of Lessons Learned

The Project has proactively applied all the lessons learned from the MTE and used its monitoring and staff performance evaluation systems to continuously monitor its performance and make improvements. The team is highly motivated and eager to learn from its experience. The project has a number of documented CS best practices that are already adding value to SIAS. It is important that these best practices be institutionalized and be incorporated to add value to SIAS nationwide.

Potential for Scale-up

The Project has written procedures, training guides, and planning and monitoring tools that have facilitated the rapid orientation of new staff and rapid deployment and start-up of the SIAS projects. Therefore, a rapid scaling-up of the CBIO and Care models to other municipalities should be feasible and within the current capacity of Curamericas/Guatemala. The main problem is the lack of bridging funding for those jurisdictions that are not part of SIAS yet. This is an issue for immediate attention by USAID and Curamericas.

B.2.C. TOOLS AND APPROACHES DEVELOPED

The project adapted and developed numerous tools and approaches. The CBIO and Care models were adapted to the project areas. There are manuals, educational modules, facilitators' guides and planning, monitoring and supervision tools. All project tools and approaches are available in Spanish, Akateko and Chuj and can be easily packaged for dissemination and rapid scale-up. All of these tools and approaches are based on the MOH's policies and approved messages.

B.3. RESULTS OF CROSS-CUTTING APPROACHES

The most significant change reported by the project staff was the participation of the mothers and TBAs. Because of increased participation of mothers in the women's groups, even in the most remote villages, mothers now bring their children for immunizations and growth monitoring sessions to the village convergence centers known as "*centros de convergencia."* These centers provide basic health promotion and preventive services (including the provision of contraceptives) and are a useful alternative to traveling to more distant health centers. The participation and involvement of the mayors and auxiliary mayors has been another innovation in this part of the country and a significant change reported by most staff. These local authorities helped convene families for immunizations and other ambulatory services. The final evaluation took place during the electoral campaign. The Project team took time to discuss the health situation, including mortality data, with all the candidates from every party and sponsored numerous public forums, which were well attended by community members in each district. At the end of each forum, all candidates publicly signed a pledge that, if elected, they would work hard to improve the health of the district they represented.

B.3.A. COMMUNITY MOBILIZATION AND PARTICIPATION

The Project adapted the Care Group Model and created a well-supported and monitored network of community providers that mobilized and ensured participation at the grassroots level.

Health Educators (HEs) played a leadership and supportive supervisory role that was vital to ensuring consistent quality services across all jurisdictions. HEs were in charge of the selection of *Comunicadoras*, selection of CFs, organization of self-care groups and care groups, and development of modules and educational cards, flipcharts and other educational materials. They also oversaw the translation into Akateko and Chuj to ensure the messages were conveyed consistently and accurately by every CF. The HEs also planned activities on a monthly calendar with the CFs, oversaw these activities and evaluated them with their CFs. The HEs accompanied the CF and *Comunicadoras* to conduct special home visits when there was a sick or malnourished child. Finally, the HEs were responsible for preparing monthly reports.

Community facilitators (CFs) were the next level in the network. There were 62 CFs supported by the HE at the EOP; 39 men and 23 women. CFs supported the *Comunicadoras*. During each home visit, the CFs filled out a form, which was then kept on file. The HEs monitored home visits done by the CFs and filled in monthly reports. The project consistently supported the performance of the CFs and conducted monthly training refresher sessions on a different topic each month (see Attachment 9 for a summary report on trained personnel). The CFs were observed on-the-job according to a quality control checklist *(listado de verificacion).* The quality control checklist was used to improve and sustain the quality of the performance of the CFs by providing more specific targeted support from the HE—the CFs that scored 80% or higher were evaluated every two months and were interviewed to ensure that their knowledge of danger signs became second nature. HEs also conducted focus group discussions with

Comunicadoras to get their views and to assess the progress of how well messages were understood and perceived.

The CF's role was essential to sustain the mother's Care Groups and to reach behavior change objectives. Curamericas has a number of lessons learned regarding the pivotal role played by the CF, the first one being that a CF should be paid according to their effort. If one CF has more communities or greater dispersion of communities, or a greater population to cover than another CF, he or she should be paid more to avoid de-motivating those that work harder. On the other hand, the SIAS pays a flat rate of Q500 to all. Many CFs are young men with a certain degree of education who are role models for other men in the community. These young men are less likely to migrate if they have jobs in their communities. The MTE showed that it was important not to overburden these community workers or the *Comunicadoras*, for that matter. In the final evaluation, we observed that CFs performed 11 functions well, were motivated and liked their jobs. However, the CFs that worked for the SIAS were expected to perform 24 functions. This can have a very detrimental effect on the quality of care and on the level of satisfaction with their jobs.

At the beginning of the project, the staff realized there were many ways of communicating messages. In some cases, it was difficult to find a word in the local language to translate accurately the Spanish message. Therefore, the messages were translated into Chuj and Akateko and standard messages were written in all the materials. In this way, Curamericas ensured the accuracy and consistency of the messages. The key messages were later adapted for radio broadcast in the three languages.

The project was a turnkey operation that had standardized regular operating procedures. For instance, the first Monday of every month the HEs gathered to select the theme for the month that needed reinforcement and revise the Educational Guides to ensure content was applicable and meaningful to the community being served. The educational activities were similarly planned to ensure the highest level of participation. These guides were used to ensure that the CF used adult education methods that promoted participation as recommended in the MTE. The HEs used the guide to train CFs, and the CFs used the guides to plan their meeting with the mothers.

In the last year, the Project had a Community Organization and Participation Manager, which enhanced community participation. She was in charge of convening people to find five representatives by sector and to create local health committees. For instance, San Miguel has seven sectors. Every sector has five to seven villages. Representatives were gathered with the members of the COCODES, which had one representative from every village and a representative from the COMUDES to form a Municipal Health Committee. Municipalities in Guatemala are not cities, like in the US, but contiguous geographic areas more like US counties. In sum, the project assisted in creating seven local Health Committees, each with its own bylaws. These Municipal Health Committees also had representatives of TBAs (*Comadronas)* and CFs, and included 35 to 40 active members organized into sub-committees: MCH, hygiene and

sanitation, nutrition and emergencies. The Project worked with the committees to develop the municipal diagnosis and a plan of action presented to all the political candidates.

B.3.B. COMMUNICATION FOR BEHAVIOR CHANGE

The project had a very well developed and effective Behavior Change Communication (BCC) strategy embedded in the Care Group Model described above. This approach incorporated key messages disseminated through various channels including communication modules for the CFs and "*cartillas*" (laminated cards) utilized by the *Comunicadoras* in their care groups. All materials are available in the three languages (Spanish, Akateko and Chuj), and the Project has developed a master list of phrases to help staff to translate and use the three languages. The Project also used its key messages to develop radio messages that were broadcasted in the three languages. During one of our focus groups, a mother recognized the voice of one of the health educators from the Chuj broadcast!

B.3.C. CAPACITY BUILDING APPROACH

The capacity building approach embedded in the Project's supportive supervision and quality control strategy followed a cascade approach that was repeated every month. The HEs trained the facilitators on a monthly basis and provided individualized support. The HE observed the CFs at work following a quality control checklist. In turn, the facilitators trained the *Comunicadoras* and supported them in their group meetings and home visits. The consistency and focus of this monthly cycle may be responsible for the high retention of the messages and high rates of behavior change.

Strengthening of Grantee Organization

Curamericas Global was strengthened as this project provided additional and unequivocal evidence of the effectiveness of the CBIO and Care Group models in a different setting. Curamericas Global is strategically positioned to disseminate a number of tried and well-documented Child Survival interventions with the confidence that they work. Curamericas should not find it difficult to obtain funding with the excellent results achieved in its field offices.

Curamericas/Guatemala was strengthened and is now perceived as a key and essential partner in the development of these indigenous communities. There are no other NGOs working in this region, with the exception of ADIVES (*Asociación de Desarrollo Integral Vida y Esperanza*) that is working in only one community through a SIAS grant. Curamericas is perceived as a reliable partner that keeps its word and is trusted by the communities. The goodwill generated by Curamericas is a very valuable asset that will benefit SIAS. It is essential that all project communities be supported and that achievements be sustained, particularly in the under-performing jurisdictions of San Rafael La Independencia.

Strengthening of Local Partner Organizations

Curamericas/Guatemala has worked closely with local partners, particularly FUMESDER and ADIVES, two local NGOs. ADIVES won the SIAS grant and works in San Miguel where Curamericas once worked. To help them get started,

Curamericas/Guatemala gave them maps, and passed on its trained CFs and *Comunicadoras*. ANDIVES also uses the same educational materials and the same monthly training curriculum as Curamericas.

Curamericas/Guatemala also assisted in creating and supporting a local NGO created by and for women, the *Wajan Nab'al Ix*, "Women's United Dream." This is a women's NGO that emerged from the Project. A number of HEs, CFs and TBAs have joined in the creation of the NGO in an effort to sustain the Project's achievements and continue to strengthen women's participation and role in their communities. This is another example of the commitment of Curamericas to gender-appropriate community development and women's empowerment.

Strengthening of Health Facilities and Health Worker Performance

Curamericas has developed the role of Institutional Facilitator (IF) and assisted in scaling-up access to services by staffing a number of facilities, and village convergence centers ("*centros de convergencia*") in each municipality. It also is supporting the launch of SIAS in this region and sharing its lessons learned.

Training

Curamericas has conducted a very thorough and systematic training program that responded to the unique needs of each CF and *Comunicadora* to strengthen their performance while building on their strengths. The Project increased its personalized training to meet their needs in response to the findings of the MTE (Attachment 9). The Project created career opportunities for those that wanted to learn, improve their status and move up from Health Communicators to CFs and CFs to HEs.

B.3.D. SUSTAINABILITY STRATEGY

Curamericas Global is looking for options to sustain its Guatemalan counterpart. In the briefing meeting with USAID on the last day of our visit, several options were identified. Particularly, the SIAS, also supported by USAID, is an excellent mechanism to sustain USAID's investment. In addition, SIAS can also benefit from many of the lessons learned by this USAID-funded Curamericas Project.

B.4. FAMILY PLANNING RESULTS

The Project had an integrated approach to family planning that focused on child spacing and worked collaboratively with the MOH for the supply of commodities. This lead to improved quality, increased access, and greater use of family planning options, and complied with the Tiahrt Amendment and Mexico Policy. Among the lessons learned were the focus on child spacing, women's empowerment and the participation component that enabled women to discuss with men their sexual behaviors and choices of when to have children. Additional lessons were learned about home visits and care group support received by users. The lessons learned explained the high contraceptive use of 47% that was achieved by mothers of children less than two who did not want a child in the next two years. This was only a subset of women of reproductive age so we believe that there is still need to address the reproductive health needs of all women, as well as the need to develop community-based distribution of commodities. During one of our focus groups,

one mother reported she was disappointed that she was pregnant with her ninth child because she ran out of contraceptives.

C. Project Management

The Project was managed by Dr. Mario Valdez who has a Master's Degree in Public Health from the University Rafael Landivar. He is an experienced public health professional and project manager. Dr. Valdez is highly regarded by staff, community leaders and families and his leadership skills were evident throughout the Project. He is also highly respected by the staff at Curamericas/Global. Dr. Valdez has worked in this area of the country for over 15 years and his commitment to the development of its health system and the reduction of mortality rates is truly admirable. He was involved with the project since its start and managed it to its successful completion. It is mostly likely that his participative management style observed during this evaluation is one of the main reasons for the Project's success. He has also promptly identified various opportunities to expand the Project and sustain its achievements. Dr. Valdez and the international community would benefit from sharing his experience with other project directors and professionals.

C.1. Planning

The project used the Detailed Implementation Plan (DIP) to develop annual plans that were turned into reviewed quarterly and monthly activity plans. In addition, the team prepared individual monthly "activity calendars," which were then used for supervision and performance assessment.

C.2. Staff Training

Curamericas Global provided training and support to Curamericas/Guatemala. A number of volunteers and US technical staff assisted the local team in responding to the Project's early implementation challenges.

C. 3. Supervision of Project Staff

Field staff were supervised monthly and observed at work using a checklist; those who scored less than 80% received additional support and were supervised the following month. Those who scored above 80% were supervised every two months. Supervision tools were appropriate and practical.

C. 4. Human Resource Management

All staff members had job descriptions and a supervisor. Monthly activity planning was accompanied by regular performance reviews. There was staff turnover, particularly among those who had been working for two or three years. It was observed that after that time, staff members "burned out" and decided that they needed to move on to other functions or move ahead in their careers. A number of staff left to pursue nursing or medical studies. Everyone recognized that the work was not easy since it required so much time in isolated communities, and was not something one can do for prolonged periods. However, we did observe great team spirit and staff who were very motivated and committed to serving their communities. We believe that the Project managed its staff effectively and provided career development opportunities within its limited

resources. The Project also created the desire to learn new things and start new activities, for much of the staff.

C. 5. FINANCIAL MANAGEMENT

Curamericas Global has previously received and successfully managed funding for several USAID Child Survival and Health Grants Program grants. During this child survival project, the financial management staff at the Headquarters office and at the Curamericas/Guatemala office coordinated their efforts in managing the project funds and budget, according to the specified guidelines. Expenditures for personnel seemed appropriate, as expected considering community workers were essential to the delivery of health services. Financial reports were regularly submitted through the designated channels and in a timely manner. Routine audits have been conducted and no financial and/or financial management issues were encountered. Additionally, Curamericas Global has met their match-funds obligations.

At the beginning of the Project, Curamericas Global budgeted $2,003,508. Over the life of the Project, $2,351,228.30 was spent; $980,481.63 (42%) was spent at HQ and $1,370,746.67 (58%) in Guatemala (Table 2). USAID contributed $1,299,999 (65%) and Curamericas Global matched with $703,509 (35%). (See Table 2 for breakdown of financial information and expenditures by expense type.) The total expenditure was $21.05 per beneficiary (22,338 women and children) per year. The direct cost in Guatemala was $12.27 per beneficiary per year. The indirect costs represent the cost of providing technical assistance develop, manage and improve a project of this magnitude.

Table 2. Total Project Revenue and Expenditures

CS-18 GUATEMALA	CS-18 CHILD	CURAMERICAS US			CURAMERICAS GUATEMALA		
SUMMARY INFORMATION BUGET AND EXPENSES	SURVIVAL GRANT CURAMERICAS GUATEMALA GENERAL BUDGET (HQ + Field)	HQ BUDGET	HQ REPORTED EXPENSES TO AID TO DATE 06/30/07	TO REPORT TO AID, LAST QUARTER (JUNE-SEPT/07)	FIELD BUDGET	FIELD REPORTED EXPENSES TO AID TO DATE 06/30/07	TO REPORT TO AID, LAST QUARTER (JUNE-SEPT/07)
AID CS-18 FUNDS	1,299,999.00	427,627.00	389,944.41	37,682.59	872,372.00	778,215.09	94,156.91
MATCHING CS-18 FUNDS	703,509.00	254,416.00	552,854.63	0.00	449,093.00	498,374.67	0.00
TOTAL	2,003,508.00	682,043.00	942,799.04	37,682.59	1,321,465.00	1,276,589.76	94,156.91

C. 6. LOGISTICS

Transport in this region of difficult geography was addressed by distributing Project staff throughout the Project area according to their place of residence. This minimized transport and ensured that communities rapidly accepted the CFs as their own.

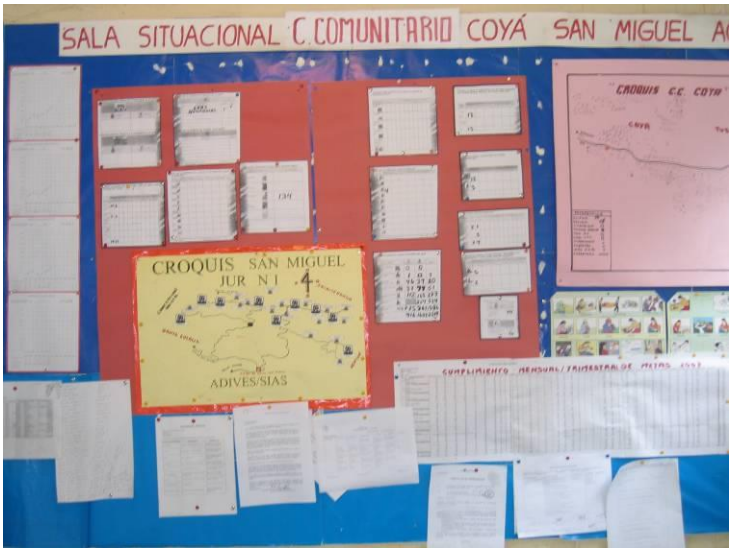
The local authorities, (the auxiliary mayors), were involved in organizing the villages to ensure that families knew when the immunization team was coming. This simplified logistics and allowed the team to reach up to eight villages in a day.

C. 7. INFORMATION MANAGEMENT

The Project has a useful project management information system that allowed the retrieval of financial, project and staff performance.

Most importantly, the Project developed a health information system to track how each facility and community is doing and to track each Care Group's performance. Each facility has a "*sala situacional*" (see Figure 4) that works as a dashboard and allows the observer in one glance to assess coverage of various services. The CBIO Methodology has an information system that tracks births and deaths. Births are recorded and the child is immediately placed into the weighing and immunization tracking systems. Pregnant mothers are also added to a tracking system for antenatal and postnatal care. The coverage area map was an instrumental tool for tracking every household with children and pregnant mothers too.

Figure 4. Situational Map of the Community of Coya



C. 8. TECHNICAL AND ADMINISTRATIVE SUPPORT

Both Curamericas Global and Curamericas/Guatemala have technical and administrative systems in place and no issues of concern were identified.

C. 9. MISSION COLLABORATION

The Population, Health and Nutrition (PHN) Officer, Ms. Isabel Stout, has provided sufficient and appropriate support to the Project. She visited the Project area in December 2004 and met with the Project team to assist them in developing proposals for the Global Fund and for the Guatemalan Government's Women's Secretariat (*Secretaria de la Mujer)*. Unfortunately, these were not successful as other municipalities were prioritized. In addition, the Mission assisted the team when they developed their proposals for the SIAS. These were successful and projects started in San Miguel and San Sebastian in January 2007. During the debriefing meeting, the PHN Officer was very supportive and impressed with the results. She also demonstrated that she was very familiar with the Project. She provided a number of suggestions for enabling the Project to sustain the results achieved and to continue providing services to these communities. She suggested that Curamericas aggressively pursue these various funding options.

C. 10. MANAGEMENT OF LESSONS LEARNED

The Project has actively collected and used its lessons learned. The operational research conducted gave important insights into behavior change, particularly in the identification of positive deviances in nutrition and breastfeeding and in the knowledge, practices and attitudes of TBAs about pregnancy and delivery. The team used the research findings to design and fine-tune their key messages. As we said above, the Project used the lessons learned from the MTE to improve and responded to all the recommendations.

D. OTHER RESULTS

We want to emphasize the results of the project regarding women's participation. The creation of self-help groups and care groups, and the Wajan Nab'al Ix (the women's NGO established by the project) are just two of several success stories of the empowerment opportunities the Project created. In addition, Curamericas is a good partner ready to assist with various community efforts. When the opportunity arose to help distribute 40 wheel chairs to disabled children in the region, Curamericas did not hesitate to assist.

E. Conclusions and Recommendations

We want to highlight the following important conclusions:

1. The Project has achieved 20 of its 24 targets and made considerable progress in the remaining four targets.
2. The CBIO and Care Group methods were effective and suited for this Project area. However, because of certain mitigating circumstances the relatively short five-year program length was not sufficient for some jurisdictions to reach targets, particularly for San Rafael La Independencia, which is a municipality that had no previous experience with community-based services and distrusted outsiders until this project started.
3. The Project achieved significant mortality impact. Mortality monitoring and verbal autopsies allowed the Project to focus on weaker jurisdictions and villages.

4. The community component consisting of Care Groups was instrumental in organizing the demand for services and in reaching the Project's results.
5. Women's participation has increased and has been pivotal to increasing the coverage of child survival interventions.
6. The staff is highly committed, hard working and competent; there is a strong team spirit.
7. Curamericas/Guatemala is sustaining its progress and continues to advance building on the project's achievements through SIAS.

Here are the immediate recommendations for the Curamericas team:

1. Share lessons learned to strengthen the community component of SIAS.
2. Continue to use and scale-up the CBIO and Care Group models, lessons learned and tools.
3. Continue mortality monitoring and verbal autopsies.
4. Develop the Emergency Obstetric Care (EOC) referral network for the region.
5. Implement community-based treatment of pneumonia.
6. Strengthen pharmaceutical logistics and implement community-based distribution of contraceptives.
7. Identify bridge funding for the Municipality of San Rafael La Independencia.

