Community-Based, Impact-Oriented Child Survival Project in Huehuetenango, Guatemala

USAID Child Survival and Health Grants Program
October 1, 2011 – September 30, 2015
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End of Project KPC Survey

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Abbreviations and Acronyms

ARI- Acute Respiratory Infection

AMTSL – Active Management of the Third Stage of Labor

B – Baseline KPC

BCG- Bacillus Calmette-Guérin (vaccine against Tuberculosis)

CBIO - Community-Based Impact-Oriented Methodology

CQI – Continuous Quality Improvement

CSHGP - Child Survival and Health Grants Program

ENC – Essential Newborn Care

F – Final KPC

INE- Instituto Nacional de Estatísticas (National Statistics Institute)

IYCF – Infant and Young Child Feeding

KPC- Knowledge, Practice, and Coverage

LOE – Level of Effort

MCH- Maternal and Child Health

MSPAS - Ministerio de Salud Pública y Asistencia Social (Ministry of Public Health and
Social Assistance)

NGO – Nongovernmental Organization

OE- Obstetric Emergency

OR- Operational Research

ORT- Oral Rehydration Therapy

PENTA - Pentavalente vaccine (diphtheria, pertussis, tetanus, Haemophilus B, Hepatitis B)

PY- Project Year

SIAS - Integrated System of Health Care (Sistema Integral de Atención Salud)

OE – Obstetric emergency

OR – Operational Research

ORS- Oral Rehydration Solution

TT – Tetanus Toxoid (vaccine)

USAID – United States Agency for International Development

WRA – Women in reproductive age

WHO – World Health Organization

Executive Summary

The "Community-Based Impact-Oriented Child Survival in Huehuetenango Guatemala" project funded by USAID's Child Survival and Health Grants Program (CSHGP) under Cooperative Agreement No. AID-OAA-A-11-00041, October 1, 2011 to September 30, 2015 was implemented in Huehuetenango Department, Guatemala by Curamericas Global in partnership with its in-country partner, Curamericas Guatemala.

The project's purpose was to improve health and nutrition, and ultimately reduce mortality, among under-five (U5) children and women of reproductive age (WRA) in the western highlands through community mobilization, capacity building, emergency response systems, and high-impact interventions. The project dedicated 35% of its level of effort (LOE) to maternal/newborn care, 30% to nutrition, 15% to pneumonia care-seeking and treatment, 15% to diarrhea prevention and treatment, and 5% to childhood immunization. It was implemented in two Phases to reach all communities over the lifetime of the project: in 89 Phase 1 communities from October 2011 through June 2015; and in 91 Phase II communities from October 2013 through June 2015.

The final Knowledge, Practice and Coverage (KPC) Survey was executed to compare final results with baseline project indicators in relation to levels of knowledge, key behaviors, and coverage of project activities and health services. This report includes findings from a random cluster-sample of 600 mothers with children under the age of 2; the data were collected from the three municipalities in which the project was implemented: San Sebastian Coatán, Santa Eulalia and San Miguel Acatán, with approximately 87,500 people in 182 communities that are from the most isolated, marginalized, and highest-mortality areas of Guatemala. The KPC survey was executed in June 2015, and included 300 mothers of children 0-23 months from 30 Phase 1 communities and 300 from 30 Phase 2 communities, all randomly selected using the same standard stratified cluster sampling used for the baseline KPC survey. Epi Info 7.1 software was used to prepare the database, and to generate results for the analysis.

Summary of main results follows. Note that B=baseline, F=Final, and the results for Phase 1 and Phase 2 are separated by a slash (/), with the Phase 1 coverage preceding.

Demographic Data

Very few statistically significant differences were noted between the demographic data for Phase I communities and Phase II communities in both surveys, indicating that the two populations are comparable.

Mean age of the mothers was B 26.5/26.6 and F 25.7/26.0 years old, respectively; the age ranges were B 16-44/15-51 and F 14-46/15-45. The mothers averaged B 3.6/3.8 and F 3.4/3.6 deliveries. The mean ages of the children 0-23 months of age who were the co-subjects of the interviews were B10.0/11.1 and F 10.1/10.4 months, respectively. The mean number of years of formal schooling completed by the mothers was very low: B 2.8/2.4 and F 3.4/3.4 years. Male children accounted for B 50.8%/52.7% and F 50.8%/52.7% of the correspondents, there were no statistically significant gender differences between the two Phases or Surveys.

The language preference of the mothers corresponds with the population distribution of the three municipalities. In Phase 1, due to an increase in population in the Phase 1 communities of San Miguel Acatán between 2011and 2015, there is an increase in the number of clusters from San Miguel for the Phase 1 sample and therefore a statistically significant increase in Akateko speakers compared to baseline.

No differences were found among the two surveys in relation to husbands/male partners living with repondents/mothers: B 88.6%/89.3% and F 87.0%/88.7%. The vast majority of the mothers were housewives or mothers who do not work for wages (B 89.0%/ 94.7% and F 94.3%/95.3%), and it is noted small but statistically significant increases in mothers with small stores in the house and working as agricultural laborers.

The very minor differences in demographic results between the two surveys and Phases demonstrate population samples with effectively the same characteristics, providing the possibility of fair and

adequate comparability with their baselines and with each other. The one caveat is the larger representation of San Miguel Acatán in the final Phase 1 survey, noted below in the Limitations.

Maternal and Neonatal Care (LOE 35%)

The final KPC results reveal dramatic and statistically significant increases, from Baseline to Final KPC, in both Phases, in nearly all maternal/newborn health indicators, validating that the Project achieved its key objectives in the area of its highest level of effort, maternal/newborn care.

Antenatal Care

Antenatal care indicators showed significant increases in coverage from baseline to final in both Phases. Women who reported at least four quality antenatal care checks from a qualified health professional during their last pregnancy shows a dramatic and statistically significant increase in both Phases from Baseline 13.4%/6.3% to Final 65.0%/53%; a fivefold increase for Phase 1 and eightfold increase for Phase 2. Mothers reporting 2 tetanus toxoid vaccinations prior to their most recent childbirth did not show significant change from baseline in both Phases: B 63.2%/63.0% and F 67.7%/62.3%. However, iron/folate supplementation for at least 90 days during the most recent pregnancy shows a significant increase from baseline in both Phase 1 and Phase 2, three- and two-fold respectively, from B 21.7%/10.0% to F 64.3%/26.3%.

Mothers who could name at least 2 danger signs during pregnancy significantly increased in both Phases from B 22.1%/21.3% to F 78.3%/66.3%.

Overall, final results for Phase 1 antenatal care indicators are all significantly higher than those in Phase 2, except tetanus toxoid immunization coverage.

Clean, Safe Births

Deliveries attended by a skilled health professional birth attendant in both Phases nearly doubled, from B 15.4% /6.0% to F 29.3% /13.7%., significant for both Phases. Deliveries that occurred in a health facility at final survey increased two fold in each of the Phases, from B 16.4%/6.7% to F 28.7%/13.0%, change significant for both Phases. The percentage of births that occurred in the home of the interviewee, attended by the local *Comadrona,* show a statistically significant decrease from B 77.6% / 85.3% to F 71.3% /71.3% in both Phases.

Mothers reporting all three elements of Essential Newborn Care (ENC) during their last delivery increased from B 6.0% / 5.0% to F 39.0% /31.0%, and those receiving three elements of AMTSL increased from B 9.4% /7.0% to F 20.0% /11.0%, showing huge improvements in these indicators, all statistically significant.

An important fourfold increase, statistically significant, is seen in mothers who could name 2 danger signs of delivery, from B 13.4% /13.3% to F 63.3% /53.7%.

Births by Cesarean section were 8.7% for Phase1 and 2.3% for Phase 2 (data available only for the Final KPC).

Final coverage of all delivery-related indicators were significantly higher in Phase 1 than in Phase 2.

Post-Partum Care

All but one of the post-partum care indicators show significant increases in coverage from baseline to final in both Phases. Mothers of newborn children who received a post-partum visit from an appropriate trained health worker for both her and her newborn within two days after the birth of the youngest child, increased from B 22.4% /16.0% to F 39.0% /18.3%, a significant increase only in Phase 1. Mothers who knew at least two post-partum danger signs increased dramatically and significantly in both Phases from B 17.1% /18.7% to F 66.3% /54.3%; and, the percentage of those who knew at least two neonatal danger signs, was B 27.4% /29.7% vs. F 64.7% /58.7%, a significant double increase in both Phases.

Comparing final results for Phase 1 and Phase 2 post-partum indicators shows that all are significantly higher for Phase 1.

Family Planning/Child Spacing

Percentage of women understanding the dangers of short pregnancy intervals at Baseline was 6.4% /12.0%, increasing significantly in each Phase to 46.7% / 33.7% at Final; but contraception usage did not show much change between Baseline (35.8% / 27.0%) and Final (34.0% / 25.0%), he changes were not statistically significant. Births with a short birth interval of less than 24 months at Baseline were 25.1% / 25.7% and at Final 18.7% / 25.0%, showing a statistically significant decrease for Phase 1 but no significant change for Phase 2.

Comparing final Phase 1 with Phase 2 results, knowledge of the dangers of short birth intervals and use of modern contraceptives were significantly higher in Phase 1 and short birth intervals significantly lower in Phase 1.

Child Nutrition (30% LOE)

Child nutrition indicators show mixed results, with significantly improved IYCF practices but no detected impact on prevalence of underweight.

Exclusive breast feeding in the 24 hours prior to the interview shows little change,   Baseline 75.0% /79.2% and Final 82.0% /71.6%; changes not significant.

Vitamin A supplementation for children decreased slightly from Baseline to Final, B 79.1% /73.7% to F 74.3%/ 67.1% (changes not significant). This would be related to the termination in PY3 of the Extension of Coverage Program of MSPAS, through which most Vitamin A supplementation was provided to beneficiaries.

IYCF practice indicator (proper complementary feeding of children 6-23 months of age) showed a sizeable increase from B 53.0% / 56.1% to F 74.35 / 65.3%; a statistically significant increase for both Phases. However, underweight (children weighing less than 2 standard deviations below normal for their age) showed no statistically significant change: B 16.1% /19.7%, F 20.1% / 20.1%. The stunting indicator (measured only during the final KPC survey) shows high percentages for both Phases, 39.5% /51.7% at final.

Final EBF, IYCF, and Vitamin A coverage was significantly higher in Phase 1 than in Phase 2. No significant difference was noted in underweight. But stunting was significantly lower for Phase 1 than for Phase 2 (p=0.004).

Prevention and Treatment of Pneumonia/Acute Respiratory Infections (15% LOE)

Pneumonia incidence decreased from B 25.8%/26.0% to F 20.7%/19.3%, significant for Phase 2. Prompt care seeking and treatment of pneumonia/ARI shows a dramatic and significant increase in both Phases, from B 26.0% /20.5% to F 51.6% /46.6%. Comparing final Phase 1 and Phase 2 pneumonia/ARI indicators, differences are not significant.

Prevention and Treatment of Diarrhea (15% LOE)

The project achieved mix results in the treatment of diarrhea, but significant improvements in nearly all diarrhea prevention indicators relating to water and sanitation.

Diarrhea incidence didn´t show a significant change between Phases and surveys, Baseline 40.1% /39.8% to Final F 34.3% /39.0%, but there were improvements in treatment and management of diarrhea at household level. Mothers' treatment response to diarrhea using oral rehydration therapy improved markedly in the two Phases, from B 28.3% /30.5% to F 40.8% / 40.2%; statistically significant for both Phases; and significant increases are also seen for both Phases in increased fluid intake during diarrhea episodes, B 7.5% /7.6% to F 18.45%/16.2%, and for use of zinc to shorten and ameliorate diarrhea episodes, B 6.7% / 1.7%, F10.7% /10.3%. However, no significant changes were seen in increasing food intake for children with diarrhea (B 0%/0%, F 2.5%/5.1%), which remained very low. However, it is clearly seen that management of the illness has improved from Baseline figures.