The CBIO and the Care Group models have also demonstrated to be effective in improving Child Survival. USAID has not only received a very high return on this investment but through this Project, now has a very good child survival model that has demonstrated to work, even in very remote areas. The Project also produced several self-standing effective tools and procedures that add value and are easily incorporated into SIAS. In fact, these tools should be incorporated in other CS projects worldwide. These project tools and procedures will sustain and help scale-up services access and delivery. The permanence of Curamericas/Guatemala will allow that these successful models help strengthen CS activities nationwide.

The Project has achieved 20 of the 24 indicators. However, to appreciate the real impact of the Project at the time of the final evaluation, these indicators need to be disaggregated by jurisdiction. There are jurisdictions that have achieved all 24 goals and some which have not. Jurisdictions new to child survival interventions consistently scored lower than those with longer exposure to maternal health education, and other child survival interventions. These variations observed by municipality in the EOP indicators suggest that the arbitrary five-year grant period is insufficient, and that further significant child survival impact can be achieved with longer involvement. A 10- to 15-year commitment to child survival interventions seems to be required to achieve impact as demonstrated by the differences between municipalities and jurisdictions. We recommend that Curamericas identify funding to initiate and sustain child survival activities for 10- to15-years to achieve consistent and institutionalized results in the new areas that is in keeping with the success achieved in the other Project areas. It was evident that a number of jurisdictions are just about to reach the tipping point and require further input in order not to lose momentum.

Curamericas/Guatemala has excellent working relationships with the MOH authorities and should continue implementing and scaling-up SIAS programs in the Project area and beyond. They have demonstrated the ability to build partnerships with local NGOs to share and expand the lessons learned. Jurisdictions in the SIAS are smaller and this makes access to services easier than in this Project, though the shortage of staff and staff retention in general prevents the impact of the SIAS. This is hard work and burn out is common. However, Curamericas Global has managed to inspire and sustain a team of very committed staff and should look for ways to support and retain them by ensuring career paths, like the "mother-turned-health educator."

Staff shortages now prevent the maximum use of an expanded network of heath facilities. Based on the experience of the CS Project, at least two providers are required at the health center (*Unidad Minima*): two IFs; or one IF and the SIAS ambulatory doctor or nurse. At this time, there are communities that are only served by an ambulatory doctor who also serves 22 other communities at the same time, thus serving one community per day and visiting each community only once a month. These doctors use public transportation to get to the communities and carry their equipment and patient forms in their backpacks. **The need for permanent IFs is immediate in these communities.** Furthermore, we recommend that in the disposition plan the office furniture and vehicles stay with Curamericas to support continued work in the SIAS.

SIAS seems to be the way to sustain the significant achievements of this Project. SIAS seems also to be the future for the development of the health sector in these isolated districts and the future for Curamericas/Guatemala to continue to make a remarkable contribution to saving lives in these indigenous populations. Curamericas has recognized this and has successfully secured two MOH grants and applied for a third one. These two grants are being implemented successfully and funding is expected to continue for several years upon successful performance. Unfortunately, San Rafael La Independencia, the district in greatest need, and for which this grant has been applied, is **NOT covered by SIAS**. The SIAS awarded a grant to another NGO that later turned it down. Curamericas will apply for a new award, but by the time a new award is made the district will have been without coverage for over a year, with the consequent loss of momentum and distrust from the communities. It is essential that Curamericas brief USAID and UNDP authorities about this situation and explore bridging funding to support project activities in San Rafael La Independencia until funds from SIAS become available in this municipality for the CS activities to continue.

Community-based treatment of pneumonia has already demonstrated to be effective in other countries with staff shortages and poor service access, similar to this Project area. Given the high mortality due to childhood pneumonia in the community, it is recommended that a number of *Comunicadoras* be trained in **community-based treatment of pneumonia**. Formal authorization from the MOH will be required and justified in these isolated areas with the support of the CFs. Every village (*aldea)* should have one mother equipped with a chronometer and trained to count respirations, diagnose pneumonia, provide the first dose of antibiotic and refer to the nearest provider.

The majority of maternal deaths were attributed to hemorrhage. Given the absence of surgical facilities and blood banks in the Project area and lack of suitable emergency obstetric care (EOC), the development of an EOC network is essential, starting with waiting houses and at least one 24-hour delivery facility per district. Curamericas/Guatemala also needs to work with the MOH to improve this situation, by improving emergency obstetric care within the Project area for non-surgical interventions and to improve transport of patients who need surgical interventions and blood at the Departmental Referral Hospital in Huehuetenango. The presence of a heliport now only used for personal use, represents an important opportunity for rapid referral to Huehuetenango, particularly in the rainy season. The Project has already started to leverage the support of future mayors and community organizations. Additional MOH support and long-term donor commitment will be required to address these issues of access to EOC. It is important to note that in the three recent maternal deaths, all three sought care. This would not have been the case before the project started. Curamericas/Guatemala should continue supporting community organizations and women's participation to develop the building blocks of an effective EOC network.

Given the developmental stage of the MCH services in the Project area, it is essential to continue the CBIO approach, with special focus on the recording of vital events and verbal autopsies as this information is the ONLY reliable record of maternal and child deaths in the area. This same data should continue to direct the decisions of health providers and be used for the continuous improvement of the quality of care and child survival outcomes.

We also propose that Curamericas/Guatemala actively share the findings of this final evaluation and the many lessons learned with the SIAS Leadership team. There are a number of simple lessons learned that can add value to the SIAS and that would help balance the apparent recording and reporting burden the program has, thus strengthening its implementation and achieving greater impact. For instance, the project developed educational materials in the local languages. These materials have been tested and are used by the health communicators in the three languages and could be used by the CFs of the SIAS. By utilizing these materials, the SIAS would benefit from the reporting and use of vital events and verbal autopsies, while at the same time strengthening the participation of women using gender-sensitive approaches and the Care Group model.

In sum, Curamericas/Guatemala, with strategic support from Curamericas Global is ready to apply for other SIAS grants and expand to other municipalities and Departments. We anticipate they will become a valuable partner in the SIAS.

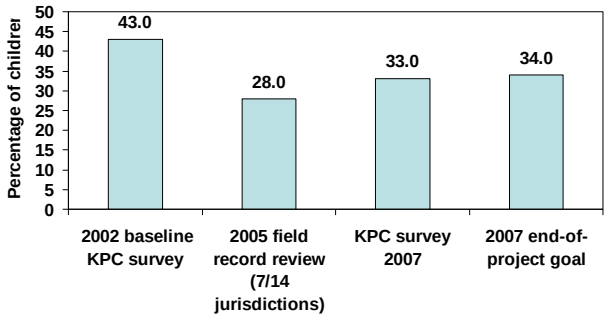
From an operational point of view, it is also recommended that Curamericas Global consider installing Internet access in the Project office to facilitate communications and virtual coaching and support from HQ. There is only one Internet café in the town that is open for a few hours a day and it was closed for most of our stay in San Miguel. The team can be isolated from HQ support for days, which can prevent HQ from providing timely and continuous support.

Finally, we conclude that Curamericas Global has established themselves as leaders in Child Survival through this Project. They have demonstrated that the CBIO approach is a cost-effective evidence-based method to implementing well-known child survival interventions. When combined with the Care Group Model, the CBIO approach empowers women and communities to participate actively in the process of health care delivery and achieves significant results in relatively short periods, even in remote populations. We recommend that Curamericas Global promote and disseminate this flagship approach for which, we predict, they will soon become globally recognized.

F. Results Highlights

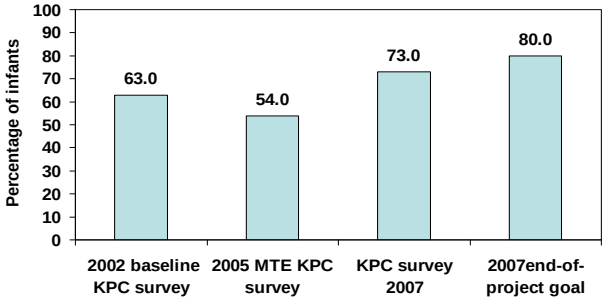
1. Improve child nutritional status (nutrition and micronutrient supplementation and promotion of breastfeeding)

Percentage of Children 0-23 Months of Age with Moderate or Severe Malnutrition



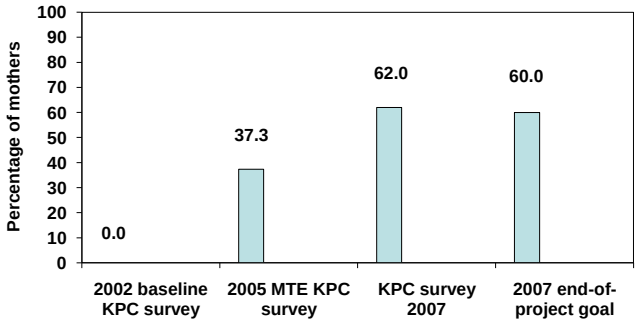
1.1: **Decrease the percentage of children age 0 –23 months who are underweight.** The Project has improved nutrition practices, including exclusive breastfeeding, in all three municipalities. The percentage of malnourished children decreased from 43% to 33% beyond the EOP target (34%). Exclusive breastfeeding increased from 54% in the MTE to 73% in the final KPC, but below the 80% of the EOP target.

Percentage of Children 0-5 Months of Age Receiving Exclusive Breastfeeding during the Previous 24 Hours



1.2: **Increase the percentage of children 0-5 months who were exclusively breastfeeding during the past 24 hours.** The operational research conducted by the Project team after the MTE showed that the baseline survey had probably overestimated the prevalence of exclusive breastfeeding. Mothers were afraid to say they preferred the use of baby bottles and the practice of providing other liquids to newborns was underestimated. Mothers reported they discarded colostrum because they believed this first milk was "weak" and just the result of breast impurities gathered during the pregnancy. Educational materials were adjusted to address this belief and the number of mothers that gave exclusive breastfeeding in the first 24 hours of life has increased.

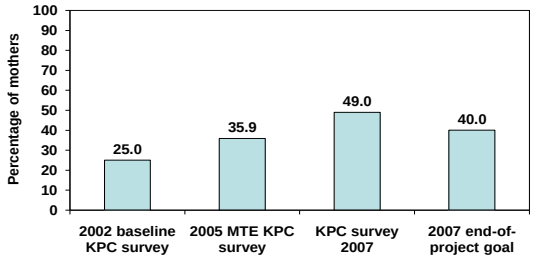
Percentage of Mothers Receiving Vitamin A within Two Months of Delivery



1.3: Increase the percentage of mothers of children 0-23 months who received a vitamin A dose during the first two months after delivery. The provision of vitamin A increased from zero at baseline to 62% exceeding the EOP target in the project area. Mothers reported to value receiving the vitamin right after birth, which facilitated birth reporting. Mothers reported births promptly in order to receive the vitamin.

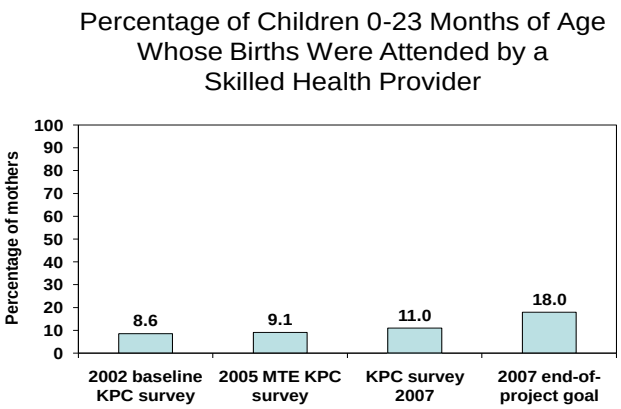
2. Improve prenatal care coverage (maternal and neonatal health)

Percentage of Mothers Who Had Obtained at Least Two Prenatal Care Visits Prior to Her Most Recent Delivery



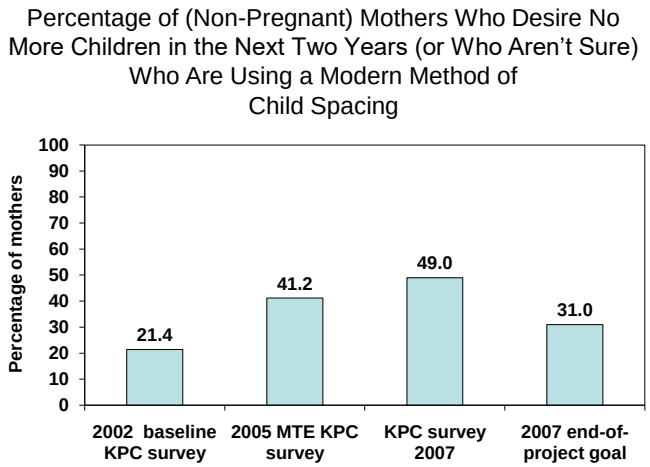
2.1: **Increase the percentage of mothers who had at least two prenatal visits (card) with a trained health provider prior to the birth of her youngest child less than 24 months of age.** Maternal health has also improved. The Project exceeded the EOP target (40%) reaching 49% of mothers that had two or more ANC visits. The percentage of mothers that received Iron tablets has increased from 33% to 58%. The presence of a permanent Institutional Facilitator at the facilities allowed the project to exceed this goal. Lack of staff remains the main barrier to increasing antenatal care coverage.

3. Assure all deliveries are safe deliveries



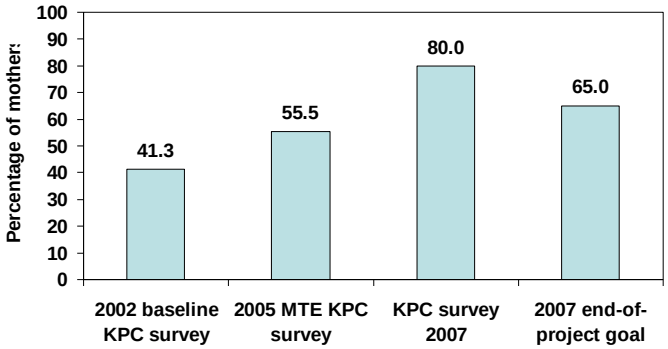
3.1: Increase the percentage of children age 0-23 months whose births are attended by skilled health personnel (nurse, auxiliary nurse or MD). Delivery by a skilled attendant has increased but it is still low, not reaching the EOP target. The lack of delivery facilities open 24 hours and the rugged terrain make it very hard for mothers to access a skilled attendant. The Project has trained TBAs. Though not considered a "Skilled Health Provider," the TBA is the main provider in most villages. The project has worked with the communities to build waiting houses. A waiting house was successfully opened in San Sebastian where the community is very active and involved.

4. Adequate child spacing



4.1: **Increase the percentage of (non- pregnant) mothers who desire no more children in the next two years (or are not sure), who are using a modern method of child spacing.**
Child spacing practices using a modern method have greatly increased and exceeded the EOP target (31%), reaching 47% of the mothers who do not want to have a child in the next two years.

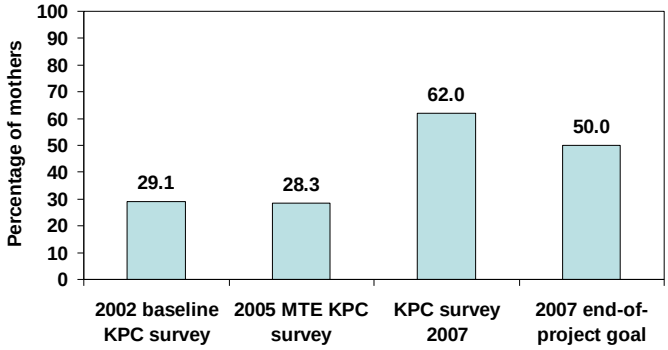
Percentage of Mothers of Infants Who Know at Least One Place Where She Can Obtain a Method of Child Spacing



4.2: Increase the percentage of mothers who know at least one place where she can obtain a method of child spacing.
The percentage of mothers that know where to obtain child spacing methods has reached 80% and exceeded the EOP target (65%).

5. Assure appropriate case management of common childhood illnesses
Pneumonia case management

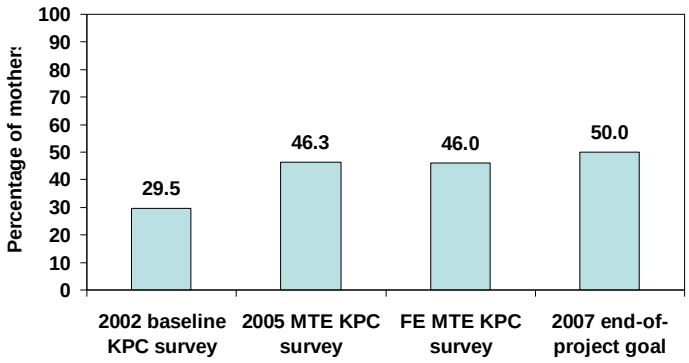
Percentage of Children 0-23 Months of Age with Cough and Fast/Difficult Breathing Who Were Taken to a Health Facility or Who Received Antibiotics from an Alternative Source



5.1: **Increase the percentage of mothers of children 0-23 months with cough and fast/difficult breathing who were taken to a health facility or who received antibiotics from an alternative source.**
The management of childhood pneumonia and diarrhea has improved remarkably. The percentage of mothers that sought care for children with cough increased to 62% also exceeding the 50% EOP target.

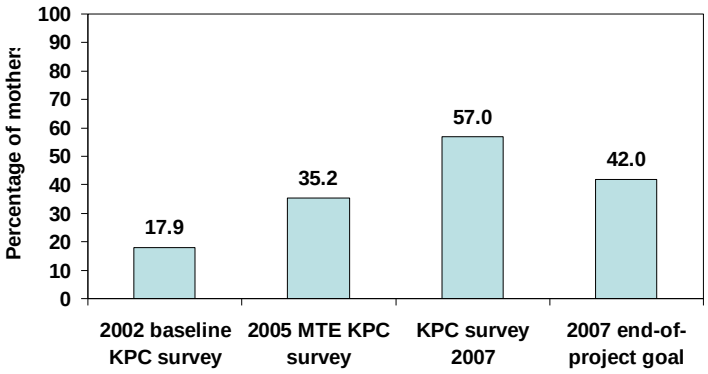
Control of diarrheal disease

Percentage of Children 0-23 Months of Age with Diarrhea Who Were Given the Same Amount or More Fluids During the Illness



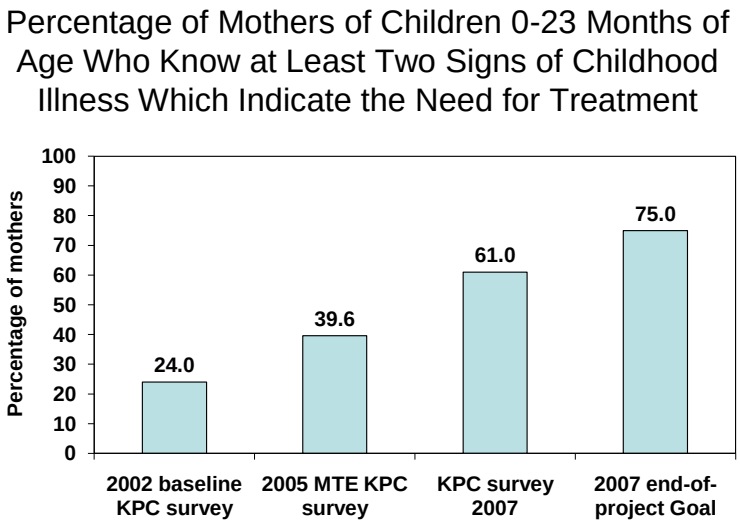
5.2: **Increase the percentage of children 0-23 months with diarrhea who were given the same amount or more liquids during the illness.**
This indicator did not reach the target in all jurisdictions and in contrast, the use of ORS has increased. The type of liquids has improved but increasing the quantity will require more time and research.

Percentage of Children 0-23 Months of Age with Diarrhea Who Received Oral Rehydration (ORS) and/or Recommended Home Fluids (RHFs)



5.3: **Increase the percentage of children age 0-23 months with diarrhea that receive oral rehydration (ORS) and/or recommended home fluids (RHFs).**
The percentage of children that received ORS or recommended home fluids increased to 57% also exceeding the 42% EOP target.

Sick Child Care



5.4: **Increase the percentage of mothers of children 0-23 months who know at least two signs of childhood illness that indicate the need for treatment.** The percentage of mothers that are able to report at least two danger signs of children's illnesses increased from 40% in the MTE to 61% but did not reach the EOP goal of 75%.

5.5: 0% of health facilities will have had a stock out of essential medications/supplies in the previous month. No stock-outs were reported during the evaluation. However, most facilities visited had small quantities of pediatric formulations of antibiotics such as cotrimoxazole, which would be required to treat child pneumonia. In general, the medicine cabinets and rooms visited were clean and well organized with stock cards for each medicine.

Figure 5. Photo of Medicine Cabinet in "Centro de Convergencia."

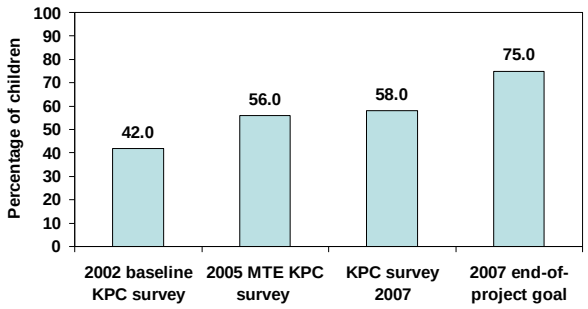
5.6: 80% of health workers will score greater than 80% on IMCI checklist in the past quarter. This goal was achieved.

5.7: **90% or more of the health facility workers and CFs will correctly assess danger signs in sick children.** This goal was achieved.

5.8: **100% of the health facility workers and CFs will have received supervision at least once in the last three months using verification checklists.** This goal was achieved.

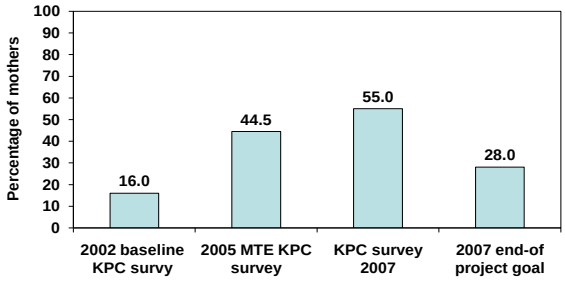
6. Timely and complete immunizations of young children

Percentage of Children 13-23 Months of Age Completely Vaccinated before 13 Months of Age



6.1: **Increase the percentage of children age 13-23 months who were fully vaccinated (against the five vaccine-preventable diseases) before they are 13 months of age.**
Coverage has reached 58% from 42% at baseline, but it is below the 75% EOP target. Only one jurisdiction in San Sebastian exceeded the EOP target by reaching 84% coverage. It is important to note that the project has focused on education and mobilization of mothers and not on the provision of vaccines, which is the MOH's responsibility. In addition, this indicator is calculated for children up to 13 months of age. Since in Guatemala, the measles policy is to give the immunization at 12 months, there is only a one-month window to reach the "fully-immunized target." This period is not enough time to account for all the children who will reach this status at 14 or even 15 months of age. We suggest recalculating this indicator, including children up to 15 or 18 months of age.

Percentage of Mothers Receiving at Least Two Tetanus Toxoid Immunizations Prior the Birth of Her Child



6.2: **Increase the percentage of mothers of children aged 0-23 months who receive at least two tetanus toxoid injections before the birth of the youngest child.**
Coverage of tetanus toxoid immunization of mothers was 55% and doubled the EOP target of 28%.

7. Improve institutional capacities

7.1 Increase Private charitable donations at headquarters. The amount of non-grant money that Curamericas Global has raised over the last five years has primarily gone into matching funds and overhead expenditures. During this same period, Curamericas made a strategic decision to pursue new projects in Asia and Africa, using some of the funds raised for those efforts. At this time, many grants are being pursued to continue funding the Guatemalan project, and Curamericas Global has secured some funding from private donations. Curamericas Global remains committed to the initiative and to the Project Director, Dr. Mario Rodrigo Valdez Ramirez. To that end, Curamericas Global is also pursuing potential funding from a corporate foundation in California that has indicated great interest in funding a Guatemalan project. Teresa Wolf, Executive Director of Curamericas Global, is set to meet with the foundation in the early part of September. USAID in Guatemala has indicated that its program to match private funding arising from the US for approved projects might be able to provide matching funds if the California source materializes.

7.2 Expand Curamericas child survival activities to program operations in two new countries. Around 2002, Curamericas Global began mentoring groups in Haiti, and on the Mexican/U.S. Border. These projects have concluded. In 2006, the Curamericas Global's Board of Directors renewed efforts to extend beyond Central and Latin America. Many efforts are underway to fund projects in Haiti and Tanzania, where they are working with a women's community-based NGO, KIWAKKUKI, and plan to apply for a PEPFAR grant in October. In Bolivia, Curamericas Global and CSRA (Consejo de Salud Rural Andino) are currently renegotiating their successful partnership. CSRA has been very successful in gaining funding from other sources—including USAID—and appears ready to stand on its own. Curamericas Global is not abandoning its long-term partner there, but reformulating its role.

7.3 Assure standardization of the CBIO methodology. Curamericas Global has developed and published a CBIO Methodology manual, which has been translated into Spanish and is available on the web. They also are planning more in-depth materials covering such subjects as nutrition, pneumonia case management, control of diarrheal diseases, maternal and neonatal health, family planning and IMCI. The CBIO Methodology is used in five other countries besides Guatemala: Mozambique, Malawi, Rwanda, Kenya and Cambodia.

8. Sustainability: Child health activities are eventually sustainable locally

8.1: **Increase the percentage of beneficiaries who live within 5 kilometers of a Dispensary with at least one health worker trained in IMCI protocols.** This indicator has been achieved in the 118 villages. All CFs are trained in IMCI.

8.2: **Curamericas/Guatemala will promote child survival activities to the municipal governments by attending at least 10 meetings annually of the Municipal Development Committee in three municipalities.** The Project has facilitated numerous meetings with municipal committees and subcommittees. It also organized public forums with current mayor candidates in the upcoming elections.

8.3: **Establish sustainable Care Groups in all Project communities (70% of Care Groups will have at least 80% of all members attending at least 80% of all meetings in the last quarter).** The Project has created 321 Care Groups and the number is increasing. They are all functional.

8.4: **Increase local monitoring and evaluation capacity.** The Project used indicators to monitor its performance and both Project and headquarter staff participated actively in the final evaluation providing insights and all required information.

Attachment 1. Objectives, Indicators and Benchmarks by Project Year

Objective	Indicator	Baseline %	MTE %	FE %	Year Estimates from DIP (%)				
					1	2	3	4	5
1. Improve child nutritional status (nutrition and micronutrient supplementation/promotion of breastfeeding)									
1.1: Decrease the percentage of children age 0 –23 months who are underweight.	Percentage of children 0-23 months who are underweight.	43	28	38	40	40	38	36	34
1.2: Increase the percentage of children 0-5 months who were exclusively breastfeeding during the past 24 hours.	Percentage of children 0-5 months who were exclusively breastfeeding during the past 24 hours.	63	54	73	70	73	75	78	80
1.3: Increase the percentage of mothers of children 0-23 months who received a vitamin A dose during the first two months after delivery.	Percentage of mothers of children 0-23 months who received a Vitamin A dose during the first two months after delivery.	0	37.3	67	30	40	50	55	60
2. Improve prenatal care coverage (maternal and neonatal health)									
2.1: Increase the percentage of mothers who had at least two prenatal visits (card) with a trained health provider prior to the birth of her youngest child less than 24 months of age.	Percentage of mothers who had at least two prenatal visits (card) with a trained health professional prior to the birth of her youngest child less than 24 months of age.	25	35.9	47	28	30	33	36	40
3. Assure all deliveries are safe deliveries									
3.1: Increase the percentage of children age 0-23 months whose births are attended by skilled health personnel (nurse, auxiliary nurse, or MD).	Percentage of children 0-23 months whose births were attended by a skilled health provider.	8.6	9.1	11	10	12	14	16	18

Objective	Indicator	Baseline %	MTE %	FE %	Year Estimates from DIP (%)				
					1	2	3	4	5
4.2: Increase the percentage of mothers who know at least one place where she can obtain a method of child spacing.	Percentage of mothers of children 0-11 months who report at least one place where she can obtain a method of child spacing.	41.3	55.5	80	--	--	53	--	65
5. Assure appropriate case management of common childhood illnesses									
Pneumonia case management									
5.1: Increase the percentage of mothers of children 0-23 months with cough and fast/difficult breathing who were taken to a health facility or who received antibiotics from an alternative source.	Percentage of mothers of children 0-23 months with cough and fast/difficult breathing, who were taken to a health facility or who received antibiotics from an alternative source.	29.1	28.3	62	33	37	41	46	50
Control of diarrheal disease									
5.2: Increase the percentage of children 0-23 months with diarrhea who were given the same amount or more liquids during the illness.	Percentage of children 0-23 months with diarrhea who were given the same amount or more of liquids during the illness.	29.5	46.3	46	33	37	41	46	50
5.3: Increase the percentage of children age 0-23 months with diarrhea that received oral rehydration (ORS) and/or recommended home fluids (RHFs).	Percentage of children 0-23 months with diarrhea in the last two weeks who received oral rehydration solution (ORS) and/or recommended home fluids (RHFs).	17.9	35.2	57	24	28	33	38	42

Objective	Indicator	Baseline %	MTE %	FE %	Year Estimates from DIP (%)				
					1	2	3	4	5
5.5: 0% of health facilities will have had a stock out of essential medications/supplies in the previous month.	Proportion of health facilities that have had a stock-out of essential medications/supplies in the previous month.	20	0	0	--	--	0	--	0
5.6: 80% of health workers will score greater than 80% on IMCI checklist in the past quarter.	Percentage of health workers who score greater than 80 % on the IMCI checklist in the past quarter.	0	--	100	--	40	60	70	80
5.7: 90% or more of the health facility workers and CFs will correctly assess danger signs in sick children.	Percentage of health facility workers and CFs will correctly assess danger signs in sick children.	0	Year 4 estimate at 100%	100	--	40	60	75	90
5.8: 100% of the health facility workers and CFs will have received supervision at least once in the last three months using verification checklists.	Percentage of health facility workers and CFs who have received supervision at least once in the last three months using verification checklists.	0	Year 4 estimate at 100%	100	--	--	70	--	100
6. Timely and complete immunizations of young children									
6.1: Increase the percentage of children age 13-23 months who were fully vaccinated (against the five vaccine-preventable diseases) before they are 13 months of age.	Percentage of children aged 13-23 months who were fully vaccinated (against the five vaccine-preventable diseases) before they are 13 months of age.	42	56	58	55	60	65	70	75
6.2: Increase the percentage of mothers of children aged 0-23 months who receive at least two tetanus toxoid injections before the birth of the youngest child.	Percentage of mothers of children 0-23 months of age who received at least two tetanus toxoid injections before the birth of the youngest child.	16	44.5	56	18	20	23	25	28

Objective	Indicator	Baseline %	MTE %	FE %	Year Estimates from DIP (%)				
					1	**2**	**3**	**4**	**5**
7.2: Expand Curamericas child survival activities to program operations to two new countries.	Number of countries in which Curamericas is operating.	4	0	0	--	--	5	--	6
7.3: Assure standardization of the CBIO methodology across countries. Curamericas will develop and standardize educational materials for field offices in CBIO methodology, nutrition and micronutrients, pneumonia case management, control of diarrheal diseases, maternal and neonatal health, family planning and IMCI.	Number of standardized educational materials developed by Curamericas for field offices in CBIO methodology, nutrition and micronutrients, pneumonia case management, control of diarrheal diseases, maternal and neonatal health, family planning, and IMCI.	0	1	Methodology was standardized and guidelines developed for each area.	--	--	--	--	7
8. Sustainability									
Child health activities are eventually sustainable locally									
8.1: Increase the percentage of beneficiaries who live within 5 kilometers of a Dispensary with at least one health worker trained in IMCI protocols.	Percentage of beneficiaries who live within 5 kilometers of a Dispensary with at least one health worker trained in IMCI protocols.	To be collected by Year 1 annual report (1 new health post was constructed in Year 1)	TBD (Year 4- San Miguel to 40%; San Sebastian to 45%)	15 IF and 62 CF trained and serving 118 communities	--	--	TBD	--	TBD (an increase to be shown)
8.2: Curamericas-Guatemala will promote child survival activities to the municipal governments by attending at least 10 meetings annually of the Municipal Development Committee in three municipalities.	Number of Municipal Development meetings that a representative of Curamericas – Guatemala attended in the past 12 months.	0	TBD (Year 4 at 10)	Curamericas -Guatemala has attended and convened numerous meetings with	--	--	10	--	10

				municipal committees exceeding the target					
8.3: Establish sustainable Care Groups in all Project communities (70% of Care Groups will have at least 80% of all members attending at least 80% of all meetings in the last quarter).	Percentage of Care Groups that have had at least 80% of all members attending at least 80% of all meetings in the last quarter.	To be collected by Year 1 annual report (established)	58.5	100%	--	--	50%	--	70%
8.4: Increase local monitoring and evaluation capacity.	90% of Institutional Facilitators will be able to do a Rotating Mini-Knowledge, Practice and Coverage (KPC) Survey properly, based on checklist scores.	0	TBD (Year 4 estimate at 66%)	100%	--	--	50%	--	90%

Attachment 2. Activities that Supported Achievements of Objectives and that Added Value to SIAS

	Major Activities			
Objectives	**Household**	**Community**	**Health Facility**	**District**
1. Improve child nutritional status	<u>Nutrition</u> Use child health register to systematically and routinely follow-up children Monitor child's growth through routine weighing of children Nutritional counseling to caretakers in the home Promotion of Breastfeeding Training in IMCI Nutritional counseling to caretakers in the home Promotion of exclusive breastfeeding during home visits <u>Micronutrient Supplementation</u> Promotion of Vitamin A to WRA	Community education during Care Groups PD study and TIPS to improve nutrition education methods Use of behavior box to monitor mothers' practices Deworming during Care Groups Community education during Care Groups TIPS to improve nutrition education methods Barrier analysis study conducted Training of traditional birth attendants (TBAs) in administration of vitamin A Vitamin A supplementation at Dispensaries Vitamin A provided to TBAs	Growth monitoring and nutritional counseling in the clinic Promotion of exclusive breastfeeding in the clinic Training of health facility workers in IMCI Administration of vitamin A during clinic visits	Coordinate with MOH in Huehuetenango for IMCI training Coordinate with MOH in Huehuetenango for IMCI training

Objectives	Major Activities			
	Household	**Community**	**Health Facility**	**District**
2. Improve prenatal care coverage	Home visits to identify pregnant women and encourage them to seek services Surveillance activities during collection of vital event data Coordination with TBAs, CFs and *Comunicadoras* to identify pregnant women	Promotion of prenatal services during Care Group meetings	Promotion of prenatal services during clinic visits Prenatal care services during clinic hours	
3. Assure all deliveries are safe deliveries	Promotion of use of trained TBAs during home visits Training of TBAs	Promotion of using trained TBAs during Care Groups	Training of Trainers for those training TBAs Deliveries provided in health facilities	Construction of birthing centers in select communities using volunteer work teams
4. Adequate child spacing	Maintenance of a women's registry with family planning data to identify women who are and are not using family planning methods Education of WRA and their partners on child spacing Promotion of child spacing among WRA and their partners Development and implementation of child spacing education materials for *Comunicadoras*	Promotion of child spacing during Care Groups Training of CFs and FIs in child spacing methods and counseling Promotion of child spacing during Care Groups Develop education materials on child spacing for use with Care Groups	Retraining of clinical staff in child spacing methods and counseling skills Provision of family planning methods Strategically place family planning educational materials (e.g. posters, brochures) in the health facility	Provide family planning methods to health facilities Provision of IEC materials

Objectives	Major Activities			
	Household	**Community**	**Health Facility**	**District**
5. Assure appropriate case management of common childhood illnesses.	<u>Pneumonia case management</u> Training in IMCI Development and training in use of educational modules Prioritize key education messages during home visits using the education modules Use of verification checklists to supervise IMCI activities Control of Diarrheal Disease Training in IMCI Promotion of proper management of diarrhea Development and training in use of Educational modules Prioritize key education messages during home visits using the education modules Promotion of proper management of diarrhea Development and training in use of educational modules on diarrhea management	Development of educational modules Education of mothers on the signs of pneumonia and appropriate care seeking behavior during Care Groups Development and utilization of educational modules for use with Care Groups Promotion to mothers and caretakers on the proper management of diarrhea during Care Groups Development and utilization of educational modules for use with Care Groups ORT promotion/ demonstration during monthly health outreach	Clinical IMCI training Implementation of IMCI in health facilities Implementation of IMCI supervision protocols Clinical IMCI training Implementation of IMCI in health facilities Implementation of IMCI supervision protocols ORT promotion/ demonstration in the clinic	Coordinate with the MOH office in Huehuetenango for training in IMCI Coordinate with the MOH office in Huehuetenango for training in IMCI

Objectives	Major Activities			
	Household	**Community**	**Health Facility**	**District**
	Prioritize key education messages during home visits using the education modules Distribution of ORS to households (HH) ORT promotion/ demonstration by *Comunicadoras* during their regular home visits <u>Integrated Management of Childhood Illnesses</u> Training in IMCI Development and training in use of educational modules for common child illnesses Prioritize key education messages during home visits using the education modules	Development of educational modules for common child illnesses Education of mothers on the signs of pneumonia and appropriate care seeking behavior during Care Group meetings	Clinical IMCI training Implementation of IMCI in health facilities Implementation of IMCI supervision protocols Training of FIs, CFs, and *Comunicadoras* in community IMCI Training of supervisors in verification checklists Application of the IMCI verification checklists on a quarterly basis Development of a supervision plan Supervisors trained in use of verification checklists Implementation of routine supervision of health facility workers and CFs	Coordinate with the MOH office in Huehuetenango for training in IMCI

	Major Activities			
Objectives	**Household**	**Community**	**Health Facility**	**District**
6. Timely and complete immunization of young children and women of reproductive age	Maintenance of child registries with EPI data to find defaulters Home visits to defaulters by *Comunicadoras* to encourage vaccination during health outreach posts Promotion of immunization activities in the HH Development and utilization of the educational modules on immunization Maintenance of women's registries with vaccination data Promotion of immunization activities in the HH Development and utilization of the educational modules on immunization	Promotion of immunization activities during Care Group meetings Vaccinations provided during health outreach posts Promotion of TT activities during Care Group meetings Vaccinations provided during health outreach posts	EPI activities promoted in the health facilities Immunization training TT activities promoted in the health facilities Immunization training	Provision of vaccines and supplies, including cold chain, for the health facilities Provision of vaccines and supplies, including cold chain, for the health facilities

Objectives	**Other Major Activities**
7. Improve Institutional Capacities at HQ in the Us	Hire a development associate to steward current donors and cultivate new prospects. Develop donor cultivation activities for major donors in TX, NC, TN, and CA. Strictly adhere to new Board of Director membership requirements that include yearly HQ gift solicitation. Restructure program staff in order to encourage the development of new programs and respective grant income. Expand organization's visibility with foundations using Board of Director and major donor network. Hire an HQ Program Specialist with a background in health education Review current educational materials in use by Curamericas partners and other organizations
8. Sustainability	Train health facility workers and *Comunicadoras* in IMCI Staff health clinics and posts in the rural communities Negotiate with the municipal governments for additional child survival resources Promote child survival activities with local government leaders Identification and training of CFs and *Comunicadoras* Establishment of Care Groups Promotion of child health activities during the Care Groups by CFs, *Comunicadoras*, and other Project staff Train Personnel on use of Rotating Mini- KPC Surveys

Attachment 3. Evaluation Team Members and Project Staff Members

Evaluation Team
Elvira Beracochea, Evaluation Team Leader
Mario Valdez, Director, CBIO Child Survival Project/Guatemala
Nancy Nix, Senior Program Specialist, Curamericas Global Headquarters/USA
Henry Perry, International Program Coordinator, Curamericas Global Headquarters/USA
Gina Stracuzzi, Evaluation Assistant, Volunteer

Project Staff Members

No.	Names	Position
1	Mario Rodrigo Valdez	Director
2	Sergio Fabricio Pèrez	Administrator
3	José Alberto Silvestre Taracena	Administrative Support
4	Alma Esperanza Dominguez	Institutional Facilitator
5	Maida Audelina Calderon	Institutional Facilitator
6	Nazario Orbelin Recinos	Institutional Facilitator
7	Antonio Ros Delgado	Institutional Facilitator
8	Vilma Etelvina Rivas	Institutional Facilitator
9	Rosalinda Villegas López	Institutional Facilitator
10	Evelin Fabiola Matías	Institutional Facilitator
11	Sairi Anel Silvestre Solis	Institutional Facilitator
12	Yuvicsa Yohana Pelaez	Institutional Facilitator
13	Sara Patricia Camposeco	Educator
14	Eulalia Andrés José	Educator
15	Elena José Miguel	Educator
16	Juana Sebastian Jímenez	Educator
17	Isabel Domingo Juan	Educator
18	Miriam Catalina Montejo Gaspar	Educator
19	Yhadira Elizabeth Francisco Juan	Community Organizer
20	Nicolas Francisco Nicolas	Community Organizer
21	Edvin Yubini López	IT
22	Luciano Lorenzo Luciano	Institutional Facilitator
23	Lucas Agustin Montejo	Institutional Facilitator

Attachment 4. Evaluation Assessment Methodology

Extended discussions were held with the Project staff, with the Project Director, and with the Headquarters Senior Program Specialist. The methodology for the measurement of population-based indicators is based on the KPC methodology used by Curamericas/Guatemala to conduct the survey. The Project Director, Dr. Mario Valdez, who had previously received training in the conduct and analysis of child survival KPC surveys, and had led the MTE KPC also conducted the FE KPC survey. The Project staff analyzed the data manually. The data were also transferred into an electronic format and analyzed with EPI INFO.