There were no significant differences in final coverages of diarrhea treatment-related indicators between Phases, except for increased feeding during diarrhea episodes, which was significantly higher in Phase 2.

Water and Sanitation

The Final KPC survey shows outstanding results and significant improvements in nearly every indicator. Appropriate treatment of water was 66.6% / 58.3% at Baseline, and at Final a statistically significant increase to F 97.7% / 97.7% for the two Phases. Safe water storage at Final showed a significant increase in both Phases, B 11.7% / 10.3% to F 28.0% / 26.0%. Households having an appropriate hand washing station is showing a huge and statistically significant increase for the two Phases, from only B 2.3% / 2.3% to F 44.7% /44.0%. Washing hands at critical times increased significantly thirtyfold in both Phases, B 1.3% /1.7%, to F 34.0% /28.7%. Safe feces disposal increased from B 43.1% /38.7% to F 45.0% /52.0%, but showed a statistically significant difference only for Phase 2.

Significant differences in water and sanitation indicators between Phases at Final KPC is noted only for safe feces disposal, with significantly higher final coverage for Phase 2, despite the briefer intervention.

Childhood Immunization (5% LOE)

Childhood immunization indicators, measles and comprehensive coverage (BCG, pentavalent (PENTA) and polio coverage), both decreased significantly from Baseline to Final KPC. Measles coverage decreased from B 79.3%/78.9% to F 64.8%/55.5%, significant in both Phases. Comprehensive vaccination coverage decreased from B 73.6% / 68.7% to F 56.6% /50.4%, also significant in both Phases. This was related to the termination in PY3 of the MSPAS Extension of Coverage Program, which provided immunizations for most of the project beneficiaries. Final measles coverage was significantly higher in Phase 1 than for Phase 2.

Women's Empowerment

Women´s empowerment indicators show good progress in areas of women´s decision-making autonomy and community participation, but an unchanged situation in relation to women's control and management of money in the household.

Decision-making autonomy for seeking proper treatment for respiratory infections in children showed a modest increase from Baseline, B 72.7% / 76.9% to Final F 74,2% / 89,7% neither significant; decision making for the location of delivery and birth attendant at Baseline was 68.2% / 71.3% while at Final 78.3% / 76,0%, a significant increase for Phase 1. Decision-making autonomy about contraception use showed a statistically significant increase, from Baseline 56.5% / 55.7% to Final 84.3% /83.0%, a significant increase for both Phases. Control over money needed to buy food to adequately feed their children showed a slight, non-significant decrease at Final compared to Baseline from B 12.6% / 11.4% to F 11.7% / 7.3%.

Mothers who reported attending a community meeting and expressing their opinion at Baseline were 10.0% /10.7%; by Final, women´s participation increased more than twofold to 24.3% / 28.0%; statistically significant for both Phases.

Final results were significantly higher in Phase 1 for control of money; and in Phase 2 for decision-making autonomy for pneumonia/ARI treatment.

Community Support of Maternal and Child Health

Mothers who reported that their community had in place an Obstetrical Emergency (OE) transportation response plan at Baseline were 29.4% / 37.0% and at Final 44.7% / 52.7%: percentage of women reporting Care Group activities and participation in the month prior to the interview increased from B 8.4% / 10.3% to Final F 64.0% / 52.3%. Both indicators significantly increased for both Phases.

In regard to community solidarity, the percentages of women who reported that in the previous three months their community worked together to solve a common problem were, 13.0% /16.0% while at Final 11.0% / 22.7%, a slight decrease for Phase1 but a statistically significant increase for Phase 2.

Community Health Priorities

Perceived community health priorities showed some change from baseline to final: perception that pneumonia is a priority increased significantly from B 26%/19% to F 49%/43% which correlates with improved care-seeking for pneumonia; and diarrhea perceived as a priority increased significantly from B 36%/37% to F 59%/53%, which correlates with the big improvements noted in water/sanitation indicators.

However, family planning remained a low perceived priority, effectively unchanged from B 1.7%/0.7% to F 2.3%/1.3%, showing persisting lack of concern for this among the women. Lack of transportation to health facilities as a priority declined – 7%/10% to 5%/4%, perhaps because the increase and availability of emergency transportation for transferring patients to a higher level facility.

Limitations

Population changes in Phase 1 communities between 2011 and 2015 resulted in a significantly higher representation of communities from San Miguel Acatán for Phase 1 of the final KPC vs. the baseline KPC, which may have skewed Phase 1 results. Project implementation is highly variable from community to community, with some communities refusing or reluctant to participate, others highly receptive and cooperative. The random cluster sampling of communities may not have reflected the actual proportion of cooperative communities, thus skewing the results. Though interviewers were intensely trained, many were inexperienced and this may have affected interview comprehension and anthropometry. Results may have been affected by the marked seasonal differences in disease incidence in the area, with pneumonia far more prevalent during the dry/cold season (Dec-March), when the baseline KPC was done, and diarrhea – which increases underweight - more prevalent during the rainy season (June-October), when the Final KPC was done. Oral translation of questions written in Spanish but administered in Chuj, Akateko, and Q'anjobal could have affected comprehension and therefore results.

Discussion and Conclusions

The project's main goals and objectives, in general, were met, especially improvements in nearly all of the maternal/newborn care indicators that are statistically significant and relate to the impact of the project in lowering maternal mortality. Significant progress was made in behavior change indicators that were related to Care Group participation: knowledge of dangers and danger signs (in pregnancy, delivery, post-partum); proper care-seeking for ARI; treatment of diarrhea with ORS; water and sanitation, especially hand-washing at critical times; and proper IYCF, where the results show significant increases. Women's empowerment indicators show significant improvement in women's participation in community meetings and decision-making autonomy for pneumonia care-seeking, place of delivery, and use of family planning.

Indicators related to the effect of the MSPAS termination of the Extension of Coverage Program, such as immunizations, vitamin A supplementation for children, and contraceptive use did not show expected improvements since they depended heavily on this program.

Further investigation is required in relation to the effect of Casas Maternas and Care Groups, as well as on nutrition, contraceptive use, and women´s decision- making autonomy and community solidarity. The disconnect between increased IYCF and unchanged underweight must be investigated. Likewise, the disconnect between unchanged contraceptive use and the improved knowledge of the benefits of family planning and increase in family planning-related decision-making autonomy among the women must be investigated.

KPC final results and associated lessons learned should be disseminated among stakeholders and current and potential partners.

USAID Child Survival and Health Grants Program
KPC End of Project Survey

Community-Based, Impact-Oriented Child Survival in Huehuetenango, Guatemala
Project in the municipalities of San Sebastian Coatán, San Miguel Acatán, and Santa
Eulalia, Huehuetenango Department, Guatemala

Background

USAID's Child Survival and Health Grants Program (CSHGP) contributes to reductions in maternal, newborn, and child mortality at the national and global levels in priority countries. The CSHGP strategic partnership model engages and builds the capacity of civil society with host country governments and the private sector to promote healthy behaviors, improve quality of and equitable access to services, and inform national policies and strategies.

USAID´s Child Survival and Health Grants Program awarded the Community-Based Impact-Oriented Child Survival in Huehuetenango, Guatemala Project to Curamericas Global to implement in partnership with Curamericas Guatemala. The project was accomplished in the municipalities of San Sebastián Coatán, Santa Eulalia, and San Miguel Acatán, in Huehuetenango Department, Guatemala from October 1, 2011 to September 30, 2015 in the area of the Cuchumatanes Mountains, an isolated mountain region of the western highlands of the Guatemalan altiplano, with overwhelmingly indigent Mayan population who exhibit some of the worst health indicators in Latin America; hence, the name locally given to this region is "the Triangle of Death."

Figure 1 – Project implementation area

The department of Huehuetenango is located in the Northwest Region of Guatemala. Its geographical area is 7,403 km² and its capital, Huehuetenango, is located approximately at 1.902 meters above sea level, with more than 1.1 million people. An estimated 75% of the department´s inhabitants live in rural areas.[1]

Table 1. Huehuetenango: Basic Indicators

Total population (thousands, 2010)	1114.4
Population density (hab. / km, 2010)	150.5
Women (%, 2010)	53.2
Rural population (2006, %)	75%
Indigenous population (2006, %)	58%
Total households (thousands, 2006)	178.2
Average size of households (2006)	5.5
Total fertility rate (2008)	4.1
Median age (2006 years)	16

Source: INE, Population projections.[2]

Two health indicators that reflect the state of human development are mortality and malnutrition in childhood. In the North-West Region, for every one thousand children that are born every year, 35 die before their first birthday and 52 before reaching five years of age[3]. In addition, almost half of children suffer from chronic malnutrition[4]. The infant mortality rate in Huehuetenango department is 43 deaths per 1,000 births—the third highest rate in Latin America, with more than half of these deaths occurring during the first month of life.[5]

One of the most threatening events in the life of rural Mayan women in Guatemala is becoming pregnant. The indigenous women of Huehuetenango suffer from extreme maternal mortality, with a rate of 226 deaths per 100,000 live births [6]— about twice the national average. This devastating mortality rate, combined with their high fertility rates, means that Maya women in this rural area face a 1-in-20 lifetime chance of dying during childbirth. Deliveries customarily take place in the mothers' dirt-floored homes, a non-sanitary environment that leaves mothers and newborns vulnerable.

The project's objective was to significantly improve the health of 15,327 under five children (U5) and 32,330 women in reproductive age (WRA) with interventions in maternal/newborn health, nutrition, prevention and treatment of ARI and diarrhea, and immunizations, delivered through the combined Community-Based, Impact-Oriented (CBIO) strategy and Care Group Methodologies, integrated into Guatemala Ministry of Health (MSPAS) initiatives, through its "Integrated System of Health Care" (SIAS) program which decentralizes services to the local level and encourages public-private partnerships with NGOs such as Curamericas Guatemala. The project's goal to decrease child malnutrition was also integrated with MSPAS' national initiatives, "El Pacto Hambre Cero" (Commitment to Zero Hunger) and "La Ventana de Mil Dias" (The Window of 1,000 Days), which targets fetal and child health from conception through two years of age.

The project served an estimated 36,580[7] beneficiaries from three rural municipalities (Table 2):

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[1] Desarrollo Humano, PNUD (UNDP), Guatemala, 2011

[2] From National Statistics Institute, cited in Cifras para el Desarrollo Humano, PNUD Guatemala, 2011

[3] Encuesta nacional de salud materna e infantil ENSMI, Guatemala, Noviembre 2019

[4] Informe nacional de desarrollo humano 2009/2010, PNUD 2010:45

5 . Epidemiological Surveillance Basic Indicators of Health Situational Analysis. Guatemala MPHSW/SIAS. 2010-11

6 Ministerio de Salud y Pública y Asistencia Social Guatemala, Segeplan / MSPAS Estudio Nacional de Mortalidad Materna, 2009

Guatemala, Serviprensa, Noviembre de 2011

7 Estimated 2015 population, based on Project´s Vital Events registries, while estimated population stated in the initial implementation plan showed higher figures obtained from the National Institute of Statistics (INE Guatemala)

Table 2 - Project beneficiaries by municipality

Beneficiary Population 2015	San Sebastián Coatán	San Miguel Acatán	Santa Eulalia	Total
Total Population	23,447	26,741	37,261	87,449
Children 0-59 months	2,940	4,855	5,653	13,448
Women: 15-49 years	6,422	6,014	10,696	23,132
TOTAL BENEFICIARIES	9,362	10,869	16,349	36,580

Source: Vital events registries – Census Based Project

The project's strategy was built upon previous work in the same area where from 2002 to 2007 Curamericas-Guatemala implemented a successful community-based CSHGP project focused on the reduction of child mortality rate for children under age five through interventions for diarrhea, pneumonia, and malnutrition. This antecedent project was highly innovative in that it combined Curamericas Global's signature methodology, the Community-Based Impact-Oriented (CBIO) methodology, with the Care Group methodology. This powerful combination resulted in high levels of community mobilization to support maternal and child health at the village level, and empowered women, via the Care Groups, to take a more active community role in ensuring the health of their children. Consequently, this methodology design was replicated by the present project, and included a robust operational research effort to better understand and demonstrate the effectiveness of this dual service platform.