Timetable of Evaluation

27 August	Travel of Dr. Beracochea, Dr. Perry and Ms. Stracuzzi from the US to the Project Area
28 August	Overview of Project activities by Dr. Valdez and discussions with Project staff
29-31 August	Focus group discussions with community members, community leaders and MOH staff; visitation of Project community activities. At many of these visits, there were Care Group meetings, and there were "mixed" meetings of CFs, *Comunicadoras*, and mothers.
1 September	Review of health information system consolidation of data from the health information system; writing of report
2 September	Report Writing
3-4 September	Consolidation of data from the health information system; meeting with Project staff
5 September	Meeting with staff; sharing of findings of the evaluation with Project; travel to Huehuetenango
6. September	Meeting with Huehuetenango Departmental Officials of the Ministry of Health (Director, and Dr. Mario Mazariegos, Assistant Technical Director)
7 September	Debriefing meeting in Guatemala City with USAID (Ms. Isabella Stout, Advisor in Health and Nutrition at USAID/Guatemala; return to US
17 September	Submission of Draft Report

Attachment 5. List of Persons Contacted and/or Interviewed

Ms. Isabella Stout	Advisor, Health and Nutrition, USAID/Guatemala
Dr. Orlando Cano	Director, Department of Huehuetenango Ministry of Health
Dr. Mario Mazariegos	Assistant Technical Director, Department of Huehuetenango Ministry of Health
Care Group Members	San Miguel, San Rafael, and San Sebastian
Women/Mothers	San Miguel, San Rafael, and San Sebastian
Community leaders	San Miguel, San Rafael, and San Sebastian
MOH staff members	San Miguel, San Rafael, and San Sebastian

Head Health Office, Huehuetenango

Elsa Marieta	Head Nurse
Karla Maria Mendoza	Promotion Coordinator karlamariamendoza@yahoo.com.ar
Lilian Edith Flores	Health Facilitator Representative Lilianfloresmonti@yahoo.com.es
Imelda Eleonora Palacios	Mental Health marifer0604@hotmail.com
Samira Dense Calderon	Human Resources Manager calderon@gmail.com
Patricia Martinez Cifuentes	Professional Nurse

Attachment 6. Best Practice

***Comunicadoras en Salud* (Health Communicators), Guatemala**

The Problem Addressed. A lack of community support and participation, distrust of outsiders and a wariness of government-sponsored activities were among the hurdles encountered at the start of the child survival program. By the mid-term evaluation there was a "growing trust and confidence" among the communities. As the project nears its scheduled end, there is a visible sense of enthusiasm and an impressive mobilization of women, even in the most unapproachable communities. Much of this interest and involvement can be directly linked to the use of the *Comunicadoras en Salud* (*Comunicadoras*), networks of village health volunteers.

The Project's Input. With direction from project staff, the Care Group (*Grupos de Cuidado)* methodology was initialized. This entails the identifying, training and continuous support of Community Facilitators *(Facilitadora Comunitarias)* and the *Comunicadoras*. Monthly, the CFs bring a new health message to their care groups, which are made up of groups of 10 *Comunicadoras.* Educated with the month's new knowledge on issues such as nutrition (including exclusive breastfeeding), immunizations, prenatal care and hygiene, the *Comunicadoras* then in turn share that message with the 15 or so women in their community for which they are responsible.

Magnitude of Intervention. There are 321 *Comunicadoras* volunteering their time to help women and children of their communities through monthly meetings and home visits as needed. The level of participation in the program continues to grow with the use of the new educational materials introduced since the mid-term evaluation. Because these new materials are in both Spanish and in the local language, and are primarily pictorial in nature, the *Comunicadoras'* level of understanding and their comfort levels have increased dramatically. The sense of pride and confidence in their roles as *Comunicadoras* is evident, and some have even moved up to positions as CFs and HEs, which is leading other women in the communities to take on roles that are more active as well.

Contribution to scaling up. The use of *Comunicadoras* has strengthened the health system at the community level and lead to perceptible behavior changes, such as far greater adoption of vital health practices, active participation of increasing numbers of women in their own health and that of their children, and the crucially important acceptance—or at least congenial tolerance—by husbands and community leaders. One of the most important contributions of the volunteer *Comunicadoras* is the monthly updating of vital events, an essential aspect of the CBIO Methodology, which is crucial to the scaling-up of census-based, community health driven programs.

Equity. This project is at work in some of the most remote, most unapproachable regions of Guatemala, even in communities considered impenetrable by the MOH and other NGOs that have tried to address the socio-economic inequities that exist for the indigenous people of this country. Moreover, this innovative idea has empowered many

women in the project area to become advocates for themselves and their communities. Many Care Groups meet separately to discuss issues important to their community and are beginning to form imaginative groups, such as a small, women-driven NGO called *Wajan Nabal' Ix* (Women's United Dream), to address strategies for gaining economic independence and how to help families manage money sent from the United States. It is worth mentioning that this same group named the Millennium Development Goals as what they believe to be the best solution for their country, and that they believe they can be achieved "*poco a poco*" (little by little).

Quantifiable results: The progress documented since the beginning of the program is in many instances inspiring and can be directly linked to the *Comunicadoras'* involvement. Some examples include: the percentage of children 0-23 months who are underweight was reduced from 43% to 33%; the percentage of mothers who had at least two prenatal visits with a trained health professional prior to birth increased from 25% to 49%; the percentage of children aged 13-23 months who were fully vaccinated before 13 months of age increased from 42% to 58%; and recognition of childhood illness needing treatment increased from 24% to 61%. These behavior-change results have lead to a perceptible decrease in the number of infant and maternal deaths reported by the mothers.

Attachment 7. Analysis of Mortality Data

Summary of Childhood Death Data

The vital events registration system established by the project now has 327 deaths of children who died after birth but before reaching 5 years of age during the period from 2002 until July 2007. The earliest registered death is 17 January 2002, but there are 29 deaths for 2002 without any month or date recorded. The latest recorded death is 17 July 2007.

The list is fairly complete, and it contains the name of the child who died, the community, the municipality, age at death (although quite a few have only the age at death in years – for those who died after one year of age), date of death (although for quite a few only the year of death is recorded with no information on the date or month), and cause of death (although there is no uniform method for registering causes of death). There are still a few obvious errors in dates that need correction, and there is still some missing information.

Cause of death (Table 1 and Figure 1): Pneumonia is far and away the leading cause of death, reported as the cause for over half (55.9%) of the deaths. Diarrhea was a distant second leading cause, reported for 18.8% of the causes. No other single cause was reported for more than 7% of the deaths.

Age at death (Table 2 and Figure 2): Only 15% of under-5 deaths of children occur after 2 years of age. 70.0% of under-5 deaths occur during the first year of life and another 15% occur during the second year of life. One quarter of infant deaths take place during the neonatal period (the first 28 days of life) and of these, 50.0% occur on the first day of life and 60.0% occur during the first week of life.

Risk of death by municipality (Table 3): There appears to be a modestly higher increased risk of death in San Sebastian Acatan and San Rafael la Independencia compared to San Miguel Acatan, but this is not a striking difference.

Number of deaths registered by year (Table 4): The number of deaths reported by year shows no obvious trend. However, the data are consistent with the hypothesis that the percentage of deaths being registered increased each year while at the same time the actual number of deaths was decreasing.

Table 1. Reported Causes of Childhood Deaths

Cause	Number of deaths registered	Percentage of deaths registered	Other terms used for this diagnosis in the registry
Pneumonia/acute respiratory infection	175	55.9	bronchopneumonia
Diarrhea	59	18.8	dehydration, intestinal infection
Birth asphyxia	20	6.4	perinatal asphyxia
Malnutrition	12	3.8	kwashiorkor
Infection	10	3.2	sepsis, fever
Trauma	9	2.9	drowning
Meningitis	6	1.9	
Early neonatal causes	5	1.6	low birth weight
Diarrhea and pneumonia combined	1	0.3	
Other*	16	5.1	
Total	313	100.0	

*Other includes: appendicitis, convulsions/epilepsy, tonsillitis, hepatitis, hydrocephalus, hepatic insufficiency, congenital malformation, intestinal obstruction, brain tumor

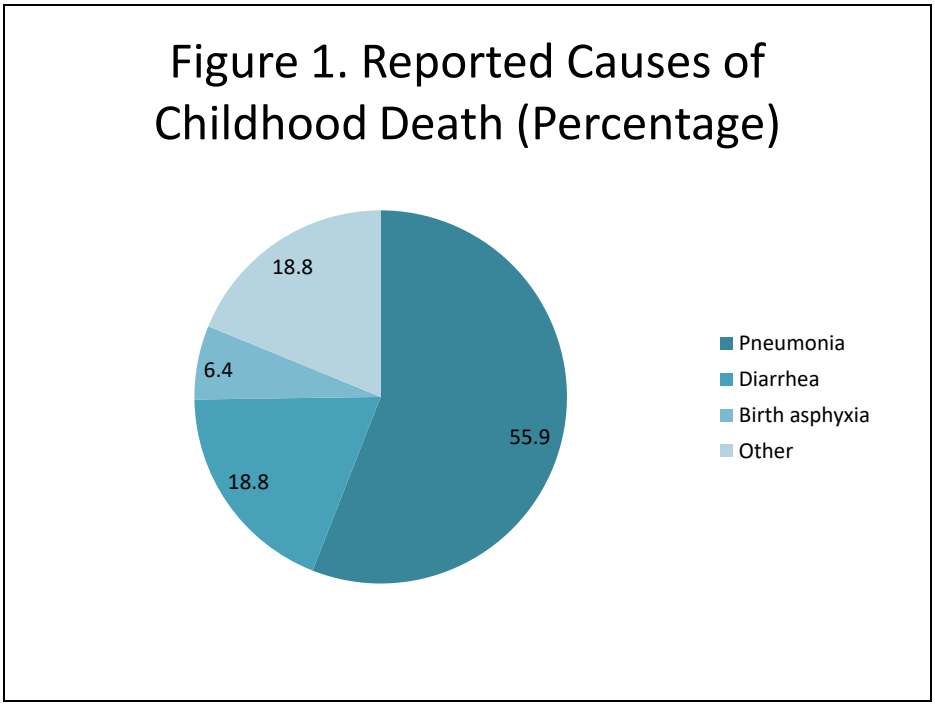


Table 2. Reported Ages at Death for Children 0-59 Months of Age

Age period		Number of cases	Percentage of cases	Comment
Neonatal period				
	0-1 days	26	8.2	50.0% of neonatal deaths occur during the first day of life
	2-6 days	5	1.6	
	7-13 days	8	2.5	
	14-20 days	8	2.5	
	21-27 days	5	1.6	60.0% of neonatal deaths occur in the first week of life
	Total	52	16.3	23.2% of infant deaths occur during the neonatal period. 16.3% of under-5 deaths occur during the neonatal period.
1-11 months	1 month	35	10.9	
	2 months	27	8.4	
	3 months	18	5.6	
	4 months	18	5.6	
	5 months	15	4.7	
	6 months	8	2.5	
	7 months	10	3.1	
	8 months	12	3.8	
	9 months	7	2.3	
	10 months	17	5.3	
	11 months	5	1.6	
	1-11-month total	172	53.8	76.8% of infant deaths occur during the period from 1-11 months of age
0-11 months	Total	224	70.0	70.0% of under-5 deaths occur during the first year of life.
12-23 months		49	15.3	
24-35 months		25	7.8	
36-47 months		14	4.4	
48-59 months		8	2.5	Only 14.7% of under-5 deaths occur among children 2-4 years of age
Total		320	100.0	

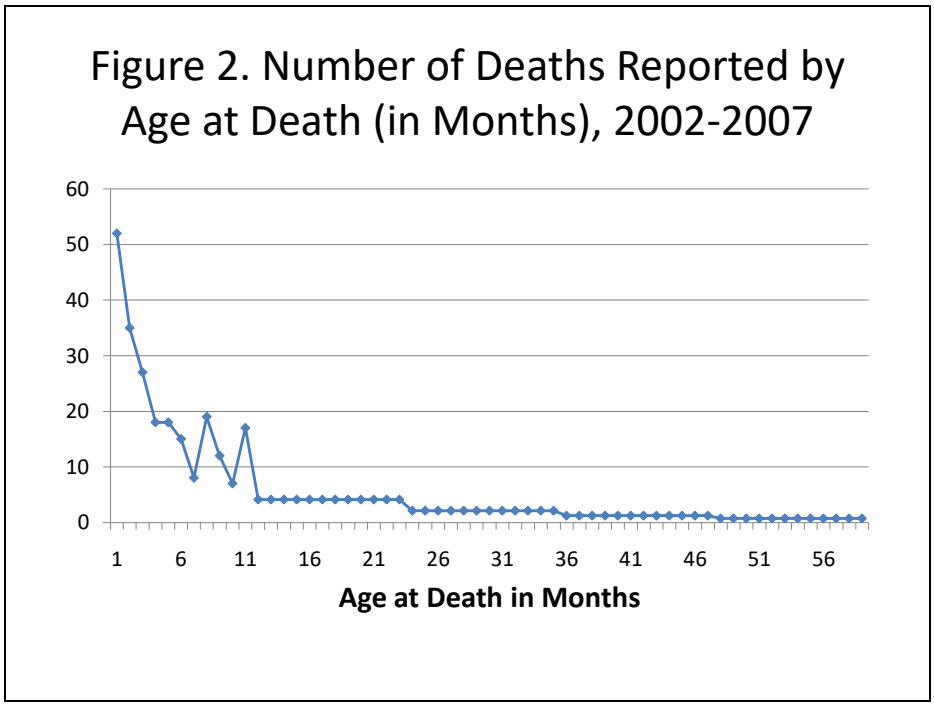


Table 3. Risk of Child Death by Municipality: Number of Child Deaths Registered by Municipality and Under-5 Population in Each Municipality, 2002-2007

Municipality	Population of children 0-4 years of age	Number of deaths registered	Mortality rate
San Sebastian Acatan	3,930	125	39.4
San Miguel Acatan	4,591	108	33.0
San Rafael la Independencia	2,603	90	27.5
Total	11,124	327	100.0

Table 4. Number of Child Deaths Registered by Year (2002 until 30 June 2007)

Year	Number of deaths registered	Comment
2002	62	
2003	57	
2004	52	
2005	63	
2006	52	
2007	66	33 deaths were registered during the first 6 months. This figure has been doubled to estimate the number for the entire year
Total	319	

Table 5. Number of Under-five Deaths by Year, Municipality and Age Group, 2002 – 2007

Location	Age at death	Year						Total
		2002	2003	2004	2005	2006	2007 (Jan-July)	
San Miguel	**≤ 1 mo**	0	1	5	5	8	6	25
	1-11 mo	10	7	10	7	7	7	48
	12-59 mo	10	9	4	6	6	4	39
San Rafael	**≤ 1 mo**	7	1	5	7	9	6	35
	1-11 mo	2	6	11	8	11	4	42
	12-59 mo	3	3	2	2	0	0	10
San Sebastian	**≤ 1 mo**	10	5	5	7	0	1	28
	1-11 mo	11	9	8	9	9	5	51
	12-59 mo	8	16	5	10	2	3	44
Total		61	57	55	61	52	36	322

Table 6. Number of Births by Year and Municipality, 2002-2007

Location	Year					
	2002	2003	2004	2005	2006	2007*
San Miguel	964	942	1025	950	915	560
San Rafael	709	697	639	536	606	372
San Sebastian	526	512	432	448	495	282
Total	2199	2151	2096	1934	2016	1,213

*Actual numbers of births in 2007 were not available at the time of this writing. The numbers here are estimates made by taking the average number of births over the previous 5 years and multiplying by 7/12 in order to give an estimate of the number of births between January and the end of July, which is the same period for which deaths have been recorded in the death registry.

Table 7. Neonatal, Infant and Under-five Mortality Rates by Municipality and Year*

Location	Rate	Year					
		2002-2003		2004-2005		2006-7*	
		Rate	Numerator/ denominator	Rate	Numerator/ denominator	Rate	Numerator/ denominator
San Miguel	**Neonatal mortality rate**	0.5	1/1,906	5.1	10/1,975	9.5	14/1,475
	Infant mortality rate	9.4	18/1,906	13.7	27/1,975	19.0	28/1,475
	Under-5 mortality rate	19.4	37/1,906	18.7	37/1,975	25.8	38/1,475
San Rafael	**Neonatal mortality rate**	5.7	8/1,406	10.2	12/1,175	15.4	15/978
	Infant mortality rate	11.4	16/1,406	26.4	31/1,175	30.7	30/978
	Under-5 mortality rate	15.6	22/1,406	29.8	35/1,175	30.7	30/978
San Sebastian	**Neonatal mortality rate**	14.5	15/1,038	13.6	12/880	1.3	1/777
	Infant mortality rate	33.7	35/1,038	33.0	29/880	19.3	15/777
	Under-5 mortality rate	56.8	59/1,038	46.6	41/880	25.7	20/777

*January 2006-July 2007

Note: Ns are the numerators and denominators for calculating rates are shown below. The rates are produced by multiplying the result by 1,000

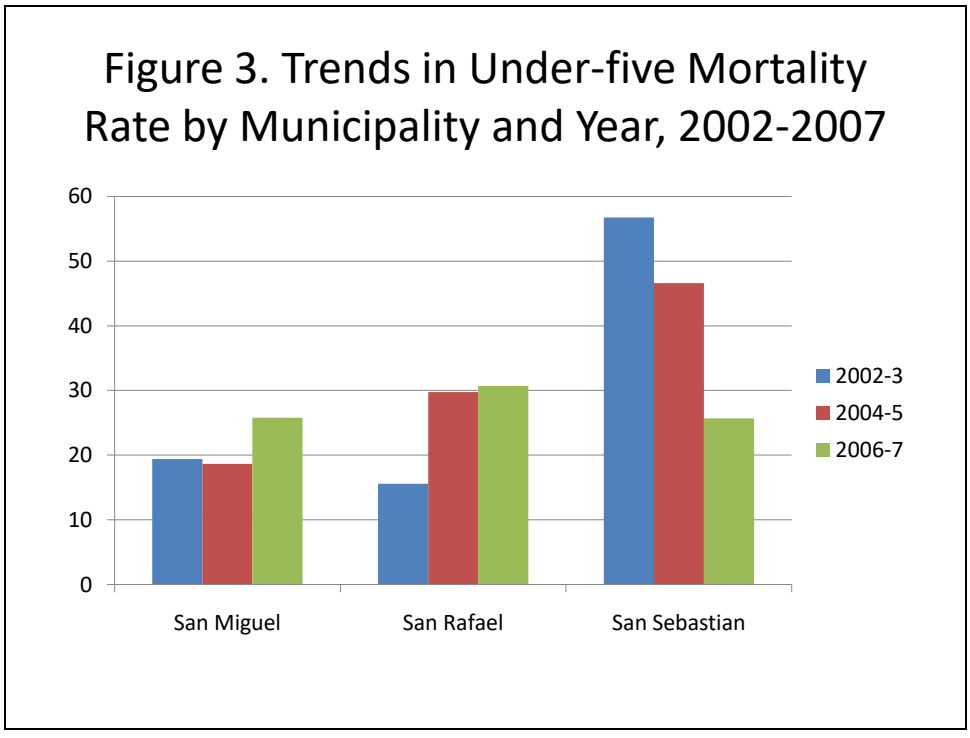
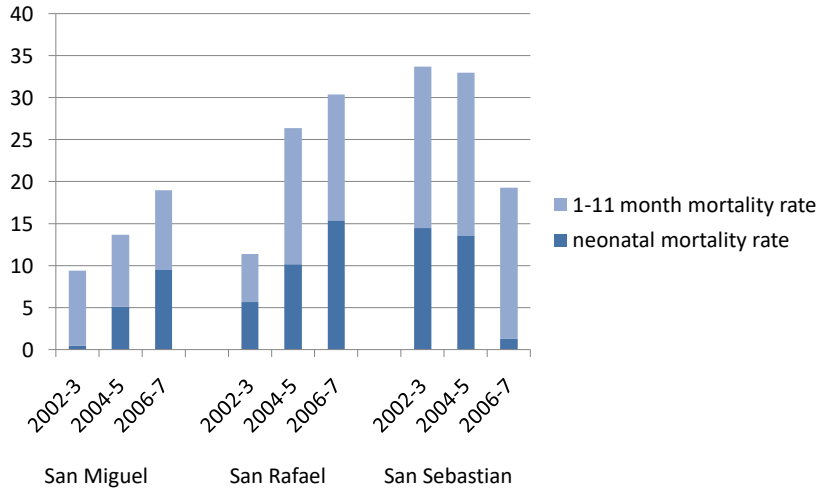


Figure 4. Neonatal and Post-neonatal Mortality Rate by Municipality and Year, 2002-2007



Summary of Maternal Mortality Data

The registry of maternal deaths lists 40 cases. There is still some missing information. The earliest date recorded on the registry is 25 December 2002, but there are quite a few deaths in 2002 without a date or month. The latest recorded death is dated 7 July 2007. The list contains the name of the person, the community, municipality, age at death, date of death, and cause of death. Again, there are no numbers of births provided yet.