Key aspects of CBIO include the creation of Community Health Committees in every village; the mapping and census of every community and creation of community registers to ensure services to those most in need; routine home visitation to bring health education and child growth monitoring to every doorstep; and community-based vital events surveillance to detect and respond to all disease incidence, new pregnancies, births, and deaths, with each death investigated with a verbal autopsy to understand causes of death and thus ensure that the project was responding to actual local epidemiological priorities. Using the Care Groups, the project trained in every community a Community Facilitator who trained in her village a group of 7-15 volunteer mother peer educators known as *Comunicadoras* (Care Group Volunteers) who in turn passed on the lessons to a group of 7-15 neighbors assigned to a *Comunicadora*, known as the Self-Help Group. Lessons, delivered in the local Maya language, were participatory and experiential and designed for non-literate learners. They covered key health behaviors such as prompt recognition and care seeking for danger signs in pregnancy, delivery, and post-partum; hand-washing and water purification; immediate and exclusive breastfeeding and complementary feeding. *Comunicadoras* also detected and reported vital events among their Self-Help Group women to accomplish the CBIO community-based vital events surveillance and response.

In addition, with matching funds provided by Ronald McDonald House Charities, the local municipalities, Curamericas Global, and other donors, and with the labor of local community members and Curamericas Global volunteers, Curamericas Guatemala initiated a revolutionary new strategy to address the persistently high maternal mortality rate: the Casa Materna, whose prototype was built in the centrally-located town of Calhuitz, in San Sebastian Coatán. The Casa Materna is a maternal clinic, staffed by an auxiliary nurse-midwife and two support women, where local Mayan women can have clean, safe deliveries attended in her native language by a skilled birth attendant in a culturally acceptable and physically accessible environment. Community emergency transportation plans in concert with the volunteer emergency medical technicians in San Antonio Huista (about 2 hours away outside of the project area), provide evacuation transport in the event of obstetric emergency to the nearest hospital in the city of Huehuetenango, approximately 4 hours away. Three Casa Maternas were operational during the life of the project (Figure 1).

The project was also integrated with the Ministry of Health and Social Welfare's (MSPAS) Extension of Coverage Program, part of the SIAS initiative mentioned above, which in the CSHGP project area was being implemented by Curamericas Guatemala and another NGO, ADIVES. Extension of Coverage Program sent ambulatory nurses into the villages to health posts and rally points on a

monthly basis to provide antenatal and post-natal care, child growth monitoring, detection and treatment of childhood illness, immunizations and vitamin A supplementation, contraceptives, and other health services critical to the project's objectives.

The intention of all this integration was the creation of a coherent integrated rural health system in full partnership with MSPAS, the municipalities, and the communities, with Care Groups stimulating demand for health behaviors and key health services; the Casa Maternas and Extension of Coverage Program fulfilling this demand with the needed services delivered locally in the native language in culturally acceptable ways; and CBIO ensuring that those most in need were served.

In accordance with its Operational Research design, the project was implemented in two Phases, Phase I and Phase II, with all three municipalities included in both Phases to ensure equitable roll-out of the project's services (Figure 2). Phase I was rolled out during the first 2 years (PY1 and PY2) of the project in 89 communities. The 91 Phase II communities were added in PY3. Consequently, the Phase 1 communities received four years of project services while the Phase 2 communities received only two years.

The purpose of this design was 1) to use Phase 1, the first two years, to perform formative research designed to derive lessons learned about the combined methodology to be applied during Phase 2 to improve implementation and services; and 2) perform end-of-project comparisons of the results obtained in the communities of the two Phases to determine if there was a dose-response effect of 4 years of implementation (Phase 1) vs only two years (Phase 2).

Figure 2 – Map of municipalities indicating boundaries of Phases
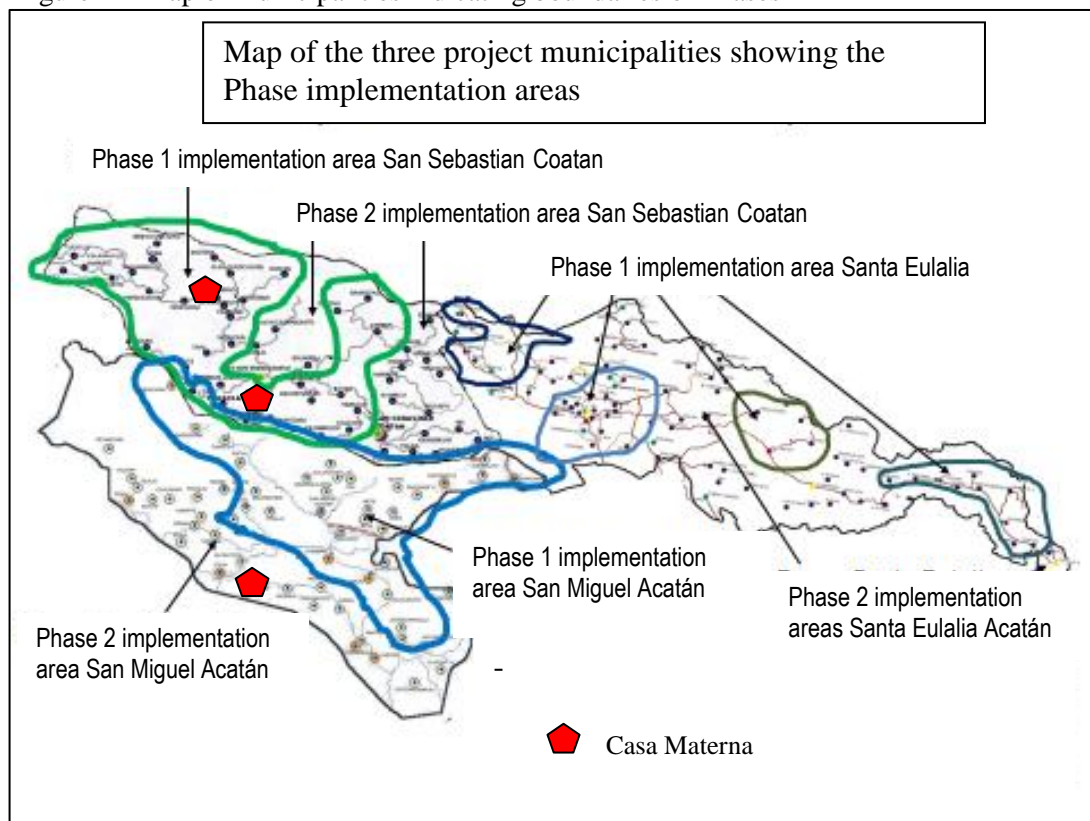
The Baseline and Final KPC surveys thus are key instruments of the project's OR, and consequently the analyses presented in this report will present and compare the baseline and final results for each Phase, rather than for the project as a whole. Baseline and final KPC data for the combined Phases can be found in Appendix F.

The principal intervention strategies of the project included:

(A) Mobilize communities and identify and address beliefs, health practices, and behaviors that impact prevention of morbidity and mortality, access to MCH services, and existing gaps in service distribution, access and quality.

(B) Improve the capacity of local partners, health facilities, and health workers to provide quality, continuum-of-care maternal and child health (MCH) information, options, and services.

(C) Establish emergency response networks to address obstetric, neonatal, and child emergencies.

(D) Increase access to high-impact interventions for pregnant women, new mothers, and under-five children

In addition, there was evidence that past Curamericas Global projects utilizing CBIO and Care Groups resulted in the empowerment of women and of communities, which in turn facilitated improvements in women's, children, and community health. Consequently the project sought to monitor and evaluate indicators for this empowerment, which are included in the list of indicators below (Table 3).

The project interventions (with level of effort) and outcome indicators were:

Table 3 – Project intervention areas (with LOE) and outcome indicators

Maternal and Newborn Care (35% LOE)
Quality Antenatal Care: Percentage of mothers of children age 0-23 months who had four or more antenatal visits with a skilled provider (doctor, nurse, professional midwife)
Tetanus Toxoid: Percentage of mothers with children age 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child
Iron Tablets for Pregnant Women: Percentage of mothers of children age 0-23 months who took iron tablets or syrup for at least 90 days before the birth of their youngest child
Knowledge of Danger Signs during Pregnancy: Percentage of mothers of children 0-23 months who knew at least two danger signs during pregnancy
Skilled Birth Attendant: Percentage of children age 0-23 months whose births were attended by skilled personnel (doctor, nurse, professional midwife)
Essential Newborn Care: Percentage of children age 0-23 who received all three elements of essential newborn care: thermal protection immediately after birth, clean cord care, and immediate and exclusive breastfeeding
Active Management of Third Stage of Labor (ATMSL): Percentage of mothers of children age 0-23 months who received AMTSL during their most recent delivery: uterotonic drug; uterine massage; controlled cord traction
Knowledge of Maternal Danger Signs During Delivery: Percentage of mothers of children 0-23 months who know at least two danger signs during delivery
Post-Partum Visit for the Mother and Newborn: Percentage of mothers of children age 0-23 and children age 0-23 months who received a post-partum visit from an appropriate trained health worker within two days after the birth of the youngest child
Knowledge of Post-partum Danger Signs: Percentage of mothers of children age 0-23 months who knew at least two post-partum danger signs
Knowledge of Neonatal Danger Signs: Percentage of mothers of children age 0-23 who know at least two neonatal danger signs
Vitamin A Supplementation for Mother: Percentage of mothers of children 0-23 months who received Vitamin A supplementation with 2 months post-partum
Knowledge of Risk Associated with Birth to Pregnancy Intervals Less than 24 Months: Percentage of mothers of children 0-23 months who know at least two risks of having a birth to pregnancy interval of less than 24 months
Current Contraceptive Use Among Mothers of Young Children: Percentage of non-pregnant mothers of children age 0-23 months who are using a modern contraceptive method
Breastfeeding and Child Nutrition (30% LOE)
Exclusive breastfeeding (0-5 months): Percent of infants aged 0-5 months who were given breast milk only in the 24 hours preceding survey
Vitamin A Supplementation for Child: Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall
IYCF practice indicator (6-23 months): Percent of infants and young children aged 6-23 months fed according to a minimum of appropriate feeding practices
Underweight: Percentage of children age 0-23 months who are underweight (<2 SD for the median weight for age, according to WHO/NCHS reference population)

Acute Respiratory Infections (15% LOE)
Appropriate Care Seeking for Pneumonia: Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider

Diarrhea Prevention and Case Management (15% LOE)
ORT Use During a Diarrheal Episode: Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution and/or recommended home fluids
Increased fluid intake during a diarrheal episode: Percent of children 0-23 months with diarrhea in the last two weeks who were offered more fluids during the illness
Increased food intake during a diarrheal episode: Percent of children 0-23 months with diarrhea in the last two weeks who were offered the same amount or more food during the illness
Zinc Treatment for Diarrhea: Percent of children 0-23 months with diarrhea in the last two weeks who were treated with zinc supplements
Regular Point of Use Water Treatment: Percentage of households of children age 0-23 months that treat water effectively and regularly
Safe Water Storage: Percent of households that store water safely
Safe Feces Disposal: Percentage of households that disposed of the youngest child's feces safely the last time s/he passed stool
Hand washing at Critical Times: Percent of mothers who wash their hands with soap before food preparation, before feeding children, after defecation, and after attending to a child who has defecated
Appropriate Hand Washing Station: Percentage of mothers of children age 0-23 months who live in households with soap, water, and recipient at a designated place for hand washing

Childhood Immunization (5% LOE)
Measles Immunization: Percentage of children aged 12-23 months who received Measles vaccination by the time of the survey (card verified)
Vaccination Coverage: Percentage of children aged 12-23 months who received all required antigens and doses by the time of the survey- BCG, PENTA1-3, Polio1-3, and Measles (card verified)

Women's Empowerment
Decision-Making re: ARI Treatment: Percentage of ARI episodes in 0-23 months old children in the past two weeks in which either the mother or the mother jointly with another person decided the care-seeking and/or treatment
Decision-Making re: Location of Delivery and Birth Attendant: Percentage of households with children 0-23 months in which either the mother of the mother jointly with another person decided the location and birth attendant of her last delivery
Control of Money for Purchasing Food for Children: Percentage of mothers of children 0-23 months who indicate that they do not need to ask for the money needed to buy the food necessary to meet the minimum acceptable feeding practices for infants and young children
Decision-Making re: Contraception: Percentage of households with children 0-23 months in which either the mother or the mother jointly with her husband/partner (or another person) would practice contraception and, if so, the method to be used
Women's Participation in Community Meetings: Percentage of mothers of 0-23 month old children who report that in the past 3 months they both attended and expressed their opinion at a community meeting

Community Support of Maternal and Child Health
Community OE Response Plan: Percentage of mothers of children 0-23 months old who report that their community has in place an emergency response plan that would provide transport for them and/or their newborn child to the nearest health facility in the event of a difficult delivery or danger signs in pregnancy or during the post-partum period
Care Group Activity: Percentage of mothers of children 0-23 months old who report that in the past month they have either been a Care Group volunteer, participated in a Care Group meeting, or have been instructed by a Care Group member

Community Solidarity
Community Solidarity: Percentage of mothers of 0-23 month old children who report that their community has worked together to solve a community problem or make a community improvement in the past 3 months

Objectives of the Final KPC Survey

The Final KPC Survey was conducted in May/June of 2015. The objectives of the survey were to:

- To collect data in the Curamericas Guatemala project's intervention areas to compare to the Baseline KPC survey conducted in January 2012.
- To collect final data to be utilized in the project's Focused Strategic Assessment, which will combine findings of the project's Operational Research along with elements of a standard final evaluation and contribute to determining the final project's impact and share lessons learned.

- To serve as an instrument to discuss project outcomes and lessons learned with USAID, MSPAS, the municipalities, the communities, and other stakeholders, as well as to motivate community participation/ownership of the accomplishments of the project.

Process and Partnership Building

The Final KPC was designed to be participatory, engaging project staff, stakeholders, partners, and beneficiaries, including Curamericas Guatemala staff, and representatives of local municipalities, partners and community authorities, municipal and departmental representatives of MSPAS as well as target beneficiary families. There is, thus, a sense of local ownership of the KPC process. Core Curamericas Guatamala staff gained experience in evaluation development as several of them also participated in the Baseline survey. As a dynamic process, the inclusion of municipal, community, and MSPAS officials participating and following data collection in remote communities and households was particularly valuable since the findings and results are of the interest and concern of all stakeholders; during interviewers training in preparation to immediate survey field implementation community leaders helped interviewers with oral translation into the indigenous Mayan languages, and in addition, a MSPAS official participated actively together with data entry staff in the Epi Info data management training.

Methods

Survey Design and Strategy

In late 2011 and early 2012, at project start up, a Baseline Knowledge, Practice and Coverage (KPC) Survey was designed and implemented to establish baseline coverage of the project indicators in order to measure change over time in levels of knowledge, key behaviours, and coverage of project activities and health services. It investigated the project indicators listed above. For the end of project Final KPC, the same KPC methodology and instrument were used, so baseline and final results are comparable. The two KPC questionnaires differed only in minor language adjustments of the Final questionnaire to improve comprehension by the interviewees and the addition of two questions: 1) an anthropometry question for determining height (in addition to weight) to determine the end-of-project prevalence of stunting in the target population and 2) a question re: if the interviewee's last delivery involved a C-section, to use as an indicator of complications in pregnancy and delivery.

The pre-implementation phase of the Final KPC involved consultations with external evaluators and both Curamericas Global and Curamericas Guatemala staff in which the sampling strategy and the actual sample were developed and all data needs were assessed. The questionnaire was reviewed and finalized and the logistics, strategy, and training of supervisors and interviewers were planned. The field implementation phase involved the recruitment, selection, and training of the data collectors and the actual collection of data in all selected communities of three municipalities taking in account the geographical and access difficulties to reach all communities and households. The post-implementation phase involved tabulating and analyzing the data using Epi Info 7 and manual data aggregation and disaggregation using MS Excel.

Sampling

The survey used the standard 300-interview stratified cluster sampling technique utilized at baseline:

1) Create 2 sampling frames, one for each Phase, which is a list of all the communities in the Phase and their populations (per the Guatemala National Statistics Institute, INE), plus the cumulative population - the population of the community added to the populations of all the communities that preceded it on the list, with the cumulative population of the last community on the list equal to the total population of the sampling frame.

2. Determine the sampling interval, which is the total population of the sampling frame divided by the number of clusters in each Phase (30). For Phase I, this was 1448; for Phase II, 1592.

3. Randomly select a number between 1 and the sampling interval (in our case, using the dollar bill serial number method).

4. Find the community on the sampling frame for which the cumulative population is less than or equal to the random number. This becomes cluster 1.

5. Add the sampling interval to the randomly selected number in step 3 and find the community in the frame where the cumulative population is equal to or less than that number. This is cluster 2.

6. Continue this process, adding the sampling interval to the previously calculated number and choosing the community for which the cumulative population is equal to or less than the new number generated, until you have 30 clusters for each Phase. Note: large communities may have more than 1 cluster.

7. In each of the 30 clusters do 10 interviews of randomly selected interviewees. 30 x 10 = 300 sample size for each Phase.

The resulting cluster samples for Phases I and II are listed in Appendix E.

The Questionnaire

The questionnaire used was the same as that used for the Baseline KPC Survey, which was thoroughly reviewed and required some minor modifications related to the format and language of some questions to improve comprehension, and with the addition of two questions as described above.

The questionnaire format included, in the following order:

1) Introduction, declaration of confidentiality, and written informed consent of the interviewee (signature or thumb-print)
2) Identifying information of cluster/community/interview/household, interviewer/supervisor, and interviewee/child of interviewee (13 questions)
3) Water and Sanitation Module (12 questions)
4) Demographic Module (5 questions)
5) Breastfeeding, Infant Young Child Feeding, Micronutrient Module (7 questions)
6) Immunization Module (2 questions)
7) Diarrhea Module (4 questions)
8) Respiratory Infections Module (7 questions)
9) Care of Pregnant Woman Module (10 questions)
10) Childbirth and Care of Newborn Module (13 questions) - Here a question was added re: if the delivery involved a C-section
11) Post-Natal Care Module (6 questions)
12) Child Spacing Module (6 questions)
13) Child Weighing/Anthropometry (2 questions) – Here a question to measure height was added.
14) Community Participation and Women's Empowerment (6 questions)
15) Section for written comments/observations by the interviewer

The survey questionnaire was in Guatemalan Spanish, with language reviewed and approved by the Curamericas Guatemala staff who provided online feedback at Skype meetings.

The original Spanish-language Questionnaire can be found in Appendix A.

Selection and Training of Supervisor, Interviews and Tabulators

The Curamericas Guatemala team selected supervisors and interviewers, some from the core staff. Others were external and new to the project and KPC.

Each of the 3 municipalities had an overall municipal supervisor responsible of the KPC data collection in their municipality; under them were 20 field supervisors, roughly a field supervisor for every two interviewers (Table 4). There were 36 interviewers. The field supervisors and interviewers were all female, and were either already on staff or expressly hired for the survey. All spoke the native Mayan language of the municipality in which they would work.

Table 4 - Supervisors and interviewers by municipality

Municipality	No. of Supervisors	No. of Interviewers
San Sebastian Coatán	5	10
San Miguel de Acatán	6	12
Santa Eulalia	9	14
Total	20	36

Main criteria to select Supervisors/Interviewers:

- Professional in social areas, such as auxiliary nurse, primary school teacher, bookkeeper, etc.
- Native (first language) speaker of one of the three local languages (Akateko, Chuj, or Q'anjobal)
- Female
- Some experience in health or education
- Available for the required time period
- Responsible, punctual
- Successful interview with selection committee of Curamericas Guatemala project staff, inquiring their experience with community work and testing their knowledge of the local language.
- Current compatible CV

Training sessions were conducted in Spanish by a Curamericas Global staff, from May 26 -30, 2015 at the Curamericas Guatemala headquarters in Calhuitz, San Sebastian Coatán (see Appendix D). The training included the seven data management support technicians as well as the supervisors and interviewers. Interviewers, supervisors, and data technicians learned the purpose of the project; acquired an understanding of the project indicators and corresponding KPC questions; and learned and practiced both in the workshop and in the field (in communities not included in the sample) proper interviewing and anthropometry techniques (weighing and measuring the lenght of children). The training included workshops in which the interviewers and supervisors – all native speakers of the three Mayan languages involved – reached consensus on the proper translation of interview questions and answer options from Spanish to the Mayan language (Chuj, Akateko, or Q'anjobal). Training included a day in the field where interviewers each conducted 4 or 5 interviews – including weighing and measuring length - observed and evaluated by a supervisor. Supervisors utilized a quality control checklist of these techniques to ensure that the necessary skills were acquired before the interviewers were allowed to begin the actual survey (see Appendix B). Anthropometry skills were assessed for both precision and accuracy. Improvements in translation were made incorporating the field work experience. Training in Epi Info 7.1 and data management was provided to the data entry staff for two days at the Calhuitz office prior to initiating data entry, at the same time while the data entry templates were finished and validated for precise and quick data entry. The data entry templates were tested and adjusted by entering data from the field practice interviews.

Survey Process and Quality Control

Direct observation, quality control as well as review and signed approval of every completed questionnaire were the main responsibilities of supervisors; all questionnaires were reviewed by them for completeness and accuracy and when approved by the field supervisor were packed in envelopes and sent to Calhuitz for further review and data entry by the data technicians before data entry. The tabulating team kept a log of all packets so received and tracked their progress through tabulation, cross-checking, and data entry. Data entry staff reviewed submitted questionnaires for completeness and clarity of responses and if problems were detected, questionnaires were returned to supervisors with written observations and recommendations to complete the data collection.

Interviewing took place during a two-week period, beginning with Santa Eulalia´s communities from 06/03/15-06/06/15, San Miguel Acatán: 06/05/15- 06/12/15 and San Sebastián Coatán: 06/11/15-06/13/15. This schedule enabled the data entry staff to 1) initiate data entry and provide immediate feedback to supervisors to improve quality and standardization of some ambiguous responses found initially and 2) make sure that supervisors verified the clarity and completeness of each questionnaire before sending the packet to the Calhuitz office. Transportation logistics were planned using two project's two 4WD vehicles and twelve motorcycles. Interviews were administered in the local Mayan language and written informed consent (signature or thumbprint) obtained from the interviewees.

Six final Epi Info data files from the data entry staff were checked for final data quality check, compiled and merged into one final Epi Info project file ready for its analysis.

Tabulation, Data Entry, and Quality Control

Epi Info 7.1 data entry templates were developed and tested in six project computers; six data entry personnel previously trained in the use Epi-Info: 1) became familiar with 18 screens for entering data, 2) were able to practice, utilizing questionnaires completed during the field practice of the interviewers, and acquire an adequate timing of about 16 minutes per completed questionnaire and 3) confirmed their skills and accuracy by performing cross checking for quality controls among themselves and through a second quality control check by the Curamericas Guatemala Monitoring and Evaluation Technician.

For tabulation purposes the standard KPC Tabulation Plan was adapted, checking that it was in line to the one used for the Baseline indicators tabulation (See Appendix C).

As packets of 10 questionnaires (representing one cluster) were tabulated, the tabulation for each packet was completely cross-checked by the KPC consultant, then again by the projects' M & E

Technician and finally by another data entry personnel. Errors were carefully tracked, addressed and commented among the data entry team for continuous quality improvement.