Cause of maternal death (Table 6): Retention of the placenta is the leading cause of maternal death, accounting for almost one-third (30.0%) of maternal deaths. Hemorrhage is the second leading cause, accounting for just over one one-quarter (27.5%) of maternal deaths. Puerperal sepsis accounts for almost one-fifth (17.5%) of deaths.

Age at maternal death (Table 7): Although we don't have the number of births given by women in each age group, it is safe to assume that the number of women giving birth who are less than 20 years of age and 40 or older is less than those giving birth between the ages of 20 and 39. Thus, these data are consistent with the hypothesis that pregnant women in the youngest and oldest age groups are at greatest risk of death from childbirth.

Risk of maternal death by municipality (Table 8): There does not appear to be any increased risk of death by municipality.

Maternal mortality ratio (Table 9 and Figure 5): There is an odd distribution of deaths demonstrated here which is not readily explainable. In 2005, 18 maternal deaths were recorded compared to only 3 in 2004 and 2 in 2006. These data are not consistent with the hypothesis generated for child deaths, namely that the percentage of actual deaths is gradually increasing while the number of actual deaths is declining. However, if one ignores the data for 2002 and 2003, the data are compatible with this hypothesis. When the data a consolidated for periods of greater than one year, Table 9 demonstrates that the maternal mortality ratio in 2004-2005 was 521.1 maternal deaths per 100,000 live births, while in 2006-7 it was only 90.3. Figure 5 lumps 2002-2005 into a single category, and suggests a marked drop in maternal mortality in the 2006-2007 period.

Table 6. Causes of Maternal Death

Cause	Number	Percentage of Total	Other terms uses
Retention of placenta	**12**	**30.0**	
Hemorrhage	**11**	**27.5**	**shock**
Puerperal sepsis	**7**	**17.5**	
Pre-eclampsia	**3**	**7.5**	
Other	**3**	**7.5**	**Includes uterine atony, placenta previa, uterine rupture**
Total	**40**	**100.0**	

Table 7. Age at Maternal Death

Age Group	Number	Percentage of Total
< 20	**7**	**17.9**
20-24	**4**	**10.3**
25-29	**6**	**15.4**
30-34	**8**	**20.5**
35-39	**6**	**15.4**
40-44	**8**	**20.5**
Total	**39**	**100.0**

Table 8. Risk of Maternal Death by Municipality: Number of Maternal Deaths Registered by Municipality and Population of Women of Reproductive Age in Each Municipality

Municipality	Population of women of reproductive age	Percentage of population	Number of maternal deaths registered	Percentage of deaths registered
San Sebastian Acatan	4,450	39.7	16	40.0
San Miguel Acatan	4,129	36.9	14	35.0
San Rafael la Independencia	2,625	23.4	10	25.0
Total	11,204	100.0	40	100.0

Table 9. Number of Maternal Deaths Registered by Year (2002 to June 30, 2007)

Year	Number of deaths registered	Number of births	Maternal mortality ratio	Comment
2002	9	2,199		
2003	3	2,151	275.9	12/4,350 * 100,000
2004	3	2,096		
2005	18	1,934	521.1	21/4,030 * 100,000
2006	2	2,016		3/3,319 * 100,000
2007	1	1,213	90.3	(January 2006 – July 2007)

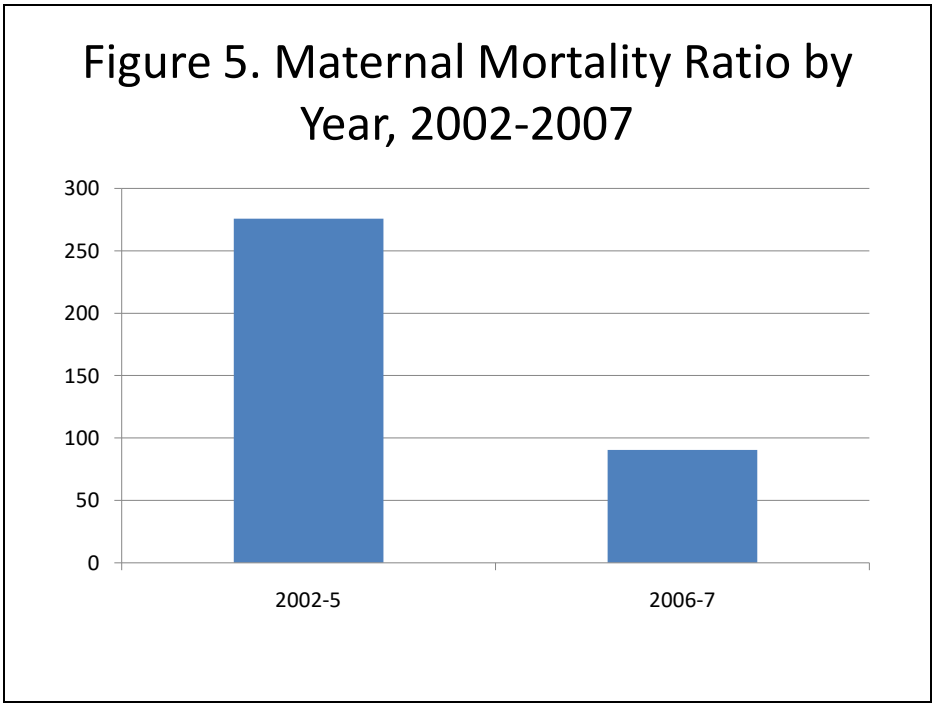


Figure 5. Maternal Mortality Ratio by Year, 2002-2007
300
250
200
150
100
50
0
2002-5
2006-7

Summary Conclusions

1. The under-five mortality rate in San Sebastian appears to have fallen by over half during the project, from56.8 to 25.7 deaths per 1,000 live births. This is the jurisdiction in which vital events registration was most complete at the outset, Under-registration of vital events at the outset of the project in San Miguel and San Rafael are the likely explanation for failure to demonstrate an under-five mortality decline in these two jurisdictions.

2. Pneumonia is far and away the leading cause of death among children who died during the life of the project for which a cause of death was identified, accounting for 55.9% of the deaths.

3. Only 14.7% of the registered under-5 deaths occurred after 2 years of age. 70.0% of under-5 deaths occur during the first year of life. 23.2% of deaths in the first year of life occurred during the neonatal period.

4. Retention of placenta, hemorrhage, and puerperal sepsis were the leading causes of maternal death. Maternal mortality ratio is quite high (521.1 in 2004 and 2005). The maternal death ratio appears to have declined during the last 18 months of the project.

Attachment 8. Population by Jurisdiction

	0-11	12-23	24-35	36-47	48-59	5 - 13	14 - 49	50- 64	65+	Totals
SAN MIGUEL ACATAN	(mos.)					(yrs)				
San Miguel Center	175	168	135	196	428	1847	1854	362	501	**5666**
Jurisdiction 2	321	237	247	309	456	2871	2428	638	713	**8220**
Jurisdiction 3 (adives)	365	349	281	257	667	4108	3509	775	668	**10979**
SAN SEBASTIAN COATAN										
San Sebastian Coatan Center	155	149	223	117	421	1467	1551	337	414	**4834**
Jurisdiction 2	304	375	424	318	215	3448	3559	624	801	**10068**
Jurisdiction 3	263	281	328	185	172	1992	3286	569	535	**7611**
SAN RAFAEL LA INDEPENDENCIA										
Jurisdiction 1	256	349	273	251	312	3015	2687	572	645	**8360**
Jurisdiction 2	99	122	72	115	339	1547	1291	202	176	**3963**
Jurisdiction 3	78	85	46	102	114	1033	976	148	145	**2727**
TOTAL	**2016**	**2115**	**2029**	**1850**	**3124**	**21328**	**21141**	**4227**	**4598**	**62428**

Attachment 9. Trained Personnel

STAFF CAPACITY, 2003 TO 2007													
2003													
Staff Capacity	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Total**
Institutional Facilitators	6	6	6	6	6	6	6	6	6	6	6	6	**72**
Educators	2	2	2	2	2	2	2	3	3	3	3	3	**29**
Community Facilitators	28	32	25	33	24	30	29	27	33	31	33	33	**358**
Health Communicators	0												**0**
Midwives	34	39	43	56	38	41	53	57	39	48	51	56	**555**
TOTAL	**70**	**79**	**76**	**97**	**70**	**79**	**90**	**93**	**81**	**88**	**93**	**98**	**1014**

2004													
Staff Capacity	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Total**
Institutional Facilitators	8	8	8	8	8	8	8	8	8	8	8	8	**96**
Educators	3	3	3	3	3	3	3	3	3	3	3	3	**36**
Community Facilitators	34	31	33	32	34	34	33	34	34	34	34	34	**401**
Health Communicators	112	98	118	101	114	95	119	103	117	119	110	113	**1319**
Midwives	68	70	73	71	77	67	73	65	78	69	77	74	**862**
TOTAL	**225**	**210**	**235**	**215**	**236**	**207**	**236**	**213**	**240**	**233**	**232**	**232**	**2714**

2005													
Staff Capacity	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Total**
Institutional Facilitators	11	11	11	11	11	11	11	11	11	11	11	11	**132**
Educators	4	4	4	4	4	4	4	4	4	4	4	4	**48**
Community Facilitators	34	34	32	34	33	32	34	34	33	34	34	34	**402**
Health Communicators	177	163	168	180	178	114	169	128	175	180	173	178	**1983**
Midwives	89	98	101	87	100	93	88	99	101	95	100	99	**1150**
TOTAL	**315**	**310**	**316**	**316**	**326**	**254**	**306**	**276**	**324**	**324**	**322**	**326**	**3715**

2006													
Staff Capacity	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Total**
Institutional Facilitators	11	11	11	11	11	11	11	11	11	11	11	11	**132**
Educators	5	5	5	5	5	5	5	5	5	5	5	5	**60**
Community Facilitators	34	34	33	34	34	32	33	34	34	32	34	34	**402**
Health Communicators	257	199	248	254	233	247	194	255	237	257	249	152	**2782**
Midwives	127	131	129	123	125	130	132	122	134	126	133	136	**1548**
TOTAL	**434**	**380**	**426**	**427**	**408**	**425**	**375**	**427**	**421**	**431**	**432**	**338**	**4924**

2007													
Staff Capacity	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Total**
Institutional Facilitators	11	13	13	13	13	13	13	13					**102**
Educators	5	8	8	8	8	8	8	8					**61**
Community Facilitators	33	48	57	62	62	62	62	62					**448**
Health Communicators	312	289	310	321	298	312	279	301					**2422**
Midwives	149	135	128	153	155	148	153	156					**1177**
TOTAL	**510**	**493**	**516**	**557**	**536**	**543**	**515**	**540**	**0**	**0**	**0**	**0**	**4210**

Attachment 10: Final KPC Report

Report of End of Project KPC Survey with Comparison to Earlier KPC Survey Findings

Curamericas/Guatemala Child Survival Project

Huehuetenango, 2002-2007

Mario Valdez and Henry Perry

TABLE OF CONTENTS

I. ACKNOWLEDGEMENTS

Curamericas Global and Curamericas Guatemala are grateful to Mr. Tom Davis for his guidance and leadership to the Guatemala project staff in the conduct of KPC surveys. Over the life of this project, the competence of the staff has improved greatly thanks to the strong foundation of knowledge that Mr. Davis provided in the early stages of this project.

II. EXECUTIVE SUMMARY

Curamericas/Guatemala carried out a household survey in its project area in the Department of Huehuetenango which included the Municipalities of San Miguel Acatan, San Rafael la Independencia, and San Sebastian Coatan, with a population of 11,143 children 0-59 months of age and 11,123 women of reproductive age. Project staff members and other specially trained women with language capabilities in Akateko and Chuj carried out the interviews. Using an LQAS methodology, 171 mothers of children 0-11 months of age were interviewed as were 171 mothers of children 12-23 months of age. There were 9 supervisory areas, and 19 women from each supervisory area were selected at random for inclusion in the survey. The analysis was first tabulated by hand and then the data were entered into EPI INFO software and retabulated. Selected parts of the EPI INFO analysis were independently verified.

The project's emphases were on nutrition (30%), maternal and newborn care (25%), childhood pneumonia (15%), childhood diarrhea (10%), child spacing (10%), and immunizations (10%).

There appeared to be an improvement in the overall level of nutrition of children 0-23 months of age in the project area, with the percent moderately or severely malnourished (based on weight for age) declining from 43% at baseline to 33% at the time of the final evaluation. All other nutrition indicators demonstrated notable progress between the time of the baseline measurement and the time of the end-of-project measurement: exclusive breastfeeding (63% to 73%), appropriate feeding during the 6-9 month age period (63% to 73%), vitamin A supplementation in previous 6 months according to the mother (36% to 86%), percentage of mothers who report that they encourage their child to eat even if the child doesn't want to eat (20% to 45%), bottle feeding among children 12-23 months of age (57% to 40%), and weighing during the previous 4 months by the health program (22% to 86%).

With respect to maternal and newborn care, there were marked improvements in the utilization of prenatal care. The percentage of mothers of a child 0-11 months of age who reported that she had obtained at least 2 prenatal care visits from a qualified provider increased from 20% to 87%, and the percentage who stated that they received a post-partum checkup increased from 23% to 67%. The percentage of mothers who reported that they received or bought iron tablets or syrups during their most recent pregnancy increased from 33% to 58%. In addition, maternal knowledge of at least 2 warning signs among newborns increased from 5% to 53%. However, there was no real change in the percentage of deliveries attended by a trained provided (nurse, auxiliary nurse or doctor) – from 9% to

12% -- or in the percentage of mothers whose most recent delivery took place in a health facility (7% to 9%).

Treatment seeking for children with symptoms of possible pneumonia increased from 29% to 62%. The percentage of mothers who wash their hands with soap or ashes increased from 58% to 80%, and the percentage who knew at least two correct times when they should wash their hands increased from 32% to 68%.

Improvement in maternal tetanus toxoid immunization coverage (with two immunizations during pregnancy) was marked, increasing from 16% to 55%. The degree of increase in childhood immunization coverage was much more modest. The percentage of children 13-23 months of age who were vaccinated against measles increased from 50% to 56%, and the percentage of children who obtained all of their immunizations by 13 months of age increased from 42% to 58%. The indicator was adjusted slightly because the government policy is not to immunize children against measles until they are 12 months of age.

III. BACKGROUND

This is the third KPC survey that the Curamericas/Guatemala Child Survival Project staff members have undertaken. Thus, by this point the project leadership and its staff are quite familiar with the process. In November and December 2002, Tom Davis was Director of Programs at Curamericas and he, along with Aroll Tumaylle, had experience in carrying out KPC surveys using the KPC2000+ Guide for training of trainers. Using this experience, the project staff carried out annual KPC surveys and quarterly monitoring activities of project indicators.

In mid-2005 a KPC was carried out for the mid-term evaluatin, an activity which further strengthened the staff capacity and the level of community support for the survey and at that time, for the first time, the staff begin to input the data into EPI INFO.

When planning the final evaluation survey, the project sought out interviewers who had worked with the project previously on earlier surveys. Various of these persons participated and provided support to the survey team, and community authorities by this time had become knowledgeable about the surveys and supportive.

Each of the survey teams had the capability of determining their own strategy for selecting households and monitoring their own indicators. The interviewers were educators and nurses on the project staff who could speak Chuj and Akateka, which was necessary in order to be able to carry out the survey with a deeper understanding also of the culture and the customs of the community.

As before, the process was to select capable people to serve as interviewers, providing training for them, field testing of their capacity as interviewers with feedback, revision of the questionnaires after field testing, tabulation of the results by municipality (project sub-area) and then for the project. A random sample of 10% of the interviews were repeated by supervisors to assess the quality of the interviews.

As before, the CORE KPC manual was followed.

IV. PROCESS AND PARTNERSHIP BUILDING

From the beginning, the project invited the collaboration of staff from the Ministry of Health (MOH) to serve as interviewers. However, there was a high turnover rate of these staff, making it necessary to train new MOH staff with each KPC. Fortunately, a few of these MOH staff were more permanent in the area and the project was able to use them for most of the KPC surveys.

In addition, we involved staff members from ASSDIC, an NGO working in the San Sebastián Coatán municipality as well as staff members from ADIVES, another NGO woroking in the San Miguel Acatán municipality.

The findings from the KPC surveys were shared with the MOH and ASSDIC and ADIVES. Together, partners sought ways to improve the coverage of services.

The findings were also shared with the communities and community leaders, and suggestions for improving project effectiveness were sought.

Representatives from USAID/Guatemala had visited the project area on several occasions. They had also been invited to participate in the final evaluation survey but were not able to do so because of the distance. Nonetheless, the project sent quarterly reports to USAID providing findings from the KPC surveys. These visits made it posible for USAID to have a better understanding of the challenges the project faced in the area.

The project always had the full support of local authorities, and often they participated in the household interviews and worked with the staff to seek ways to improve the coverage of key project activities.

V. METHODS

A. Questionnaire

The questionnaires were essentially the same as those used in the baseline survey except for a few minor changes in wording. There was one questionnaire for mothers of infants 0-11 months of age, with 84 questions pertaining to the following themes:

- Identifying information (10 questions)
- Water and sanitation (2 questions)
- Information about the person being interviewed and the house itself (8 questions)
- Breastfeeding, nutrition and micro-nutrients (12 questions)
- Growth monitoring (2 questions)
- Care of the sick child (2 questions)
- Diarrhea (5 questions)
- ARI (11 questions)

- Care of the pregnant mother (10 questions)
- Birth and neonatal care (3 questions)
- Post-neonatal care (5 questions)
- Birth spacing (8 questions)
- Knowledge about HIV/AIDS (3 questions)
- Previous health education (1 question)
- Measure of height and weight (2 questions)

The questionnaire for mothers of 12-23-month-old children had 64 questions with the following themes:

- Identifying information (10 questions)
- Water and sanitation (2 questions)
- Information about the person being interviewed and the house itself (8 questions)
- Breastfeeding, nutrition and micro-nutrients (12 questions)
- Growth monitoring (2 questions)
- Vaccinations (2 questions with multiple sub-parts)
- Care of the sick child (2 questions)
- Diarrhea (5 questions)
- ARI (11 questions)
- Birth spacing (8 questions)
- Knowledge about HIV/AIDS (3 questions)
- Previous health education (1 question)
- Measure of height and weight (2 questions)

B. Sampling Design

The project used a lot quality assurance sampling (LQAS) technique in which it considered a supervisory area ("lot") a geographic area which is supervised by one field supervisor. In each "lot" 19 infants 0-11 months of age were selected for the sample along with 19 children 12-23 months of age. The project had 9 supervisory areas at the time of the survey. The survey had interviews with mothers of 191 children 0-11 months of age and 191 mothers of children 12-23 months of age for a total of 342 respondents.

Because of the presence of a census and a listing of households for each community, selecting 19 infants and children in the respective age groups was straightforward. A sampling interval of households was determined and a random start within this interval was selected, and the appropriate households within each community selected for inclusion in the survey were selected at random. Then, beginning with the household selected, a search was made for either a child 0-11 months of age or 12-23 months of age. If children of both ages were encountered in the same household, then one of them was selected at random for inclusion in the survey. Then, adjacent households were visited until one child in both age groups was identified and included in the survey.

C. Training

Given the language barriers and different cultural groups in the project area, there were 10 interviewers who spoke Chuj (four of whom work as Community Facilitators with the

project). Six others were mothers from the area who had participated in previous household surveys. These 10 interviewers underwent two days of training on July 30 and 31.