Epi Info 7.1 was used to obtain lists, frequencies, and tables that included calculated percentages, means, medians, and ranges for all indicators and demographic data points, as well as confidence intervals/margins of error for each proportional result; Epi Info - Stat Calc was used to obtain p values for significance between Baseline and Final KPC survey indicators data, and between final Phase 1 and Phase 2 data. For calculation of the indicators for underweight and stunting, z-scores were calculated after eliminating outliers (<>6SD) eliminated per WHO analysis protocols. Data tables were also created for the combined Phase 1 and Phase 2 data. The raw data tables are found in Appendix F (combined Phases), Appendix G (disaggregated by Phases), and Appendix H (rapid Catch indicators for the combined Phases).

Results

In order to better understand the results, it is important to consider that the OR structure carried out and the activities performed during the project´s four years were based on the implementation of the project in two Phases, as already explained. For presenting results the following format will be used: 1) "B" indicates Baseline KPC data and "F" Final KPC data. 2) The two numbers following the B or F are the results for Phase 1 and Phase 2, respectively, separated by a slash: B Phase 1 result/Phase 2 result and F Phase 1 result/Phase 2 result.

Demographic Data

Analysis of the demographic data of the Final KPC revealed very few statistically significant differences between the data for Phase I and Phase II in both surveys, both between Baseline and Final KPC, and between Phases, indicating that the two populations are comparable. However, there are a few significant differences which will be noted below.

Table 5 - Age, education, and fecundity- Final KPC

Demographic Data 2015 KPC	PHASE 1			PHASE 2			
Age, Education, Fecundity	Mean	Median	Range		Mean	Median	Range	
Age of Mother	25.7	24	14	46	26.0	24	15	45
Age of Child (in months)(0= less than one month)	10.1	10	0	23	10.4	10	0	23
Years Mother Attended School	3.4	3	0	17	3.4	3	0	13
Number of Deliveries Mother Has Had	3.4	3	1	14	3.6	3	1	14

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Table 5 shows results only of the Final KPC. The mean age of the mothers was B 26.5/26.6 and F 25.7/26.0 years old; the age ranges B 16-44/15-51 and F 14-46/15-45. The mothers averaged B 3.6/3.8 and F 3.4/3.6 deliveries. The mean ages of the children 0-23 months of age who were the co-subjects of the interviews were B10.0/11.1 and F 10.1/10.4 months, respectively. The mean number of years of formal schooling completed by the mothers was B 2.8/2.4 and F 3.4/3.4 years. No statistically significant differences were noted between Phases nor from baseline KPC in either Phase.

Table 6 - Gender of child of interviewees

Indicator	Baseline	Final KPC	Baseline	Final KPC
	Phase 1		Phase 2	
Gender of Child	Pctg. (95% CI)	Pctg. (95% CI)	Pctg. (95% CI)	Pctg. (95% CI)
Male	50.8% (43.9, 57.7)	50.0% (44.2,55.8)	52.7% (45.8, 59.6)	46.7% (40.9, 52.5)
Female	49.2% (42.3, 56.1)	50.0% (44.2, 55.8)	47.3% (40.4, 54.2)	53.3% (47.5, 59.1)

The gender distribution of the children was B 50.8%/52.7% and F 50.0%/46.7% for males, with no statistically significant differences between Phases or Surveys (Table 6).

Table 7 – Languages spoken/preferred by the mother

Indicator	Baseline Phase 1	Final KPC Phase 1	P value Baseline vs Final KPC	Baseline Phase 2	Final KPC Phase 2	P value Baseline vs Final KPC
		PHASE 1			PHASE 2	
Languages Spoken by Mother	Pctg. (95% CI)	Pctg. (95% CI)		Pctg. (95% CI)	Pctg. (95% CI)	
Spanish	18.7% (13.3, 24.1)	44.0% (38.2 ,49.8)	0.000	15.7% (10.7 ,20.7)	37.0% (31.3, 42.7)	0.000
Akateko	21.1% (14.4, 26.8)	34.7% (29.1, 40.3)	0.000	28.7% (22.4, 35.0)	34.0% (27.4, 40.6)	0.100
Chuj	23.4% (17.5, 29.3)	24.7% (19.5, 29.9)	0.395	23.0% (17.2, 28.8)	26.0% (20.7, 31.3)	0.223
Q'anjob'al	57.2% (50.3, 64.1)	43.7% (38.0, 49.4)	0.000	50.3% (43.4, 57.2)	49.0% (43.2, 54.8)	0.403
Language Preferred by Mother						
Spanish	1.7% (-0.1, 3.5)	3.3% (-3.1, 9.7)	0.236	0.3% (-0.5, 1.1)	1.0% (-0.9, 2.9)	0.311
Akateko	20.4% (14.8, 26.0)	33.0% (26.4, 39.6)	0.000	26.3% 20.2, 32.4)	28.3% (22.8, 33.8)	0.323
Chuj	23.1% (17.3, 28.9)	24.0% (18.8, 29.2)	0.432	23.0% (17.2, 28.8)	24.7% (19.5, 29.9)	0.350
Q'anjob'al	56.2% (49.3, 63.1)	40.7% (34.9, 46.5)	0.000	50.3% (43.4, 57.2)	46,7% (40.9, 52.5)	0.207

The language preference of the mothers corresponds with the population distribution of the three municipalities, with the Akateko speakers overwhelmingly from San Miguel Acatán, the Chuj speakers from San Sebastian Coatán, and the Q'anjobal speakers from Santa Eulalia (Table 7). A significant increase was found among mothers who stated that they are able to communicate in Spanish between the two surveys B 18.7%/15.7% and F 44.0%/37.0% (p=0.00).The reason for this dramatic increase must be investigated (see Discussion). None of the mothers reported speaking Mam or other neighboring Mayan languages.

The significant differences found between baseline and final in Akateko speakers in Phase 1, is due to an increase in representation in the sample for clusters/communities from San Miguel de Acatan because of marked population increases in Phase 1 communities of that municipality (per INE) between 2011 and 2015. The significant change in Q'anjobal speakers is primarily to due to the relative increase in the sample/population from San Miguel compared to baseline. The representation of San Sebastian Coatán and its Chuj speakers changed little from baseline to final.

Table 8 – Father/partner living with the mother

Indicator	Baseline	Final KPC	P value Baseline vs Final KPC	Baseline	Final KPC	P value Baseline vs Final KPC
		PHASE 1			PHASE 2	
Father/Partner Living with Mother	Pctg. (95% CI)	Pctg. (95% CI)		Pctg. (95% CI)	Pctg. (95% CI)	
Yes	88.6% (84.2, 93.0)	87.0% (83.4, 90.6)	0.314	89.3% (85.0 ,93.6)	88.7% (85.0, 92.4)	0.448
No	10.7% (6.4, 15.0)	12.7% (8.4, 17.0)	0.464	10.3% (6.1, 14.5)	11.3% (7.6, 15.0)	0.396

No significant differences were found between baseline and surveys in relation to husbands/male partners living with mothers: B 88.6%/89.3% and F 87.0%/88.7% (Table 8).

Table 9 – Mother´s occupation

Indicator	Baseline Phase 1	Final KPC Phase 1	P value Baseline vs Final KPC	Baseline Phase 2	Final KPC Phase 2	P value Baseline vs Final KPC
	PHASE 1			PHASE 2		
Mother's Occupation	Pctg. (95% CI)	Pctg. (95% CI)		Pctg. (95% CI)	Pctg. (95% CI)	
Housewife (no work for wages)	89.0% (84.6, 93.4)	94.3% (92.0, 96.6)	0.012	94.7% (91.6, 97.8)	95.3% (92.7, 97.9)	0.425
Artisan/craft worker in the house	0.7% (-0.4, 1.8)	1.0% (-1.0, 3.0)	0.501	2.7% (0.5, 4.9)	1.7% (0.0, 3.4)	0.288
Small store in the house	5.4% (2.3, 8.5)	3.7% (2.0, 5.4)	0.213	1.0% (-0.4, 2.4)	4.0% (1.6, 6.4)	0.016
Other work from the house	0.7% (-0.4, 1.8)	0.7% (-0.4, 1.8)	0.686	0.0%	0.3% (-0.5, 1.1)	0.000
Agricultural laborer	1.7% (-0.1, 3.5)	2, 3% (-0.1, 4.7)	0.388	0.3% (-0.5, 1.1)	4.3% (1.8, 6.8)	0.002
Food seller	0.7% (-0.4, 1.8)	0.3% (-0.5, 1.1)	0.749	2.7% (0.5, 4.9)	0,0%	0.003
Salesperson in a store	0.3% (-0.5, 1.1)	1,0% (-0.8, 2.8)	0.313	0.3% (-0.5, 1.1)	0,0%	0.500
Domestic employee	2.0% (0.1, 3.9)	1.3% (-1.2, 3.8)	0.373	0.3% (-0.5, 1.1)	0.7% (-0.4, 1.8)	0.500
Salaried worker	0.7% (-0.4, 1.8)	0.7% (-0.4, 1.8)	0.686	0.7% (-0.4, 1.8)	0.7% (-0.4, 1.8)	0.688
Other	0.7% (-0.4, 1.8)	1.0% (-0.8, 2.8)	0.501	0.7% (-0.4, 1.8)	0.3% (-0.5, 1.1)	0.500

The vast majority of the mothers were housewives/mothers who do not work for wages (B 89.0%/ 94.7% and F 94.3%/95.3%); among Phase 1 respondents, we see a small but significant increase in percentage of women who are primarily housewives (Table 9). Among Phase 2 respondents we see small but statistically significant   increases in mothers with small stores in the house and working as agricultural laborers. These changes likely reflect changes in the local economy.

The very minor differences in demographic results between the two surveys and Phases demonstrate population samples with effectively the same characteristics, providing the possibility of fair and adequate comparability.

Maternal and Neonatal Care (LOE 35%)

The final KPC results reveal dramatic and statistically significant increases from Baseline in both Phases in nearly all maternal/newborn health indicators, validating that the project achieved its key objectives in its area of highest level of effort, maternal/newborn care (35% LOE) (Table 10). In addition, final indicator coverages achieved for Phase 1 are significantly higher than for Phase 2.

Antenatal care

Three of the four antenatal care indicators showed significant increases in coverage from Baseline to Final KPC in both Phases: quality antenatal care, iron/folate supplementation, and knowledge of prenatal danger signs: Only tetanus immunizations showed no significant change (Table 10).

Table 10 – Maternal and newborn care

Indicator	Baseline Phase 1	Final KPC Phase 1	p value Baseline vs Final KPC	Baseline Phase 2	Final KPC Phase 2	p value Baseline vs Final KPC	p value- Final Phase 1 vs Final Phase 2
	PHASE 1			PHASE 2			
Antenatal care	Pctg. (95% CI)	Pctg. (95% CI)		Pctg. (95% CI)	Pctg. (95% CI)		
Quality Antenatal Care: Percentage of mothers of children age 0-23 months who had four or more antenatal visits with a skilled provider (doctor, nurse, professional midwife)	13.4% (8.7, 18.1)	65.0% (59.5, 70.5)	0.000	6.3% (2.9, 9.7)	53.3% (47.4, 59.2)	0.000	0.002
Tetanus Toxoid: Percentage of mothers with children age 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child.	63.2% (56.5, 69.9)	67.7% (62.8, 72.6)	0.144	63.0% (56.3, 69.7)	62.3% (56.9, 67.7)	0.466	0.100
Iron Tablets for Pregnant Women: Percentage of mothers of children age 0-23 months who took iron tablets or syrup for at least 90 days before the birth of their youngest child.	21.7% (16.0, 27.4)	64.3% (58.7, 69.9)	0.000	10.0% (5.8, 14.2)	26.3% (20.7, 31.9)	0.000	0.000
Knowledge of Danger Signs during Pregnancy: Percentage of mothers of children 0-23 months who knew at least two danger signs during pregnancy.	22.1% (16.3, 27.9)	78.3% (73.5, 83.1)	0.000	21.3% (15.6, 27.0)	66.3% (60.8, 71.8)	0.000	0.001

Mothers who reported receiving four quality antenatal care checks from a qualified health professional during their most recent pregnancy shows a dramatic and statistically significant increase from Baseline, 13.4%/6.3%, to Final 65.0%/53. Iron supplementation for at least 90 days during the most recent pregnancy shows a significant increase from Baseline in both Phases: B 21.7%/10.0% to F 64.3%/26.3%, three and twofold increases, respectively. However, mothers reporting 2 Tetanus Toxoid vaccinations prior to their most recent childbirth did not show significant changes from Baseline in both Phases: B 63.2%/63.0% and F 67.7%/62.3%.

Also statistically significant was the more than threefold increase of the percentage of mothers who could name at least 2 danger signs of pregnancy, from B 22.1%/21.3% to F 78.3%/66.3%.

Final coverages for quality antenatal care, iron supplementation, and knowledge of danger signs in pregnancy were significantly higher for Phase 1 compared to Phase 2 (Table 10). No significance difference between Phases was noted for tetanus toxoid immunization.

Clean Safe Births

Dramatic and significant increases from Baseline to Final in all but one delivery-related indicators were noted for both Phases (Table 11). The only indicator without a significant improvement was AMTSL for Phase 2.

Table 11 – Clean safe births

Indicator	Baseline Phase 1	Final KPC Phase 1	p value Baseline vs Final KPC	Baseline Phase 2	Final KPC Phase 2	p value Baseline vs Final KPC	p value- Final Phase 1 vs Final Phase 2
	PHASE 1			PHASE 2			
Clean Safe Births	Pctg. (95% CI)	Pctg. (95% CI)		Pctg. (95% CI)	Pctg. (95% CI)		
Skilled Birth Attendant: Percentage of children age 0-23 months whose births were attended by skilled personnel (doctor, nurse, professional midwife)	15.4% (10.4, 20.4)	29.3% (24.1, 34.5)	0.000	6.0% (2.7, 9.3)	13.7% (9.8, 17.6)	0.01	0.000
Birth in Health Facility: Percentage of children age 0-23 months whose births were attended by skilled personnel (doctor, nurse, professional midwife) in a health facility.	16.4% (11.3, 21.5)	28.7% (23.6, 33.8)	0.000	6.7% (3.2, 10.2)	13.0% (9.2, 16.8)	0.013	0.000
Births in home of interviewee attended by comadrona	77.6% (71.8, 83.4)	71.3% (66.0, 76.6)	0.048	85.3% (80.4, 90.2)	71.3% (66.0, 76.6)	0.000	1.000
Essential New born Care: Percentage of children age 0-23 who received all three elements of essential new born care: thermal protection immediately after birth, clean cord care, and immediate and exclusive breastfeeding.	6.0% (2.7, 9.3)	39.0% (33.5, 44.5)	0.000	5.0% (2.0, 8.0)	31.0% (25.8, 36.2)	0.000	0.049
Active Management of Third Stage of Labor (AMTSL): Percentage of children age 0-23 months who received AMTSL during their most recent delivery: uterotonic drug; uterine massage; controlled cord traction.	9.4% (5.4, 13.4)	20.0% (15.5, 24.5)	0.000	7.0% (3.5, 10.5)	11.0% (7.4, 14.6)	0.057	0.000
Knowledge of Maternal Danger Signs During Delivery: Percentage of mothers of children 0-23 months who know at least two danger signs during delivery.	13.4% (8.7, 18.1)	66.3% (61.0, 71.6)	0.000	13.3% (8.6, 18.0)	53.7% (48.1, 59.3)	0.000	0.002
Births by Caesarean Section at health facility: Percentage of pregnant women whose last delivery was by a caesarean section (C-section).	NA	8.7% (5.3, 12.1)	NA	NA	2.3% (0.4, 4.2)	NA	0.000

Deliveries attended by a skilled professional birth attendant (doctor, RN, or auxiliary nurse) show in both Phases a two-fold increase from B 15.4% /6.0% to F 29.3% /13.7%; these are both statistically significant increases. While 16.4% / 6.7% of all deliveries at Baseline occurred in a health facility, at Final survey the percentages had increased to 28.7% /13.0%, a statistically significant almost two-fold increase in each of the Phases.

At Baseline 77.6% / 85.3% of the births occurred in the home of the interviewee, attended by the local *Comadrona* while the Final KPC Survey shows a decrease to 71.3% /71.3%, statistically significant in the two Phases.

The indicator "mothers reporting all three elements of Essential Newborn Care (clean umbilical cord care, thermal protection, and immediate breast feeding)" showed a statistically significant six- fold increase, from B 6.0% /5.0% to F 39.0% /31.0%. Since 28.7% and 13.0% of deliveries were attended by health professionals, this means that 10.2% of the deliveries in Phase 1 and 17.3% in Phase 2 were attended by trained *Comadronas* who provided the 3 ENCs.

The percentage of mothers reporting receiving three elements of AMTSL (controlled cord traction, uterine massage, and uteronic drug) is significantly higher at Final, increasing from B 9.4% /7.0% to F 20.0% /11.0%.

A significant increase from baseline to final is seen in the percentage of mothers who could name 2 danger signs of delivery, from B 13.4% /13.3% to F 63.3% /53.7%; more than four-fold higher.

Births by Cesarean section (investigated only for the Final KPC Survey) were 8.7% of deliveries for Phase 1 and 2.3% for Phase 2. This difference is statistically significant and can be related to the operation of two Casa Maternas in the Phase 1 communities of San Sebastian Coatán, who made 25 referrals of complications in deliveries to the local referral hospital in Huehuetenango during the two years prior to the final KPC survey.

For all delivery-related indicators, final Phase 1 coverages were significantly higher than those for Phase 2.

Post-Partum Care

All but one of the post-partum care indicators show sizeable and significant increases in coverage from Baseline to Final (Table 12).

Table 12 – Post-natal care

Indicator	Baseline Phase 1	Final KPC Phase 1	p value Baseline vs Final KPC	Baseline Phase 2	Final KPC Phase 2	p value Baseline vs Final KPC	p value- Final Phase 1 vs Final Phase 2
	PHASE 1			PHASE 2			
Post- Natal Care	Pctg. (95% CI)	Pctg. (95% CI)		Pctg. (95% CI)	Pctg. (95% CI)		
Post-Partum Visit for the Mother and Newborn: Percentage of mothers of children age 0-23 and children age 0-23 months who received a post-partum visit from an appropriate trained health worker within two days after the birth of the youngest child.	22.4% (16.6, 28.2)	39.0% (33.2, 44.8)	0.000	16.0% (10.9, 21.5)	18.3% (14.0, 22,6)	0.258	0.000
Knowledge of Post-partum Danger Signs: Percentage of mothers of children age 0-23 months who knew at least two post-partum danger signs.	17.1% (11.9, 22.3)	66.3% (60.8, 71.8)	0.000	18.7% (14.3, 25.1)	54.3% (48.5, 60.1)	0.000	0.000
Knowledge of Neonatal Danger Signs: Percentage of mothers of children age 0-23 who know at least two neonatal danger signs.	27.4% (21.2, 33.6)	64.7% (59.2, 70.2)	0.000	29.7% (23.4, 36.0)	58.7% (53.0, 64.4)	0.000	0.035
Vitamin A Supplementation for Mother: Percentage of mothers of children 0-23 months who received vitamin A supplementation within 2 months post-partum	22.1% (16.3, 27.9)	47.7% (41.9, 53.5)	0.000	17.0% (11.8, 22.2)	26.7% (21.6, 31.8)	0.002	0.000

Percentage of mothers of children age 0-23 and children age 0-23 months who received a post-partum visit from an appropriate trained health worker within two days after the birth of the youngest child increased from B 22.4% /16.0% to F 39.0% /18.3%, a significant increase only for Phase 1.

Percentage of mothers of children age 0-23 months who knew at least two post-partum danger signs increased dramatically and significantly in both Phases from B 17.1% /18.7% to F 66.3% /54.3%. Percentage of mothers of children age 0-23 who know at least two neonatal danger signs was twice as high at Final as at Baseline: B 27.4% /29.7% vs. F 64.7% /58.7%; a statistically significant improvement in both Phases.

Mothers who received vitamin A supplementation within 2 months post-partum at Baseline were 22.1% / 17.0% and at Final showed an increase to 47.7% /26.7%; the difference is statistically significant for both Phases. However, it should be noted that the Guatemala Ministry of Health is no longer requiring or monitoring this intervention or its indicators.

Comparing Phase 1 with Phase 2, all final post-partum indicator results are significantly higher for Phase 1 than for Phase 2.

Family Planning

Family Planning indicators show mixed results. The percentage of women understanding of the dangers of short pregnancy intervals of less than 24 months at Baseline was 6.4% /12.0%, increasing dramatically in each Phase to 46.7% /33.7% at Final; the difference is statistically significant for both Phases (Table 13). However, modern contraceptive usage showed little change in both Phases: at Baseline it was 35.8% / 27.0, and at Final 34.0% / 25.0%. This contrasts markedly with the dramatic increase in knowledge about the benefits of longer birth intervals and, therefore, of family planning. Why this knowledge did not result in increased uptake of contraceptive use must be investigated. It should be noted that the MSPAS Extension of Coverage Program was the prime source of contraceptives for women of reproductive age women and the termination of the program may have impeded increased contraceptive use despite increased knowledge of its benefits.

Table 13 – Family Planning

Indicator	Baseline Phase 1	Final KPC Phase 1	p value Baseline vs Final KPC	Baseline Phase 2	Final KPC Phase 2	p value Baseline vs Final KPC	p value- Final Phase 1 vs Final Phase 2
	PHASE 1			PHASE 2			
Family Planning	Pctg. (95% CI)	Pctg. (95% CI)		Pctg. (95% CI)	Pctg. (95% CI)		
Knowledge of Risk Associated with Birth to Pregnancy Intervals Less than 24 Months: Percentage of mothers of children 0-23 months who know at least two risks of having a birth to pregnancy interval of less than 24 months	6.4% (3.0, 9.8)	46.7% (41.1, 52.3)	0.000	12.0% (7.5, 16.5)	33.7% (28.4, 39.0)	0.000	0.000
Current Contraceptive Use Among Mothers of Young Children: Percentage of non-pregnant mothers of children age 0-23 months who are using a modern contraceptive method	35.8% (29.1 ,42.5)	34.0% (28.6, 39.4)	0.354	27.0% (19.8, 32.2)	25.0% (20.1 ,29.9)	0.320	0.000
Short Birth Interval: Percentage of women whose interval between the births of her two youngest children was equal to or less than 24 months	25.1% (18.8, 31.4)	18.7% (14.3, 23.1)	0.035	25.7% (19.6, 31.8)	25.0% (20.1, 29.9)	0.462	0.011

The percentages of births with a short birth interval (<24 months) at Baseline were 25.1% /25.7% and at Final 18.7% / 25.0%, a statistically significant decrease for Phase 1 but no significant change for Phase 2. Considering the lack of increase in contraceptive use shown for Phase 1 communities, the significant decrease achieved in short birth intervals must be investigated. Absence of husbands away in the US or Mexico working is suggested, but there was no change for the combined Phases in the percentage of respondents indicating that their partner/spouse was not living at home (88.6% baseline vs 87.0% final).

Comparing final results of Phase 1 with Phase 2, in Phase 1 we see 1) significantly higher coverage of contraceptive use and of knowledge of the dangers of short birth intervals, and 2) significantly lower incidence of short birth intervals.

Child Nutrition (30% LOE)

Though LOE is 30% and considerable project effort was dedicated to this area, breastfeeding and malnutrition indicators did not show much change from Baseline to Final in both Phases- though there were significant improvements in infant/young child feeding (IYCF) practices in both Phases.