Eighteen interviewers who spoke Akateko were selected as well. These underwent training on August 6 and 7.

All interviewers had an opportunity to carry out trial interviews in the training room with other trainees and also in the field in households on a trial basis.

All interviews were carried out by pairs of interviewers. One person asked the questions and the other person filled out the questionnaire.

D. Data Collection and Analysis

Each interview lasted 20-40 minutes depending in large part on whether the mother had had a sick child during the previous two weeks. The Chuj communities were interviewed on August 1-3 and the Akateka communities were interviewed on August 8-10. The project used its 4x4 vehicle, 3 motorcycles, and on occasion local transportation to reach the communities selected for the survey. It was necessary to reach 5 communities by foot since no roads were present.

The findings were tabulated first by hand by all the interviewers and later after entering the data into EPI INFO. In both cases, a sample of 10% of the questionnaires was selected at random in each of the three project jurisdictions to assure that the findings were accurate. The entry of data into EPI INFO utilized two data technicians and two educators.

VI. FINDINGS AND DISCUSSION

A. Background and Demographics

Among the 342 mothers participating in the survey, the average age was 25.0 years. Almost half (45.7%) had never attended any school whatsoever, and less than half (48.4%) could speak any Spanish. The preferred spoken language was Akateko for 65.2% of the respondents and Chuj for 32.4% of the respondents.

B. Nutrition

The overall level of nutrition of children 0-23 months of age in the project area, as defined as the percentage of children who were moderately or severely malnourished (based on weight for age) declined from 43% at baseline to 33% at the time of the final evaluation. This was statistically significant ($p < 0.05$).

All other nutrition indicators demonstrated notable progress between the time of the baseline measurement and the time of the end-of-project measurement. The percentage of mothers of a child 0-5 months of age who were exclusively breastfeeding their child during the previous 24 hours increased from 63% to 73%. The percentage of mothers of a child 6-9 months of age who gave complementary feeding in addition to breastmilk increased from 63% to 73%. The percentage of children 12-23 months of age who received supplemental vitamin A during the previous 6 months increased from 36% to 86% according to the report of the mother and from 28% to 71% according to health card documentation. The

percentage of mothers who reported that they encouraged their child to eat even if the child did not want to eat increased from 20% to 45%. The prevalence of bottle feeding among children 12-23 months of age declined from 57% to 40%. The percentage of children 0-23 months of age who had been weighed during the previous 4 months by the health program increased from 22% to 86%. The percentage of mothers who received vitamin A during the first 2 months post-partum increased from 0% at baseline to 62% at the end of the project.

C. Maternal and Newborn Care

With respect to maternal and newborn care, there were marked improvements in the utilization of prenatal care. The percentage of mothers of a child 0-11 months of age who reported that she had obtained at least 2 prenatal care visits from a qualified provider increased from 20% to 87%, and the percentage who stated that they received a post-partum checkup increased from 23% to 67%. The percentage of mothers who reported that they received or bought iron tablets or syrups during their most recent pregnancy increased from 33% to 58%. In addition, maternal knowledge of at least 2 warning signs among newborns increased from 5% to 53%. However, there was no real change in the percentage of deliveries attended by a trained provided (nurse, auxiliary nurse or doctor) – from 9% to 12% -- or in the percentage of mothers whose most recent delivery took place in a health facility (7% to 9%).

D. Childhood Illnesses

The percentage of mothers who know 2 danger signs of childhood illness increased from 21% to 58% from baseline to end of project, and the percentage of mothers who reported receiving a health education message in the previous 3 months increased from 8% to 70%. The percentage of children with symptoms of pneumonia whose mothers sought advice or treatment at a health facility or who gave the child antibiotics increased from 29% to 62%. The percentage of children with symptoms of pneumonia who received the same amount or more fluids increased from 31% to 46%, and who received the same amount or more food increased from 33% to 61%. Feeding during diarrhea increased only slightly, with the percentage of mothers reporting giving the same amount or more food increasing from 25% to 34%.

Handwashing with soap/ashes increased from 58% to 80%, and the percentage of mothers who reported at least 2 correct times when she washes her hands increased from 34% to 68%.

E. Immunization

Childhood immunization coverage had to be calculated in a special way because in Guatemala the MOH policy is not to give measles immunization (actually, measle/mumps/rubella) until the child is at least 12 months of age. Hence, no child in Guatemala is fully immunized before 12 months of age. We calculated this indicator for children 13 months of age. Thus, the percentage of children fully vaccinated was 42% at baseline and 58% at the end of the project. That is to say, the percentage of children 13-23 months of age who were fully vaccinated by 13 months of age increased from 42% to 58%. The percentage of children 13-23 months of age with a measles immunization increased from 50% to 56%.

The percentage of mothers with a child 0-23 months of age who received 2 TT immunizations during her most recent pregnancy increased from 16% to 55%.

F. HIV/AIDS

The percentage of respondents who had heard of HIV/AIDS increased from 50% to 75%, and the percentage of respondents who knew at least two ways to prevent the transmission of HIV/AIDS increased from 3% to 61%.

VII. ANNEX

Annex A: Frequency Tables

Indicator	Baseline Percentage	Final Evaluation		
		Numerator	Denominator	Percentage
Nutrition				
% of children 0-23 months of age with moderate or severe malnutrition (<-2 sd below the mean)	43%	113	342	33.0%
% of children 0-5 months of age who were exclusively breastfed during the previous 24 hours	63%	62	85	72.9%
% of children 6-9 months of age who received breastmilk and complementary feeding during the previous 24 hours	45%	24	43	58.1%
% of children 12-23 months of age who received vitamin A during the previous 6 months (according to the mother)	36%	147	171	86.0%
% of children 12-23 months of age who received vitamin A during the previous 6 months (card verified)	28%	121	171	70.8%
% of mothers of infants who received vitamin A during the first 2 months following her last pregnancy (card verified)	0%	106	171	62.0%
% of mothers who encourage their child to eat even if they don't want to	20%	153	342	44.7%
% of children 12-23 months of age who are fed by bottle at present	57%	68	171	39.8%
% of children who were weighed in the previous 4 months	22%	295	342	86.3%
Maternity Care				
% of mothers of infants who received at least 2 prenatal checkups (from any health worker, card verified) during her most recent pregnancy	25%	83	171	48.5%
% of mothers of infants who had at least 2 prenatal visits from a qualified health care provider (doctor, nurse, trained	20%	149	171	87.1%

Indicator	Baseline Percentage	Final Evaluation		
		Numerator	Denominator	Percentage
midwife) during her most recent pregnancy (according to the mother)				
% of infants whose births were attended by a trained health care provider (nurse, auxiliary nurse, or doctor)	9%	20	171	11.7%
% of mothers of infants who received or bought iron tablets or syrup during her most recent pregnancy	33%	99	170	58.2%
% of mothers of infants whose last delivery took place in a health facility	7%	15	171	8.8%
% of mothers of infants who identified 2 or more warning signs among newborns	5%	91	171	53.2%
% of mothers of infants who had a postnatal checkup after her most recent delivery	23%	115	171	67.2%
Birth Spacing				
% of mothers of children 12-23 months of age who are pregnant	14%	35	171	20.8%
IMCI				
% of mothers of children who know at least two danger signs of childhood illness	21%	198	342	57.9%
% of mothers of children 0-23 months of age who know at least danger signs which indicate the necessity of seeking treatment	24%	209	342	61.1%
% of mothers of children 12-23 months of age who have received health education talks in the previous 3 months	8%	120	171	70.2%
Pneumonia				
% of mothers of children 0-23 months of age who sought advice/treatment at a health facility or who gave antibiotics when her child had cough with difficult or agitated breathing	29%	212	342	62.0%
% of children 0-23 months of age who were sick during the previous 2 weeks	80%	92	342	26.9%
% of children 12-23 months of age with cough and difficult or	31%	157	342	45.9%

Indicator	Baseline Percentage	Final Evaluation		
		Numerator	Denominator	Percentage
agitated breathing who received the same or more liquids than usual during the illness				
% of children 0-23 months of age with cough and difficult or agitated breathing who received the same or more food than usual during the illness	33%	209	342	61.1%
Diarrhea				
% of children with diarrhea during the previous 2 weeks	54%	55	342	16.1%
% of children with diarrhea who received the same or more food than usual during the illness	25%	19	55	34.5%
Water and sanitation in the household				
% of mothers of children who use soap/ashes to wash their hands	58%	274	342	80.1%
% of mothers of children who mentioned at least 2 correct times when they wash their hands (when they were asked if the used soap/ash)	32%	233	342	68.1%
% of mothers of children who mentioned at least 2 out of 4 correct times when they wash their hands	34%	232	342	67.8%
Immunizations				
% of mothers with a child 0-23 months of age who received at least 2 TT injections prior to the birth of her youngest child	16%	188	342	55.0%
% of children 13-23 months of age with all of their immuizations (BCG, DPT3, OPV3 y MMR) obtained by 13 months of age	42%	91	157	58.0%
% of children 13-23 months of age with measles immunizations	50%	88	157	56.1%

Annex B: KPC Questionnaires

CURAMERICAS – GUATEMALA
PROYECTO SUPERVIVENCIA INFANTIL.
Huehuetenango, Guatemala.

CUESTIONARIO 0 a 11 Meses

Encuesta Familiar Dirigida a Madres con Hijos Menores de Un Año
Conocimientos, Actividades y Coberturas sobre el Cuidado de los niños Menores De Un año

a. Saludar y presentarse a la persona que esta en casa.
b. Pregunte si la mama de los niños se encuentra.
c. ***Si no hay niños,*** procede a la próxima casa (más cercana)
d. ***Si hay dos madres de niños menores de 2 años que viven en la casa,*** pregunta las edades de los niños. Si los dos tienen por lo menos un niño abajo de dos años, seleccione uno al azar (usa una moneda), y continuar abajo, paso "e".
e. ***Si la madre está en casa:***
   - Pregunte las edades de sus niños que viven en la casa con ella.
   - Si hay un niño menor de 12 meses, pasar al *consentimiento* para explicar el propósito de la encuesta.
   - Si hay un niño (o más) entre 12 y 23 meses, y no hay niños 0-11 meses, aplicar el **CUESTIONARIO 12 a 23 MESES.**
   - Si hay un niño (o más) entre 0 y 11 meses de edad en la casa, y otro niño (o mas) entre 12 y 23 meses de edad, selecciona uno de los niños al azar (usar una moneda), y usar el cuestionario correcto.
f. ***Si la madre no está en casa:***
   - Pregunta a la persona en casa sobre las edades de sus niños que viven con ella en la casa.
   - Si la madre tiene por lo menos un niño menor de 2 años, pregunte donde esta la madre y cuando regresa.
     - Si la madre está más de 30 minutos de la casa, procede a la próxima madre, y llenar el formulario de *Madres no encontradas/Entrevistadas* para esta mamá.
     - Si la madre está menos de 30 minutos de la casa, búsquela y hacer la entrevista donde ella está.
     - Regresa a su casa para seleccionar otra casa si tiene que seleccionar otro niño todavía en el área.
g. ***Si la (s) madre (s) no tiene por lo menos un niño menor de 2 años,*** ir a la próxima casa.

CONSENTIMIENTO

Explicar a la madre: Mi nombre es _____ y trabajo conjunto con el Centro de Salud del Ministerio de Salud Pública. Estamos realizando una encuesta de salud de niños en la comunidad. Su participación de más o menos 30 minutos puede ayudar a su comunidad, y todo lo que usted me dirá será confidencial. Tiene el derecho para no participar en la encuesta, también. ¿Puede usted participar en la encuesta?
SI DICE QUE SI → Firma abajo, y seguir con la entrevista.
SI DICE QUE NO → Ir a la próxima madre y llenar el formulario de Madres no Encontradas/ Entrevistadas.

Firma del Encuestador:_____ Fecha: _____/ _____/ _____
¡LLENAR HOJAS FORMULARIO PARA REGISTRAR ENCUESTADOS NO ENCONTRADOS!

Nombre de la madre:_____ _____ _____ _____
Primer nombre 1 Segundo nombre 2 Apellido 1 Apellido 2

IDENTIFICACIÓN	
NÚMERO DE JURISDICCIÓN	_____ _____
NÚMERO DE ENTREVISTA	_____ _____ _____
NÚMERO DE SECTOR	_____ _____ _____
NÚMERO DE CASA	_____ _____ _____

IDENTIFICACIÓN	
NÚMERO DE JURISDICCIÓN	_____ _____
NÚMERO DE ENTREVISTA	_____ _____ _____
NÚMERO DE SECTOR	_____ _____ _____
NÚMERO DE CASA	_____ _____ _____

4.	Fecha de Entrevista	_____/ _____/ _____ dd mm aaaa
5.	Nombre del Encuestador	_____
6.	Nombre del Supervisor	_____
7.	Nombre de la Comunidad	_____
8.	Iniciales de la Madre	____ ____ ____ _____
9.	¿Cuántos años ha cumplido usted?	_____ años
10	Nombre del niño seleccionado para la entrevista (**SI TIENE UN NIÑO EN CADA GRUPO DE EDAD, ESCOGER AL AZAR UN NIÑO)**	_____
11.	Sexo de este niño	❑ Masculino ❑ Femenino
12.	Fecha de nacimiento de este niño	_____**/** _____**/** _____ **dd mm aaaa**
13.	Edad en meses de este niño	_____ meses (Usa 0 si no ha cumplido un mes)

(Nota a encuestador: Hablaremos solamente de este niño/a durante la entrevista.)

(Diga:) Como le mencioné, esta entrevista tiene que ver con su salud y la salud de (NOMBRE DEL NIÑO). Por favor, saque todo (tarjetas/ carnets/ hojas/ fichas de salud) que tenga de (nombre del niño/a) – vacunación, control de citas, crecimiento/peso, entrega de alimentos – y las que corresponde a usted y su embarazo con (NOMBRE DEL NIÑO). Esto nos ayudará a contestar algunas preguntas.

MODULO 1A: AGUA Y SANEAMIENTO

No.	Preguntas	Codificación	Saltos
14.	¿Con que se lavan las manos?	1. Con agua solamente---------- → **# 16** 2. Con agua y jabón o con ceniza 3. Otro ---------- → **# 16** (ESPECIFIQUE_____)
15.	(*Si la respuesta es con jabón o ceniza:),* ¿En que momentos se lava las manos con jabón o ceniza)	(*Puede marcar varias opciones)* a. Nunca b. Antes de preparar alimentos c. Antes de dar de comer a los niños d. Después de hacer necesidades e. Después de cambiar los pañales o limpiar la nalga del niño f. Otro _____	

INFORMACIÓN SOBRE LA ENTREVISTADA Y EL HOGAR

No.	Preguntas	Codificación	Saltos
16.	¿Tuvo la oportunidad de estudiar usted?	**1.** Si **2.** No---------- →	**# 18**
17.	¿Por cuantos años asistió a clases?	Años de educación cumplidos ____ (Si nunca estudio, marcar <u>0</u>)	
18.	¿Cuáles idiomas habla usted?	(*Puede marcar varias opciones)* a. Español b. Akateko c. Chuj d. Mam e. Otro _____	
19.	¿En cual idioma es <u>más</u> cómodo/ fácil para expresarse/ comunicarse con otros	*(Marcar una sola opinión)* 1. Español 2. Akateko 3. Chuj 4. Mam 5. Otro _____	

OTRA INFORMACIÓN

No.	Preguntas	Codificación	Saltos
20	¿El padre de (NOMBRE DEL NIÑO) vive en esta casa?	1. Si 2. No 3. No sabe.	
21	¿Usted trabaja afuera de la casa para ganar dinero?	1. Si 2. No	
22	¿A que se dedica usted?	(*Puede marcar varias opciones)* a. Ama de casa (no trabaja afuera de la casa) b. Artesana c. Obrera agrícola d. Vende comida e. Trabaja en una tienda/ vendedora f. Empleada doméstica g. Trabajadora asalariada h. Otro _____	
23	¿Quién le cuida a (NOMBRE DEL NIÑO) cuando usted no esta en casa?	*(Puede marcar varias opciones)* a. Madre (entrevistada)/ nunca lo deja b. Esposo/ "Compañero" c. Hijos mayores d. Otro pariente_____ e. Vecino/ amigo _____ f. Empleada/niñera g. Guardián/ guardería/ escuela h. Otro _____	

MODULO 2: LACTANCIA MATERNA, ALIMENTACIÓN Y MICRONUTRIENTES

No.	Preguntas	Codificación	Saltos
24.	Ha dado pecho a [NOMBRE DEL NIÑO]?	1. Sí 2. No---------- →	#27
25.	Después del parto, ¿en que momento le dio de mamar [NOMBRE DEL NIÑO]?	1. De inmediato/dentro de la primera hora 2. Después de la primera hora 3. No recuerda	
26.	¿Actualmente le está dando pecho a [NOMBRE DEL NIÑO]?	1. Sí 2. No	
27.	¿Cuántas veces comió o mamó ayer durante el día y la noche [NOMBRE DEL NIÑO]?	Pecho: ___ veces Pacha: ___veces Refacción:_____veces Tiempos de comida: ____ Veces	

No.	Preguntas	Codificación		Saltos	
28.	¿Cuales son todos los alimentos/bebidas qué comió y bebió ayer durante el día y noche [NOMBRE DEL NIÑO]?	(Escribir aquí todo lo que diga:)			
29	Ahora, vamos a ser más específicos. Voy a leer unas comidas y bebidas, y quisiera que me diga si los comió o bebió [NOMBRE DEL NINO] ayer durante el día o la noche.	***Leer cada comida y marcar con X lo que afirma la madre***		**Si**	**No**
		A	Amamantarlo		
		B	Café		
		C	Té/agüitas claras/refrescos		
		D	Leche (de cabra, polvo o vaca)		
		E	Algo con tomates o pasta de tomates		
		F	Granos (maíz, tortilla, arroz, avena, mosh, pan, pasta, incaparina, pinolillo, cebada)		
		G	Calabaza, camote amarillo, zanahoria, güicoyito, güisquiles		
		H	Comida hecha con tubérculos (papa, yuca)		
		I	Hojas verdes (hoja de rábano, quelite, hierba Mora, cilantro, mostaza, otras de la comunidad)		
		J	Verduras o frutas amarillas (zanahorias, ayote, mango, papaya)		
		K	Otras frutas (manzana, banano, aguacate, durazno)		
		L	Carnes (pescado, pollo, res, huevo)		
		M	Leguminosas (frijoles, lentejas, manía o soya)		
		N	Cuajada, mantequilla o crema, queso, yogur		
		O	Comida hecha con aceite, manteca, mantequilla		
		P	Cualquier otro alimento que no mencioné		
		Q	Sal CON YODO (VERIFICAR)		
			(ESPECIFICAR:_____)		
30.	¿Ha recibido [NOMBRE DEL NIÑO] vitamina A durante los últimos 6 meses? (mostrar cápsula)	1. Sí 2. No 3 . No sabe			
31.	¿Tiene tarjeta donde esta anotado los datos de vitamina A de [NOMBRE DEL NIÑO]? (Buscar en las tarjetas que tiene la madre.)	1. Sí Anote fecha ultima dosis _____/ _____/ _____ 2. No			
32.	¿Usted recibió vitamina A durante los dos meses después de su último parto? (mostrar cápsula)	1. Sí 2. No 3. No sabe			
33	¿Tiene tarjeta donde está anotado los datos de vitamina A de usted? (Buscar en las tarjetas que tiene la madre.)	1. Sí → Anote fecha ultima dosis _____/ _____/ _____ 2. No			
34	Si [NOMBRE DEL NIÑO] no quiere comer, que hace usted normalmente?	1. Animar/dar un incentivo al niño 2. No le doy de comer 3. Le doy de comer a la fuerza 4. Nunca rehúsa/siempre quiere comer			
35	¿Está dando la pacha al niño actualmente?	1. Sí 2. No 3. No sabe			

MODULO 3: MONITOREO DE CRECIMIENTO

(Diga:) Para conocer mas sobre los controles que ha recibido (nombre del niño/a), me gustaría revisar los carnet de el/ella. Los podría sacar por favor?