Table 14 – Breastfeeding and child nutrition

Indicator	Baseline Phase 1	Final KPC Phase 1	p value Baseline vs Final KPC	Baseline Phase 2	Final KPC Phase 2	p value Baseline vs Final KPC	p value- Final Phase 1 vs Final Phase 2
	PHASE 1			PHASE 2			
Breastfeeding and Child Nutrition (30% LOE)	Pctg. (95% CI)	Pctg. (95% CI)		Pctg. (95% CI)	Pctg. (95% CI)		
Exclusive breastfeeding (0-5 months): Percentage of infants aged 0-5 months who were given breast milk only in the 24 hours preceding survey	75.0% (63.7, 86.3)	82.0% (74.0, 90.0)	0.173	79.2% (67.7, 90.7)	71.6% (61.8, 81.4)	0.186	0.0004
Vitamin A Supplementation for Child: Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall	79.1% (72.4, 85.8)	74.3% (68.4, 80.2)	0.216	73.7% (66.7, 80.7)	67.1% (60.9, 73.3)	0.078	0.049
IYCF practice indicator (6-23 months): Percentage of infants and young children aged 6-23 months fed according to a minimum of appropriate feeding practices	53.0% (44.8, 61.2)	74.3% (68.4, 80.2)	0.000	56.1% (48.2, 64.0)	65.3% (50.0, 71.6)	0.029	0.026
Underweight: Percentage of children age 0-23 months who are underweight (<2 SD for the median weight for age, according to WHO/NCHS reference population)	16.1% (12.1, 20.8)	20.1% (15.6, 25.1)	0.240	19.7% (15.3, 24.6)	20.1% (15.6, 25.1)	0.918	1.00
Stunting: Percentage of children age 0-23 months who are stunted (<2 SD for the median height for age, according to WHO/NCHS reference population)	ND	39.5% (33.8, 45.3)	NA	ND	51.7% (45.8, 57.5)	NA	0.004

Exclusive breastfeeding (EBF) in the previous 24 hours reported at Baseline was 75.0% /79.2% and at Final was 82.0% /71.6%, showing not much change between Phases and surveys, changes not significant.

Vitamin A supplementation for child decreased from Baseline to Final: 79.1% /73.7% to 74.3%/ 67.1%, but this change was not statistically significant for either Phase. Both Phases have been affected by the MSPAS suspension of the Extension of Coverage Program, which would have affected Vitamin A supplementation for children.

The Infant Young Child Feeding (IYCF) practice indicator showed a sizeable increase from B 53.0% /56.1% to F 74.35 /65.3%; a statistically significant increase for both Phases. However, while at baseline the children weighing less than 2 standard deviations below normal for their WHO reference population by age and gender were B16.1% /19.7%, at Final KPC Survey the percentage was effectively unchanged: F 20.1% /20.1%; no statistical difference, identical final results.

The stunting indicator, which was added for the Final KPC, shows a high prevalence of stunting for both Phases: F 39.5% /51.7%.

Final coverages for EBF, vitamin A supplementation, and IYCF were significantly higher in Phase 1 compared to Phase 2. There was no difference in underweight between the Phases. However, final stunting was significantly lower in Phase 1 than in Phase 2 (p=0.004).

Treatment of Pneumonia/Acute Respiratory Infections (15% LOE)

Table 15 shows that the project was instrumental in lowering the incidence of acute respiratory infections, co-related with dramatic and significant increases in appropriate care-seeking and treatment of children with symptoms of pneumonia/ARI in both Phases.

Table 15 – Pneumonia/Acute respiratory infections

Indicator	Baseline Phase 1	Final KPC Phase 1	p value Baseline vs Final KPC	Baseline Phase 2	Final KPC Phase 2	p value Baseline vs Final KPC	p value- Final Phase 1 vs Final Phase 2
	PHASE 1			PHASE 2			
Pneumonia/Acute Respiratory Infections	Pctg. (95% CI)	Pctg. (95% CI)		Pctg. (95% CI)	Pctg. (95% CI)		
Percentage of children with cough and rapid/difficult breathing in the two weeks previous to the interview.	25.8% (19.7, 31.9)	20.7% (14.6, 26.8)	0.084	26.0% (19.9, 32.1)	19.3% (13.2, 25.4)	0.031	0.559
Appropriate Care Seeking for Pneumonia: Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider	26.0% (14.0, 38.0)	51.6% (39.6, 63.6)	0.001	20.5% (9.5, 31.5)	46.6% (35.6, 57.6)	0.001	0.328

At Baseline, 25.8% /26.0%, or one of four children, had had symptoms of acute respiratory infection (ARI) or pneumonia in the two weeks previous to the interview while at Final this improved to 20.7% /19.3%, or one of five children with ARI symptoms; this is a statistically significant difference for Phase 2.

Of these children, with pneumonia/ARI symptoms, at Baseline only 26.0% /20.5% were taken to a health professional and/or health facility for proper treatment with antibiotics while at Final there is a

twofold increase for both Phases: 51.6% (n=62) / 46.6% (n=58), statistically significant for both Phases.

Comparing the two Phases, at Final KPC there were no significant differences noted between Phases in incidence or treatment of pneumonia/ARI, even though Phase 2 communities had only 2 years of project implementation.

Prevention and Treatment of Diarrhea (15% LOE)

Diarrhea case management indicators show mixed results, with not much change in incidence of this condition, but significant improvements in treatment and management of diarrhea at the household level (Table 16).

Table 16 – Diarrhea case management

Indicator	Baseline Phase 1	Final KPC Phase 1	p value Baseline vs Final KPC	Baseline Phase 2	Final KPC Phase 2	p value Baseline vs Final KPC	p value- Final Phase 1 vs Final Phase 2
		PHASE 1			PHASE 2		
Diarrhea Case Management (10% LOE)	Pctg. (95% CI)	Pctg. (95% CI)		Pctg. (95% CI)	Pctg. (95% CI)		
Percentage of children with diarrhea episode in the two weeks preceding the interview	40.1% (33.3, 46.9)	34.3% (28.9, 39.7)	0.083	39.8% (33.0, 46.6)	39.0% (32.2, 45.8)	0.500	0.097
ORT Use During a Diarrheal Episode: Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution and/or recommended home fluids	28.3% (18.4, 38.2)	40.8% (31.3, 50.3)	0.034	30.5% (20.3, 40.7)	40.2% (31.3, 49.1)	0.078	0.194
Increased fluid intake during a diarrheal episode: Percentage of children 0-23 months with diarrhea in the last two weeks who were offered more fluids during the illness	7.5% (1.7, 13.3)	18.4% (11.0, 25.8)	0.011	7.6% (1.7, 13.5)	16.2% (9.6, 22.8)	0.034	0.157
Increased food intake during a diarrheal episode: Percentage of children 0-23 months with diarrhea in the last two weeks who were offered the same amount or more food during the illness	0.0%	0.0%	0	2.5% (-1.0, 6.0)	5.1% (1.1, 9.1)	0.245	0.010
Zinc Treatment for Diarrhea: Percentage of children 0-23 months with diarrhea in the last two weeks who were treated with zinc supplements	6.7% (1.2, 12.2)	10.7% (4.8, 16.6)	0.203	1.7% (-1.2, 4.6)	10.3% (7.4, 13.2)	0.005	0.193

The percentage of mothers who reported that their child had had a diarrhea episode in the two weeks previous to the interview doesn't show a significant change; at Baseline 40.1% /39.8% were with this condition, and at Final F 34.3% /39.0%, despite improvements in water and sanitation indicators to be noted below. Seasonal factors may be affecting results here (see Limitations, Discussion).

Final results show that the mothers' treatment response to diarrhea using oral rehydration therapy improved markedly in the two Phases, from B 28.3% /30.5% to F 40.8% / 40.2%; this difference is statistically significant for both Phases.

In addition, at baseline only 7.5% /7.6% of children were offered increased fluid intake while at Final F 18.45% / 16.2%; there is a twofold increase, statistically significant in both Phases. However, increased feedings offered to the child to compensate for nutrient loss remained very low; at Baseline 0.0% / 2.5% while at Final only 0.0% / 5.1%, with the change not significant for either Phase.

Use of zinc to shorten and ameliorate diarrhea episodes at Baseline was 6.7% / 1.7% showing at Final KPC Survey 10.7% /10.3%, a significant increase only for Phase 2.
Comparing Final Phase 1 vs Phase 2 results, a significant difference in coverage between Phases is noted only in increased food intake, higher in Phase 2 (though still very low coverage).

Water and Sanitation

As water and sanitation contribute to the magnitude and incidence of diarrheal infection, project indicators show outstanding results and significant improvements in nearly every indicator (Table 17).

Table 17 – Water and sanitation

Indicator	Baseline Phase 1	Final KPC Phase 1	p value Baseline vs Final KPC	Baseline Phase 2	Final KPC Phase 2	p value Baseline vs Final KPC	p value- Final Phase 1 vs Final Phase 2
	PHASE 1			PHASE 2			
Water and Sanitation	Pctg. (95% CI)	Pctg. (95% CI)		Pctg. (95% CI)	Pctg. (95% CI)		
Regular Point of Use Water Treatment: Percentage of households of children age 0-23 months that treat water effectively and regularly	66.6% (60.1, 73.1)	97.7% (96.0, 99.4)	0.000	58.3% (51.5, 65.1)	97.7% (95.9, 99.5)	0.000	1.000
Safe Water Storage: Percentage of households that store water safely	11.7% (7.2, 16.2)	28.0% (22.9, 33.1)	0.000	10.3% (6.1, 14.5)	26.0% (21.0, 31.0)	0.000	0.430
Safe Feces Disposal: Percentage of households that disposed of the youngest child's feces safely the last time s/he passed stool	43.1% (36.2, 50.0)	45.0% (39.4, 50.6)	0.353	38.7% (32.0, 45.4)	52.0% (46.3, 57.7)	0.000	0.05
Appropriate Hand Washing Station: Percentage of mothers of children age 0-23 months who live in households with soap, water, and recipient at a designated place for hand washing *	2.3% (0.2, 4.4)	44.7% (39.1, 50.3)	0.000	2.3% (0.2,4.4)	44.0% (38.4, 49.6)	0.000	0.816
Hand washing at Critical Times: Percentage of mothers who usually wash their hands with soap before food preparation, before feeding children, after defecation, and after attending to a child who has defecated	1.3% (-0.3, 2.9)	34.0% (28.6, 39.4)	0.000	1.7% (-0.1,3.5)	28.7% (18.3, 38.3)	0.000	0.187

The percentage of mothers who reported proper and regular point of use treatment of water at Baseline was 66.6% / 58.3%, and at Final 97.7% / 97.7% a statistically significant increase for both Phases.

While at Baseline safe water storage was found to be 11.7% / 10.3%, at Final a 2.5 times increase is seen in both Phases, 28.0% / 26.0%, with the changes statistically significant in both Phases.

Safe feces disposal from Baseline to Final increased but showed a statistically significant change only for Phase 2: B 43.1% /38.7% to F 45.0 /52.0%.

Mothers reporting having an appropriate hand washing station is showing a huge and statistically significant increase for both Phases, from B 2.3% / 2.3% to F 44.7% / 44.0%. While at Baseline a

very low percentage of mothers reported washing their hands at the four critical times (1.3%/1.7%) at Final the increase of about 30 times is statistically significant for the two Phases (34.0% / 28.7%).

It is important to recognize the large and significant increases in all indicators, with exception of the safe feces disposal in Phase 1. These contribute to family and community health improvement. Both Phases show good final results, especially for Phase 2, with only two years of implementation.

Significant differences between Phases at Final KPC is noted for safe feces disposal, with higher final coverage for Phase 2, despite the briefer intervention.

Childhood Immunization (5% LOE)

Looking at childhood immunization indicators (Table 18), we see that measles vaccination and comprehensive coverage (which includes BCG, 3 doses of PENTA and of polio, and measles), decreased significantly in both Phases from Baseline to Final KPC instead of an expected improvement. This is almost certainly related to the termination in late PY3 of the MSPAS Extension of Coverage Program, which provided immunizations for most of the project beneficiaries.