No.	Preguntas	Codificación	Saltos
36.	¿Ha sido pesado **[NOMBRE DEL NIÑO]** en los últimos 4 meses?	1. Sí 2. No	
37.	¿Tiene una ficha del niño menor donde anota sus datos de peso/talla para **[NOMBRE DEL NIÑO]?**	1. Sí Anote fecha de ultimo peso __/___/__ 2. Carné no está disponible/perdido 3. Nunca tuvo carné 4. No sabe	

4

5 MODULO 4B: ASISTENCIA DOMICILIAR Y ATENCION AL NIÑO ENFERMO

No.	Preguntas	Codificación	Saltos
38.	**A veces, los niños se enferman ...** **¿Cuáles son los motivos/causas/razones que le haría salir a buscar atención médica para un hijo suyo?**	***(Puede marcar varias opciones)*** **a.** No sé **b.** Cuando se ve mal o cuando no juega normalmente **c.** No come, no bebe o no mama **d.** Esta desmayado/débil/aletargado y no quiere despertarse **e.** Calentura alta **f.** Respiración rápida o dificultosa **g.** Vomita todo **h.** Convulsiona **i.** Otro _____ **j.** Otro _____ **k**. Otro _____	
39.	¿Ha estado enfermo **[NOMBRE DEL NIÑO]** con una de las siguientes enfermedades durante las últimas dos semanas? ***(LEER LAS ENFERMEDADES EN LA LISTA.)***	***(Leer esta lista de enfermedades)*** (*Puede marcar varias opciones*) **a.** Diarrea **b.** Sangre en el popo **c.** Tos **d.** Dificultad para respirar/cansadito **e.** Respiración rápida o en forma entrecortada y poco profunda **f.** Otro _____ **g.** Otro _____ **h.** Ninguna enfermedad ----------→	**#56**

MODULO 4C: DIARREA

No.	Preguntas	Codificación	Saltos
40.	¿Ha tenido diarrea durante las últimas dos semanas **[NOMBRE DEL NIÑO]**?	**1.** Sí **2.** No ----------→ **3.** No sabe ----------→	 **#45** **#45**
41.	¿Que le dio a **[NOMBRE DEL NIÑO]** para tratar la diarrea? **¿Algo más?**	(*Puede marcar varias opciones*) **a.** Nada **b.** SRO en sobre **c.** Líquidos disponibles en casa (ej., jugo) **d.** Pastilla/Píldora o jarabe **e.** Inyección **f.** Suero (en vena) **g.** Remedio casero/hierbas con mucha agua **h.** Remedio casero/hierbas con poca agua **i.** Otro _____	
42.	¿Cuando **[NOMBRE DEL NIÑO]** estuvo con diarrea, le dio menos, igual o mayor cantidad de líquidos (incluyendo leche materna) de lo acostumbrado?	**1.** Menos de lo acostumbrado **2.** Igual a lo acostumbrado **3.** Mas de lo acostumbrado **4.** No le dio líquidos **5.** No sabe	
43.	¿Cuando estuvo **[NOMBRE DEL NIÑO]** con diarrea, le dio menos, igual o mayor cantidad de comida/alimentos de lo acostumbrado?	**1.** Menos de lo acostumbrado **2.** Igual a lo acostumbrado **3.** Mas de lo acostumbrado **4.** No le dio comida/alimentos **5.** No sabe	
44.	¿Cuando **[NOMBRE DEL NIÑO]** estaba recuperándose de la diarrea (durante la semana después de estar con diarrea), le dio menos, igual o mayor cantidad de comida de lo acostumbrado?	**1.** Menos de lo acostumbrado **2.** Igual a lo acostumbrado **3.** Mas de lo acostumbrado **4.** No le dio pecho/comida/alimentos **5.** No sabe	

MODULO 4D: INFECCIÓNES RESPIRATORIAS AGUDAS

No.	Preguntas	Codificación	Saltos
45.	**¿Ha tenido** [NOMBRE DEL NIÑO] **una enfermedad con tos durante las ultimas dos semanas?**	**1.** Sí **2.** No ----------→ **3.** No sabe ----------→	 **#56** **#56**
46.	Cuando **[NOMBRE DEL NIÑO]** estuvo con tos, ¿también tuvo dificultad para respirar o estuvo respirando más rápidamente de lo normal?	**1.** Sí **2.** No ----------→ **3.** No sabe ----------→	 **#56** **#56**

No.	Preguntas	Codificación	Saltos
47.	Cuando **[NOMBRE DEL NIÑO]** estuvo con la tos o tos con respiración rápida, ¿Buscó ayuda o el tratamiento?	**1.** Sí **2**. No ----------→	**#53**
48.	¿Dónde acudió primero para consejos o tratamiento para la tos o tos con respiración rápida de **[NOMBRE DEL NIÑO]**?	**ENTIDAD MEDICA** 01 Hospital 02 Centro de salud 03 Puesto de salud 04 Centro curativo de una ONG o Institución 05 Clínica particular 06 Promotor/F.C./guardián de salud 07 Otro tipo de servicio medico _____ **OTRO LUGAR** 08 Curandero 09 Tienda 10 Farmacia 11 Distribuidora comunal 12 Pariente/amigo 13 Otro _____	
49.	***Vea las respuestas de pregunta #48.*** Si 01, 02, 03, 04: Escribir nombre de entidad _____		
50.	*¿A los cuántos días de la aparición de la tos o tos con respiración rápida buscó ayuda?*	**0.** el mismo día **1.** El día siguiente **2.** Dos días **3.** Tres o mas días	
51.	Cuando **[NOMBRE DEL NIÑO]** estuvo con la tos o tos con respiración rápida, *¿buscó ayuda o el tratamiento en algún otro lugar?*	**1.** Sí **2.** No ----------→	**#53**

No.	Preguntas	Codificación	Saltos
52.	*¿A cual otro lugar fue para ayuda o tratamiento?*	01 Hospital 02 Centro de salud 03 Puesto de salud 04 Centro curativo de una ONG 05 Clínica particular 06 Promotor/guardián de salud 07 Otro tipo de servicio medico 08 Curandero 09 Tienda 10 Farmacia 11 Distribuidora comunal 12 Pariente/amigo 13 Otro _____	
53.	*¿Cuáles remedios/medicinas le dio a [**NOMBRE DEL NIÑO]?*	(*Puede marcar varias opciones*) **a.** Ningún remedio **b.** Aspirina **c.** Panadol **d.** Antibiótico **e.** Otro _____ **f**. No sabe *(preguntar si tiene el frasco)*	
54.	*¿Cuando **[NOMBRE DEL NIÑO]** estuvo con tos y respiración rápida, le dio menos, igual o mayor cantidad de líquidos (incluyendo la leche materna) de lo acostumbrado?*	**1.** Menos de lo acostumbrado **2.** Igual a lo acostumbrado **3.** Mas de lo acostumbrado **4.** No le dio líquidos **5.** No sabe	
55.	*¿Cuando estuvo **[NOMBRE DEL NIÑO]** con tos y respiración rápida, le dio menos, igual o mayor cantidad de comida/alimentos de lo acostumbrado?*	**1.** Menos de lo acostumbrado **2.** Igual a lo acostumbrado **3.** Mas de lo acostumbrado **4.** No le dio comida/alimentos **5.** No sabe	

MODULO 5A. CUIDADOS DE LA MUJER GESTANTE

Diga: Para conocer más sobre los controles que usted se hizo durante el embarazo de [NOMBRE DEL NIÑO], me gustaría revisar los carné que usted tiene. Me podría mostrar los carnet suyos?

No.	Preguntas	Codificación	Saltos
56.	¿Quien le atendió para los controles de embarazo o cuidados prenatales durante su embarazo con **[NOMBRE DEL NIÑO]?** *Si le atendió alguien, diga: ¿le atendió o vio con otra persona? ¿Alguien más?*	(*Puede marcar varias opciones*) **a.** Doctor **b.** Enfermera profesional **c.** Auxiliar de enfermería **d.** Partera/Comadrona capacitada **e.** Partera/Comadrona no capacitada **f.** Guardián/promotor de salud **g.** Otro _____ **h.** Nadie ----------→	 **#58**
57.	¿Cuantos controles se hizo usted durante su último embarazo?	____ controles	

No.	Preguntas	Codificación	Saltos
58.	Antes de que naciera **[NOMBRE DEL NIÑO],** ¿recibió usted una inyección en el brazo (DT/TD/tétano toxoide/TT) para prevenir que le de tétano (convulsiones) el bebe?	**1.** Sí **2.** No **3.** No sabe	
59.	¿Tiene usted un carnet del último embarazo?	**1.** Sí, encuestador lo vio **2.** No lo tiene disponible----------→ **3.** Nunca tuvo carnet----------→	 **#62** **#62**
60.	*Anote número de controles que se hizo durante el embarazo de (nombre del niño/a).*	____ controles ____ No tiene carnet	
61.	*Anote información sobre las dosis de* DT/TD/ *TT (toxoide tetánico) recibido por la madre.*	Escribir la fecha de cada inyección de DT/TD/TT recibido (día/mes/año) ____/____/____ ____/____/____ ____/____/____ ____/____/____ ____/____/____ ____/____/____ _____ No tiene carnet	
62.	¿Que problemas o señas de peligro durante el embarazo harían que usted buscara ayuda urgentemente con el personal de salud?	**(*Puede marcar varias opciones*)** **a.** Dolor de cabeza **b.** Dolor en la boca del estomago **c.** Ruptura de la fuente **d.** Sangrado **e.** Hinchazón de los pies, cara, cuerpo **f.** Otro **g.** No sabe	
63.	Durante su último embarazo, ¿usted recibió o compro tabletas o jarabe de hierro? ***(mostrar tableta/jarabe)***	**1.** Sí **2.** No----------→ **3.** No sabe----------→	 **#65** **#65**
64.	¿Por cuantos tiempo tomo las tabletas o jarabe de hierro?	_____ días _____ semanas _____ meses ❑ No se acuerda	
65.	Durante su último embarazo, ¿comió menos, igual, o mayor cantidad de comida/alimentos de lo acostumbrado?	**1.** Menos de lo acostumbrado **2.** Igual a lo acostumbrado **3.** Mas de lo acostumbrado **4.** No sabe / no recuerda	

MODULO 5B: PARTO Y CUIDADO DEL RECIEN NACIDO

No.	Preguntas	Codificación	Saltos
66.	¿Dónde fue atendido el parto de [NOMBRE DEL NIÑO]?	1 Casa de entrevistada 2 Casa de otra persona 3 Hospital 4 Centro de Salud 5 Centro curativo/clínica de una ONG 6 Puesto de Salud 7 Otra entidad medica _____ 8 Otro _____	
67.	**Vea las respuestas de pregunta #66.** Si 3, 4, 5, 6: Escribir nombre de la entidad _____		
68.	¿Quien le atendió durante su último parto?	(puede marcar varias opciones) **a**. Doctor **b**. Enfermera Profesional **c.** Auxiliar de enfermería **d.** Comadrona **e.** Promotor de salud **f.** Otro _____ **g.** Nadie	

MODULO 5C: CUIDADOS POST-NATALES

No.	Preguntas	Codificación	Saltos
69.	¿Cuales son las señas que indica que un recién nacido está enfermo?	(*Puede marcar varias opciones*) **a.** No mama **b.** Esta morado **c.** Dificultad para respirar **d.** No activo, desmayado **e.** chiquito **f.** Área del cordón rojo **g.** Esta frío **h.** Otro _____ **i.** No sabe	
70.	Después del parto de [NOMBRE DEL NIÑO], ¿alguien le chequeo la salud de usted?	**1.** Sí **2.** No ----------→	**#73**
71.	Después de que nació [NOMBRE DEL NIÑO], ¿al cuanto tiempo le hicieron el primer chequeo a usted?	_____ días _____ semanas _____ No sabe/no se acuerda Escribir 00 si fue el mismo día	

No.	Preguntas	Codificación	Saltos
72.	Quien hizo el chequeo post-natal a usted? ALGUIEN MAS LA VIO? *Indague para descubrir persona mas calificada*	**1**. Doctor **2**. Enfermera profesional **3**. Auxiliar de enfermería **4.** Partera/Comadrona capacitada **5.** Partera/Comadrona no capacitada **6**. Otro_____	
73.	¿Cuales problemas o señas de peligro durante los 40 días después del parto (la cuarentena) harían que usted buscara ayuda urgentemente con personal de salud?	(*Puede marcar varias opciones*) **a.** Fiebre **b.** Sangrado **c.** Flujo vaginal con mal olor **d.** Otro _____ **e.** No sabe	

MODULO 6: ESPACIMIENTO DE EMBARAZOS

Diga: Ahora solamente nos falta pocas preguntas. Algunas de las preguntas son personales y de temas sensibles. Le recuerdo que no hay problema si usted no desea contestar cualquier pregunta.

No.	Preguntas	Codificación	Saltos
74.	Cuantos niños menores de cinco años viven en esta casa?	_____niños menores de cinco	
75.	Cuantos de estos niños son suyos?	_____niños biológico	
76.	Puede decirme el sexo y la fecha de nacimiento de sus dos hijos mas chiquitos?	**Niño #1 (hijo menor)** Nombre_____ 1 Masculino_____ 2 Femenino_____ Fecha de Nacimiento (día/mes/año)___/____/____ edad en meses _____ **Niño #2** Nombre_____ 1 Masculino _____ 2 Femenino _____ Fecha de nacimiento (día/mes/año) ___/____/____ edad en meses_____	
77.	Actualmente, ¿está embarazada?	**1.** Sí ----------→ **2.** No **3.** No sabe/no esta segura	**#81**
78.	¿Quiere tener otro niño?	**1.** Sí **2.** No ----------→ **3.** No sabe ----------→	 **#80** **#80**
79.	¿Dentro de cuanto tiempo piensa tener otro hijo?	**1.** Dentro de los siguientes dos años **2.** Mas de dos años **3.** No esta segura	

No.	Preguntas	Codificación	Saltos
80.	Actualmente, ¿que hace usted para espaciar sus embarazos (no quedar embarazada) (que hace usted o su esposo para protegerse contra el embarazo)?	(*Marcar una opción solamente – el método que normalmente usa.*) 01 Ningún método 02 Norplant/implantes bajo de la piel 03 Inyección/DepoProvera 04 Píldoras/pastillas anticonceptivas 05 T de Cobre/Dispositivo Intrauterino (DIU) 06 Diafragma 07 Condón 08 Espuma/gel/espermicida/óvulo/crema/ tableta 09 Esterilización quirúrgica femenina 10 Esterilización quirúrgica masculina/ Vasectomía 11 Método de la amenorrea de la lactancia (MELA) **12 Ritmo/calendario/moco cervical/ temperatura basal/collar** 13 Abstinencia 14 Coito interrumpido 15 Otro	

No.	Preguntas	Codificación	Saltos
81.	Usted sabe donde puede conseguir un método para espaciar los embarazos (para no quedar embarazada)?	***(Puede marcar varias opciones)*** a Hospital **b.** Centro de salud **c.** Centro curativo/ clínica de una ONG **d.** Puesto de salud **e.** Clínica de planificación familiar. **f.** Guardián/promotor de salud **g.** Farmacia **h.** Otra entidad medica/clínica _____ **i.** Tienda **j.** Iglesia **k.** Amigo/Pariente **l**. Otro_____ **m.** No sabe	

MODULO 7: CONOCIMIENTO SOBRE HIV/SIDA

No.	Preguntas	Codificación	Saltos
82.	¿Ha escuchado de una enfermedad que se llama "SIDA"?	**1.** Si **2.** No. ---------- →	**#85**
83.	¿Es posible protegerse del SIDA?	**1.** Si **2.** No. ---------- →	**#85**
84.	¿Cómo cree que se proteja contra el SIDA? Diga: **Algo más para protegerse contra SIDA?**	***(Puede marcar varias opciones)*** **a.** No teniendo sexo **b.** Usando Preservativo/Condones **c.** Teniendo sexo con una sola persona/ ser fiel a una sola persona **d.** Limitar número de personas con quien tiene relaciones sexuales. **e.** No tener sexo con prostitutas **f.** No tener sexo con personas quienes mantienen relaciones sexuales con personas del mismo genero (Sexo homosexual) **g.** No tener sexo con personas quienes se inyectan drogas. **h.** No tener trasfusiones de sangre contaminadas **i.** No recibir inyecciones con jeringas contaminadas **j.** No besar **k.** No contacto con mosquitos/zancudos. **l.** Buscar protección de los curanderos. **m.** No compartir las rasuradoras **n.** Otro_____ **o.** Otro_____ **p.** No sabe	

OTRO: CAPACITACION PREVIA EN SALUD

No.	Preguntas	Codificación	Saltos
85.	¿Ha recibido charlas o platicas de salud en los últimos tres meses?	**1.** Si **2.** No	

ANTROPOMETRIA

No.	Preguntas	Codificación	Saltos
86.	ENTREVISTADOR: PESA AL NIÑO, Y MARCA EL PESO DEL NIÑO AQUI	si su balanza es en libras: Peso:____Libra :_____Onzas Ropa:____Libras:_____Onzas si su balanza es el Kilos: Peso: _____._____Kilos Ropa: _____._____Kilos	
87.	ENTREVISTADO R: VERIFICAR SI HAY EDEMA (HINCHAZON) EN AMBOS PIES.	**1.** Si, Hay edema en los dos pies **2.** No, no hay edema en los dos pies **3.** No sabe.	

REVISAR EL CUESTIONARIO

Agradezca la colaboración!

Comentarios:

_____

Firma del Supervisor: _____

CURAMERICAS - GUATEMALA
PROYECTO SUPERVIVENCIA INFANTIL
Huehuetenango, Guatemala

CUESTIONARIO 12 a 23 Meses

Encuesta Familiar Dirigida a Madres con Hijos 12 a 23 Meses
Conocimientos, Actitudes y Coberturas sobre el Cuidado de los Niños Entre 12 y 23 Meses

a. (Cuando ya ha usado el cuestionario de O a 11 meses en un área, proceder a la próxima casa para usar este cuestionario. ¡NO SE DEBE USAR LOS DOS CUESTIONARIOS EN LA MISMA CASA!)
b. Verificar las edades de los niños en la casa. Si hay un niño 12 a 23 meses, use este cuestionario. Si no hay niños de 12 a 23 meses, pasa a la próxima casa. Si hay más de un niño 12 a 23 meses, seleccione uno al azar (usar una moneda).
c. Si la madre de este niño está en casa:

- Pasar al consentimiento para explicar el propósito de la encuesta y continuar con la encuesta.

d. Si la madre no está en casa:

- Si la madre está más de 30 minutos de la casa, proceda a la próxima madre, y llenar el formulario de Madres no Encontradas.
- Si la madre está menos de 30 minutos de la casa, búscala y haga la entrevista donde ella está.
- Regresa a su casa para seleccionar otra casa si tiene que seleccionar otro niño en el área todavía.

e. Si la(s) madre(s) no tiene por lo menos un niño entre 12 y 23 meses, ir a la próxima casa.

CONSENTIMIENTO

Explicar a la madre: Mi nombre es _____ y trabajo con Curamericas y el Ministerio de Salud Pública. Estamos realizando una encuesta de salud de niños en la comunidad. Su participación de más o menos 30 minutos puede ayudar a su comunidad, y todo lo que usted me dirá será confidencial. Tiene el derecho para no participar en la encuesta, también. ¿Puede usted participar en la encuesta?
SI DICE QUE SI → Firma abajo, y seguir con la entrevista
SI DICE QUE NO→ Ir a la próxima madre y llenar el formulario de Madres no Encontradas/Entrevistadas.

Firma del Encuestador: _____ Fecha:_____/_____/_____

¡LENAR HOJA FORMULARIO PARA REGISTRAR ENCUESTADOS NO ENCONTRADOS!

Nombre de la madre: _____ _____ _____ _____
Primer nombre1 Segundo nombre2 Apellido 1 Apellido 2

IDENTIFICACION	
NÚMERO DE JURISDICCIÓN	---------- ----------
NÚMERO DE ENTREVISTA	---------- ---------- ----------
NÚMERO DE CASA	---------- ---------- ----------
NUMER0 DE SECTOR	---------- ---------- ----------

IDENTIFICACION	
NÚMERO DE JURISDICCIÓN	_____ _____
NÚMERO DE ENTREVISTA	_____ _____ _____
NUMERO DE SECTOR	_____ _____
NÚMERO DE CASA	_____ _____ _____

4.	Fecha de la Entrevista	_____/_____/_____ dd mm aaaa
5.	Nombre del Encuestador	_____
6.	Nombre del Supervisor	_____
7.	Nombre de la Comunidad	_____
8.	Iniciales de la madre	____ ____ ____ ____
9.	¿Cuantos años ha cumplido usted?	_____Años
10.	Nombre del Niño seleccionado para la entrevista **(SI TIENE UN NIÑO EN CADA GRUPO DE EDAD, ESCOGER AL AZAR UN NIÑO)**	_____
11.	Sexo de este niño	☐Masculino ☐Femenino
12.	Fecha de nacimiento de este niño	____/____/_____ dd mm aaaa
13.	Edad en meses de este niño	_____meses

(Nota a encuestador: Hablaremos solamente de este niño/a durante toda la entrevista.)

(Diga:) Como le mencioné, esta entrevista tiene que ver con su salud y la salud de (NOMBRE DEL NIÑO). Por favor, saque todos los documento (tarjetas/carnets/hojas/fichas de salud) que tenga de (nombre del niño/a) -- vacunación, control de citas, crecimiento/peso, entrega de alimentos — y las que corresponde a usted y su embarazo con (NOMBRE DEL NINO). Esto nos ayudará a contestar algunas preguntas.

MODULO 1A: AGUA Y SANEAMIENTO

No.	Preguntas	Codificación	Saltos
14.	¿Con que se lavan las manos?	**1.** Con agua solamente ----------→ **2**. Con agua y jabón o con ceniza **3.** Otro ----------→ (ESPECIFICAR:_____)	**#16** **#16**
15.	(Si la respuesta es con jabón o ceniza:) ¿en que momentos se lava las manos con jabón o ceniza?	(Puede marcar varias opciones) **a**. Nunca **b.** Antes de preparar alimentos **c**. Antes de dar de comer a los niños **d**. Después de hacer necesidades **e.** Después de cambiar los pañales o limpiar la nalga del niño **f**. Otro_____	

INFORMACION SOBRE LA ENTREVISTADA Y EL HOGAR

No.	Preguntas	Codificación	Saltos
16.	¿Tuvo la oportunidad de estudiar usted?	**1.** Sí **2**. No ----------→	**#18**
17.	¿Por cuantos años asistió a clases?	Años de educación cumplidos (si nunca estudio, marcar 0) _____	
18.	¿Cuales idiomas habla usted?	(Puede marcar varias opciones) **a.** Español **b.** Akateko **c.** Chuj **d.** Mam **e**. Otro_____	
19.	¿En cual idioma es más cómodo/fácil para (expresarse/comunicarse con otros)?	(Marcar solo una opción) **a.** Español **b.** Akateko **c**. Chuj **d.** Mam **e**. Otro_____	

OTRA INFORMACIÓN

No.	Preguntas	Codificación	Saltos
20.	¿El padre de [NOMBRE DEL NIÑO] vive en esta casa?	**1.** Sí **2.** No **3**. No sabe	
21.	¿Usted trabaja a fuera de la casa para ganar dinero?	**1.** Sí **2**. No	
22.	¿A que se dedica usted?	(Puede marcar varias opciones) **a.** Ama de casa (no trabaja afuera de la casa) **b.** Artesana **c.** Obrera agrícola **d.** Vende comida **e.** Trabaja en una tienda/vendedora **f.** Empleada doméstica **g.** Trabajadora asalariada **h**. Otro_____	
23.	¿Quién le cuida a (NOMBRE DEL NIÑO) cuando usted no esta en casa?	**(Puede marcar varias opciones)** **a.** Madre (entrevistada)/nunca lo deja **b.** Esposo/"compañero" **c.** Hijos mayores **d.** Otro pariente_____ **e.** Vecino/amigo **f.** Empleada/niñera **g.** jardín/guardería/escuela **x.** Otro_____	

MODULO 2: LACTANCIA MATERNA, ALIMENTACION Y MICRONUTRIENTES

No.	Preguntas	Codificación	Saltos
24.	¿Actualmente le está dando pecho a [NOMBRE DEL NIÑO]?	**1.** Sí **2.** No	
25.	¿Cuántas veces comió o mamó ayer Pecho: veces durante el día y la noche [NOMBRE DEL NIÑO]?	Pecho:_____veces Pacha: _____veces Tiempos de refacción_____veces Tiempos de comida:_____veces	
26.	¿Cuales son todos los alimentos/bebidas (Escribir aquí todo lo que diga:) qué comió y bebió ayer durante el día y noche [NOMBRE DEL NIÑO]?	**(Escribir aquí todo lo que diga:)**	

Cuestionario 12-23 meses

<table>
<tr><th>No.</th><th>Preguntas</th><th>Codificación</th><th>Saltos</th></tr>
<tr><td>27.</td><td>Ahora, vamos a ser más específicos. Voy a leer unas comidas y bebidas, y quisiera que me diga si los comió o bebió [NOMBRE DEL NIÑO] ayer durante el día o la noche.</td><td colspan="2">
<table>
<tr><th colspan="4">Leer la comida y marcar con X lo que afirma la madre</th></tr>
<tr><th></th><th></th><th>SI</th><th>NO</th></tr>
<tr><td>A</td><td>Amamantarlo</td><td></td><td></td></tr>
<tr><td>B</td><td>Café</td><td></td><td></td></tr>
<tr><td>C</td><td>Té/agüitas claras/refrescos</td><td></td><td></td></tr>
<tr><td>D</td><td>Leche (de cabra, polvo o vaca)</td><td></td><td></td></tr>
<tr><td>E</td><td>Comió algo con tomates o pasta de tomates?</td><td></td><td></td></tr>
<tr><td>F</td><td>Granos (maíz, tortilla, arroz, avena, mosh, pan, pasta, incaparina, pinolillo, cebada)</td><td></td><td></td></tr>
<tr><td>G</td><td>Calabaza, camote amarillo, zanahoria, guicoyito, guisquil</td><td></td><td></td></tr>
<tr><td>H</td><td>Comida hecha con tubérculos (papa, yuca)</td><td></td><td></td></tr>
<tr><td>I</td><td>Hojas verdes (hoja de rábano, quelite, hierba mora, cilantro, otros de la comunidad)</td><td></td><td></td></tr>
<tr><td>J</td><td>Verduras o frutas amarillas (zanahorias, ayote, mango, papaya)</td><td></td><td></td></tr>
<tr><td>K</td><td>Otras frutas (manzana, banano, aguacate, durazno)</td><td></td><td></td></tr>
<tr><td>L</td><td>Carnes (pescado, pollo, res, huevo)</td><td></td><td></td></tr>
<tr><td>M</td><td>Leguminosas (frijoles, lentejas, manía o soya)</td><td></td><td></td></tr>
<tr><td>N</td><td>Cuajada, mantequilla o crema, queso, yogur</td><td></td><td></td></tr>
<tr><td>O</td><td>Comida hecho con aceite, manteca, mantequilla</td><td></td><td></td></tr>
<tr><td>P</td><td>Cualquier otro alimento que no mencioné</td><td></td><td></td></tr>
<tr><td>Q</td><td>Sal CON YODO (VERIFICAR)</td><td></td><td></td></tr>
<tr><td></td><td>(ESPECIFICAR:_____)</td><td></td><td></td></tr>
</table>
</td><td></td></tr>
<tr><td>28.</td><td>¿Ha recibido [NOMBRE DEL NIÑO] vitamina A durante los últimas 6 meses? (mostrar cápsula)</td><td colspan="2">1. Sí
2. No
3. No sabe</td><td></td></tr>
<tr><td>29.</td><td>¿Tiene tarjeta donde esta anotado los datos de vitamina A de [NOMBRE DEL NIÑO]? (Buscar en las tarjetas que tiene la madre.)</td><td colspan="2">1. Sí Anote fecha ultima dosis
____/_____/_____
2. No</td><td></td></tr>
<tr><td>30.</td><td>¿Si [NOMBRE DEL NIÑO] no quiere comer, que hace usted normalmente?</td><td colspan="2">1. Animar/dar un incentivo al niño
2. No le doy de comer
3. Le doy de comer a la fuerza
4. Nunca rehúsa/siempre quiere comer</td><td></td></tr>
<tr><td>31.</td><td>¿Está dando la pacha al niño actualmente?</td><td colspan="2">1. Sí
2. No
3. No sabe</td><td></td></tr>
</table>

Página 5
Cuestionario 12-23 meses

MODULO 3: MONITOREO DE CRECIMIENTO
(Diga:) Para conocer mas sobre los controles que ha recibido (nombre del niño/a), me gustaría revisar los carnet de el/ella. ¿Los podría sacar por favor?

No.	Preguntas	Codificación	Saltos
32.	¿Ha sido pesado [NOMBRE DEL NIÑO] en los últimos 4 meses?	**1**. Sí **2**. No	
33.	¿Tiene una ficha del niño donde están anotados sus datos de peso/talla para [NOMBRE DEL NIÑO]?	**1**. Sí anote fecha de ultimo peso ____/____/____ **2.** Carnet no está disponible/perdido **3.** Nunca tuvo carnet **4.** No sabe	

MODULO 4A: VACUNACIÓN

No.	Preguntas	Codificación	Saltos
36.	Tiene una ficha del (nombre del niño/a)? donde esta la información sobre las vacunas?	**1.** Sí **2.** Carnet no está disponible/perdido--→ **3.** Nunca tuvo carnet ----------→	 **#38** **#38**
37.	Anote la información exactamente como aparece en el carnet de vacunación del niño/a	BCG ___/___/___ VPO/Polio, Primera Dosis ___ /___ /___ VPO/Polio, Segunda Dosis___/___/___ VPO/Polío, Tercer Dosis ___/___ /___ PENTA, Primera Dosis___/___/___ PENTA, Segunda Dosis ___/___/__ PENTA, Tercera Dosis___/___/___ SPR/Tres Viral ___/___ /___ Vitamina A (más reciente) ___/____/___ OTRO _____especificar	

Página 6
Cuestionario 12-23 meses

MODULO 4B: ASISTENCIA DOMICILIAR Y ATENCION AL NIÑO ENFERMO

No.	Preguntas	Codificación	Saltos
38.	A veces, los niños se enferman ... ¿Cuáles son los motivos/causas/razones que le haría salir a buscar atención médica para su hijo ?	**(Puede marcar varias opciones)** **a.** No sé **b.** Cuando se ve mal o cuando no juega normalmente. **c.** No come, no bebe o no mama **d.** Esta desmayado/débil/decaído o no quiere despertarse. **e.** Calentura alta **f.** Respiración rápida o dificultosa **g.** Vomita todo **h.** Convulsiona/ataques **i.** Otro_____ **j.** Otro_____ **k.** Otro_____	
39.	¿Ha estado enfermo [NOMBRE DEL NIÑO] con uno de las siguientes enfermedades durante las ultimas dos semanas? (LEER LAS ENFERMEDADES EN LA LISTA.)	**(Leer esta lista de enfermedades)** (Puede marcar varias opciones) **a.** Diarrea/asientos/chorrio **b.** Sangre en el popo **c.** Tos **d.** Dificultad para respirar/cansadito **e.** Respiración rápida o en forma entrecortada y poco profunda **f.** Otro **g.** Otro **h.** Ninguna enfermedad ----------→	**#56**

MODULO 4C: DIARREA

No.	Preguntas	Codificación	Saltos
40.	¿Ha tenido diarrea durante las últimas dos semanas [NOMBRE DEL NIÑO]?	**1**. Sí **2**. No ---------- → **3**. No sabe ---------- →	 **#45** **#45**
41.	¿Que le dio a [NOMBRE DEL NIÑO] para tratar la diarrea? ¿Algo más?	(Puede marcar varias opciones) **a.** Nada **b.** SRO en sobre **c.** Líquidos disponibles en casa **d.** Píldora o jarabe **e.** Inyección **f.** Suero (en vena) **g.** Remedio casero/hierbas con mucha agua. **h.** Remedio casero/hierbas con poco agua **i.** Otro_____	

Página 7

Cuestionario 12-23 meses

No.	Preguntas	Codificación	Saltos
42.	¿Cuando [NOMBRE DEL NIÑO] estuvo con diarrea, le dio menos, igual o mayor cantidad de líquidos (incluyendo leche materna) de lo acostumbrado?	**1.** Menos de lo acostumbrado **2**. Igual a lo acostumbrado **3.** Más de lo acostumbrado **4.** No le dio líquidos **5** No sabe	
43.	¿Cuando estuvo [NOMBRE DEL NIÑO] con diarrea, le dio menos, igual o mayor cantidad de comida/alimentos de lo acostumbrado	**1**. Menos de lo acostumbrado **2**. Igual a lo acostumbrado **3**. Más de lo acostumbrado **4.** No le dio comida/alimentos **5** No sabe	
44.	¿Cuando [NOMBRE DEL NIÑO] estaba Recuperándose de la diarrea (durante la semana después de estar con diarrea), le dio menos, igual o mayor cantidad de comida de lo acostumbrado?	**1.** Menos de lo acostumbrado **2**. Igual a lo acostumbrado **3**. Más de lo acostumbrado **4**. No le dio pecho/comida/alimentos **5** No sabe	

MODULO 4D: INFECCIONES RESPIRATORIAS AGUDAS

No.	Preguntas	Codificación	Saltos
45	¿Ha tenido [NOMBRE DEL NIÑO] una enfermedad con tos durante las ultimas dos semanas?	**1**. Sí **2**. No ---------- -→	 **#56** **#56**

		3. No sabe---------- →	
46.	Cuando [NOMBRE DEL NIÑO] estuvo con tos. ¿También tuvo dificultad para respirar o estuvo respirando más rápidamente de lo normal?	**1**. Sí **2**. No ---------- → **3**. No sabe ---------- →	**#56** **#56**
47.	Cuando [NOMBRE DEL NIÑO] estuvo con la tos o tos con respiración rápida, ¿busco ayuda o el tratamiento?	**1.** Sí **2**. No ---------- →	**#53**
48.	¿Donde acudió primero para consejos, tratamiento para la tos o tos con respiración rápida de [NOMBRE DELNIÑO]?	**ENTIDAD MEDICA** **01** Hospital **02** Centro de salud **03** Puesto de salud **04** Centro curativo de una ONG **05** Clínica particular **06** Promotor/guardián de salud **07** Otro tipo de servicio medico _____ **OTRO LUGAR** **08** Curandero **09** Tienda **10** Farmacia **11** Distribuidora comunal **12** Pariente/amigo **13** Otro	

Página 8

Cuestionario 12-23 meses

No.	Preguntas	Codificación	Saltos
49.	Vea las respuestas de la pregunta #48 Si 01, 02, 03, 04: Escribir nombre de entidad_____		
50.	¿A los cuántos días de la aparición de la tos o tos con respiración rápida buscó ayuda?	**1**. El misma día **2.** El día siguiente **3**. Dos días **4**. Tres o mas días	
51.	Cuando **[NOMBRE DEL NIÑO]** estuvo con la tos o tos con respiración rápida, ¿buscó ayuda o el tratamiento en algún otro lugar?	**1.** Sí **2.** No ----------	**#53**
52.	¿A cual otro lugar fue para ayuda o tratamiento?	**01** Hospital **02** Centro de salud **03** Puesto de salud **04** Centro curativo de un ONG **05** Clínica particular **06** Promotor/guardián de salud **07** Otro tipo de servicio medico **08** Curandero **09** Tienda	

		10 Farmacia **11** Distribuidora comunal **12** Pariente/amigo **13** Otro_____	
53.	¿Cuales remedios/medicinas le dio a **[NOMBRE DEL NIÑO]?**	(Puede marcar varias opciones) **a.** Ningún remedio **b.** Aspirina **c.** Acetaminofen **d.** Antibiótico **e.** Otro **f.** No sabe (preguntar si tiene el frasco)	
54.	¿Cuando **[NOMBRE DEL NIÑO**] estuvo con tos y respiración rápida, le dio menos, igual o mayor cantidad de líquidos (incluyendo la leche materna) de lo acostumbrado?	**1.** Menos de lo acostumbrado **2.** Igual a lo acostumbrado **3.** Más de lo acostumbrado **4.** No le dio líquidos **5.** No sabe	
55.	¿Cuando estuvo **[NOMBRE DEL NIÑO]** con tos y respiración rápida, le dio menos, igual o mayor cantidad de comida/alimentos de lo acostumbrado?	**1.** Menos de lo acostumbrado **2.** Igual a lo acostumbrado **3.** Más de lo acostumbrado **4.** No le dio comida/alimentos **5**. No sabe	

Página 9
Cuestionario 12-23 meses

MODULO 6: ESPACIMIENTO DE EMBARAZOS

Diga: Ahora solamente nos falta pocas preguntas. Algunas de las preguntas son personales y de temas sensibles. Le recuerdo que no hay problema si usted no desea contestar cualquier pregunta.

No.	Preguntas	Codificación	Saltos
56.	¿Cuantos niños menores de cinco años viven en esta casa?	_____niños menores de cinco	
57.	¿Cuantos de estos niños son suyos propios?	_____niños biológicos	

58.	¿Puede decirme el sexo y la fecha de nacimiento de sus dos hijos más chiquitos?	**Niño #1 (hijo menor)** nombre_____ 1 Masculino _____ 2 Femenino _____ Fecha de nacimiento (día/mes/año) ____/____/_____ Edad en meses _____ **Niño #2 nombre** 1 Masculino_____ 2 Femenino_____ Fecha de nacimiento (día/mes/año) ____/____/____ Edad en meses_____	
59.	Actualmente ¿Esta embarazada?	**1.** Sí ----------→ **2.** No **8**. No sabe/no esta segura	**#63**
60.	¿Quiere tener otro niño?	**1.** Sí **2**. No----------→ **8.** No sabe----------→	 **#62** **#62**
61.	¿Dentro de cuanto tiempo piensa tener otro hijo?	**1.** Dentro de los siguientes dos años **2.** Mas de dos años **8.** No esta segura	
62.	Actualmente, ¿que hace usted para espaciar sus embarazos (no quedarse embarazada) (que hace usted o su esposo para protegerse contra el embarazo)?	**(Marcar una opción solamente – el método mas usado)** **01** Ningún método **02** Norplant/implantes bajo de la piel **03** lnyeccion/DepoProvera **04** Píldoras/pastillas anticonceptivas **05** T de Cobre/Dispositivo Intrauterino (DIU) **06** Diafragma **07** Condón **08** Espuma/gel/espermicida/óvulo/crema/tableta **09** Esterilización quirúrgica femenina **10** Esterilización quirúrgica masculina/Vasectom ja **11** Método de la amenorrea de la lactancia (ME LA) **12** Ritmo/calendario/moco cervical/ temperatura basal/collar **13** Abstinencia **14** Coito interrumpido **15** Otro	

Página 10
Cuestionario 12-23 meses

No.	Preguntas	Codificación	Saltos
63.	Usted sabe donde puede conseguir un método para espaciar los embarazos (Para no quedarse embarazada)?	**(Puede marcar varias opciones)** b. Hospital **j.** Centro de salud **k.** Centro curativo/clínica de una ONG **l.** Puesto de Salud **m.** Clínica de planificación familiar **n.** Guardián/Promotor de salud/centro	

		de convergencia **o.** Farmacia **p.** Otra entidad medica/clínica _____ **q.** Tienda **r.** Iglesia **s.** Amigo/Pariente **t.** Otro_____ **u.** No sabe	

MODULO 7: CONOCIMIENTO SOBRE HIV/SIDA

No.	Preguntas	Codificación	Saltos
64.	¿Ha escuchado de una enfermedad que se llama SIDA?	**1**. SI **2**. NO ----------	**#67**
65.	¿Es posible protegerse del SIDA?	**1**. SI **2**. NO ----------	**#67**
66.	¿Cómo cree que se protege contra el SIDA? Diga: Algo mas para protegerse contra el SIDA	(Puede marcar varias opciones) **a.** No teniendo sexo **b.** Usando preservativos/condones **c.** Teniendo sexo con una sola persona/ ser fiel a una sola persona **d.** Limitar número de personas con quien tiene relaciones sexuales. **e.** No tener sexo con prostitutas. **f.** No tener sexo con personas quienes mantienen muchas relaciones sexuales. **g.** No tener sexo con personas quienes mantienen relaciones sexuales con personas del mismo genero (sexo Homosexual). **h.** No tener sexo con personas quienes se inyectan drogas. **i.** No tener trasfusiones de sangre. **j.** No recibir inyecciones **k.** No besar **l.** No contacto con mosquitos/zancudos **m.** Buscar proteccion de los curanderos **n.** No compartir equipo de rasurar O Otro _____ P. Otro _____ Q. No sabe_____	

OTRO: CAPACITACION PREVIA EN SALUD

No.	Preguntas	Codificación	Saltos
67.	¿Ha recibido charlas o platicas de salud en los últimos tres meses?	**1.** SI **2.** NO	

ANTROPOMETRIA

No.	Preguntas	Codificación	Saltos
68.	ENTREVISTADOR: PESA AL NIÑO Y MARCARA EL PESO DEL NIÑO AQUÍ.	Si su balanza es en libras: Peso:_____Libras_____onzas Ropa: _____Libras_____onzas si su balanza es en kilos: Peso:_____._____kilos Ropa:_____._____Kilos	
69.	ENTREVISTADOR: VERIFICA SI HAY EDEMA (HINCHAZON) EN AMBOS PIES	**1.** Si, hay edema en los dos pies **2.** No, no hay edema en los pies **3.** No sabe.	

REVISAR EL CUESTIONARIO
Agradezca la colaboración!

Comentarios:_____

Firma del supervisor:_____

Pagina 12
Cuestionario 12-23 meses

Attachment 11: Project Data Sheet