At Baseline measles vaccination coverage was 79.3% /78.9% while a decrease is seen at Final, to 64.8% /55.5%, a statistically significant decrease for the two Phases. As with the measles vaccination coverage, a decrease is seen in the overall vaccination coverage from B 73.6% / 68.7% to F 56.6% /50.4%, a statistically significant decrease in both Phases.

Table 18 – Childhood immunization

Indicator	Baseline Phase 1	Final KPC Phase 1	p value Baseline vs Final KPC	Baseline Phase 2	Final KPC Phase 2	p value Baseline vs Final KPC	p value-Final Phase 1 vs Final Phase 2
	PHASE 1			PHASE 2			
Childhood Immunization (5% LOE)	Pctg. (95% CI)	Pctg. (95% CI)		Pctg. (95% CI)	Pctg. (95% CI)		
Measles Immunization: Percentage of children aged 12-23 months who received measles vaccination by the time of the survey (card verified).	79.3% (70.5, 88.1)	64.8% (56.4, 73.2)	0.000	78.9% (70.8, 87.0)	55.5% (46.6, 64.4)	0.000	0.035
Vaccination Coverage: Percentage of children aged 12-23 months who received all required antigens and doses by the time of the survey-BCG, PENTA1-3, Polio1-3, and measles (card verified).	73.6% (64.0, 83.2)	56.6% (47.8, 65.4)	0.000	68.7% (59.5, 77.9)	50.4% (41.4, 59.4)	0.000	0.161

Final coverage of measles immunization was significantly higher in Phase 1 than in Phase 2; no significant difference was noted for comprehensive vaccination coverage between Phases.

Women's Empowerment

The women´s empowerment indicators, shown in Table 19, show good progress in areas of women´s decision-making autonomy and community participation, but an unchanged situation in relation to women's control of money in the household. Decision-making autonomy means the woman alone or jointly with her partner made the decision in question.

Decision-making autonomy for treatment of respiratory infections in children increased from B 72.7% / 76.9% to F 74.2% / 89.7%, neither increase significant.

Decision-making autonomy for the location of delivery and birth attendant at Baseline was 68.2% / 71.3% while at Final it was 78.3% / 76.0%, showing an increase in both Phases, though statistically significant only for Phase 1.

Table 19 – Women´s empowerment

Indicator	Baseline Phase 1	Final KPC Phase 1	p value Baseline vs Final KPC	Baseline Phase 2	Final KPC Phase 2	P value Baseline vs Final KPC	p value- Final Phase 1 vs Final Phase 2
	PHASE 1			PHASE 2			
Women's Empowerment	Pctg. (95% CI)	Pctg. (95% CI)		Pctg. (95% CI)	Pctg. (95% CI)		
Decision-Making re: ARI Treatment: Percentage of ARI episodes in 0-23 months old children in the past two weeks in which either the mother or the mother jointly with another person decided the care-seeking and/or treatment	72.7% (60.5, 84.9)	74.2% (63.3, 85.1)	0.500	76.9% (65.4, 88.4)	89.7% (81.9, 97.5)	0.085	0.04
Decision-Making re: Location of Delivery and Birth Attendant: Percentage of households with children 0-23 months in which either the mother of the mother jointly with another person decided the location and birth attendant of her last delivery	68.2% (61.7, 74.7)	78.3% (73.7, 82.9)	0.003	71.3% (65.0, 77.6)	76.0% (71.2, 80.8)	0.114	0.344
Control of Money for Purchasing Food for Children: Percentage of mothers of children 0-23 months who indicate that they do not need to ask for the money needed to buy the food necessary to meet the minimum acceptable feeding practices for infants and young children	12.6% (7.2, 18.0)	11.% (8.1, 15.3)	0.430	11.4% (6.3, 16.5)	7.3% (4.4, 10.2)	0.072	0.094
Decision-Making re: Contraception: Percentage of households with children 0-23 months in which either the mother or the mother jointly with her husband/partner (or another person) would practice contraception and, if so, the method to be used.	56.5% (49.6, 63.4)	84.3% (80.2, 88.4)	0.000	55.7% (48.8, 62.6)	83.0% (78.7, 87.3)	0.000	0.539
Women's Participation in Community Meetings: Percentage of mothers of 0-23 month old children who report that in the past 3 months they both attended and expressed their opinion at a community meeting.	10.0% (5.8, 14.2)	24.3% (19.5, 29.1)	0.000	10.7% (6.4, 15.0)	28.0% (22.9, 33.1)	0.000	0.157

Decision-making autonomy about contraception shows a sizeable and statistically significant increase in both Phases, from Baseline 56.5% /55.7% to Final 84.3% /83.0%.

Controlling the money needed to buy food to adequately feed their children showed a decrease at Final compared to Baseline, from B 12.6% / 11.4% to F 11.7% / 7.3%; differences are not significant.

Mothers who reported attending a community meeting and expressing their opinion at Baseline were 10.0% / 10.7%; by Final, women´s participation increased more than twofold to 24.3% / 28.0%; statistically significant for both Phases.

Significant differences between Phases in final coverage are noted for decision-making autonomy for pneumonia treatment, with higher coverage in Phase 2.1.

Community Support of Maternal and Child Health

Indicators of community support of maternal/child health showed significant improvements, though the community solidarity indicator improved significantly only in Phase 2.

The percentages of mothers who reported that their community had in place an obstetric emergency (OE) response plan at Baseline were 29.4% /37.0% and at Final 44.7% / 52.7%; these are statistically significant increases for both Phases (Table 20).

Table 20 – Community support of maternal and child care

Indicator	Baseline Phase 1	Final KPC Phase 1	p value Baseline vs Final KPC	Baseline Phase 2	Final KPC Phase 2	p value Baseline vs Final KPC	p value- Final Phase 1 vs Final Phase 2
		PHASE 1			PHASE 2		
Community Support of Maternal and Child Health and Community Solidarity	Pctg. (95% CI)	Pctg. (95% CI)		Pctg. (95% CI)	Pctg. (95% CI)		
Community OE Response Plan: Percentage of mothers of children 0-23 months old who report that their community has in place an emergency response plan that would provide transport for them and/or their newborn child to the nearest health facility in the event of a difficult delivery or danger signs in pregnancy or during the post-partum period	29.4% (23.1, 35.7)	44.7% (39.0, 50.4)	0.000	37.0% (30.3, 43.7)	52.7% (46.0, 59.4)	0.000	0.05
Care Group Activity: Percentage of mothers of children 0-23 months old who report that in the past month they have either been a Care Group volunteer, participated in a Care Group meeting, or have been instructed by a Care Group member.	8.4% (4.6, 12.2)	67.7% (62.0, 72.9)	0.000	10.3% (6.1, 14.5)	59.7% (53.9, 65.2)	0.000	0.05
Community Solidarity: Percentage of mothers of 0-23 month old children who report that their community has worked together to solve a community problem or make a community improvement in the past 3 months	13.0% (8.3, 17.7)	11.0% (7.5, 14.5)	0.260	16.0% (12.2, 20.5)	22.7% (18.2, 27.7)	0.024	0.049

Care Group activity or contact in the previous month - mothers who were Care Group Volunteers or participated in Care Group meetings or had contact with a Care Group Volunteer - showed a dramatic and statistically significant increase for both Phases from Baseline 8.4% /10.3% to Final 67.7% /59.7%, an eightfold for Phase 1 and fivefold for Phase 2.

In regard to the community solidarity indicator - mothers reporting that in the past three months the community worked together to solve a community problem- the percentages at Baseline were 13.0% / 16.0% while at Final 11.0% / 22.7%, a non-significant decrease for Phase1 but a statistically significant increase for Phase 2.

Comparing Final community support and solidarity indicators for the Phases, we see a significantly higher coverage in Phase 2 for OE response plan and community solidarity, and significantly higher coverage in Phase 1 for Care Group activity.

Community Health Priorities

The community perception of its main health priorities was determined by asking the mothers what they believed to be their own community's health priorities, with more than one priority able to be mentioned.

For both Phases combined, the most-cited priorities were: 1) diarrhea cited by 56% at Final KPC, much higher compared to the Baseline of 36%, 2) ARI/pneumonia, cited by 46% at Final vs. 23% at Baseline, and, 3) general lack of medical attention (lack of health facilities, medicines, and health providers) cited by 24% at Final vs. 18% at Baseline (Figure 3). Following and in descending order were cited: 4) Fever; 5) Measles; 6) lack of pre- and post-natal care; 7) malnutrition; 8) lack of transportation to health facilities; and 9) lack of clean/safe deliveries.

Figure No. 3 – Perceived community health priorities
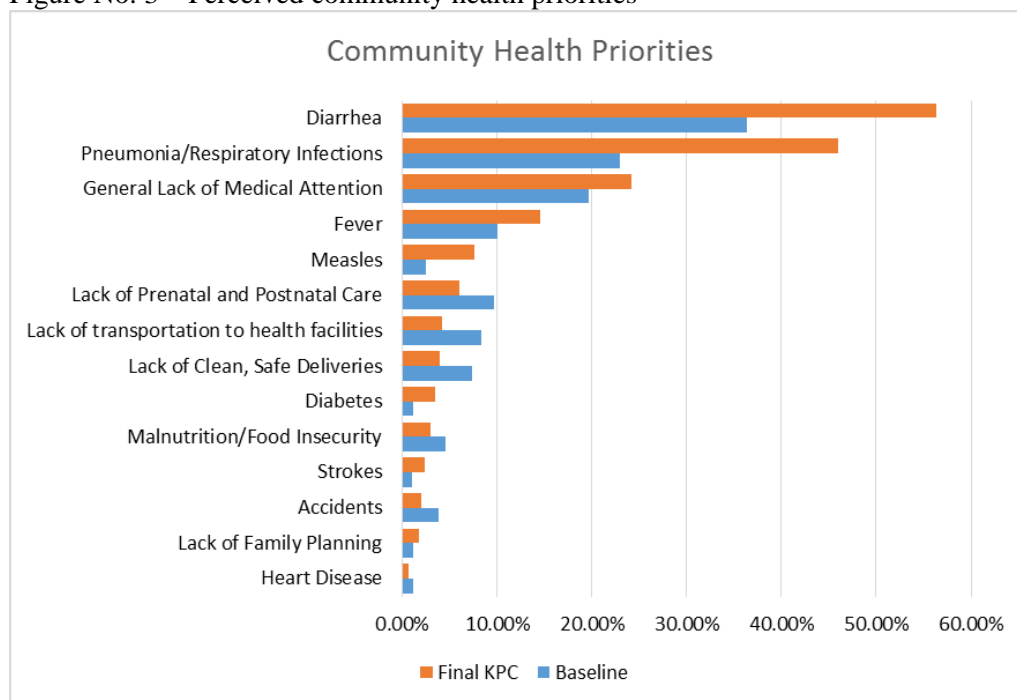
Changes in perception of health priorities by the communities have changed in time, at Final KPC higher prioritization is seen for diarrhea, pneumonia, lack of general medical attention, fever, measles, strokes, diabetes and lack of family planning, and, decreases in perceived prioritization are seen for lack of pre-postnatal care, malnutrition, lack of transportation and lack of safe deliveries than priorities stated at Baseline. Few differences between the perceived priorities were noted between the Phases (Table 21).

Table 21- Perceived Community Health Priorities

COMMUNITY HEALTH PRIORITIES	Baseline Phase 1	Final KPC Phase 1	p value Baseline vs Final KPC		Baseline Phase 2	Final KPC Phase 2	p value Baseline vs Final KPC
	PHASE 1				PHASE 2		
	Pctg.	Pctg.			Pctg.	Pctg.	
Diarrhea	35.8%	59.3%	**0.00**		37.0%	53.3%	**0.00**
Pneumonia/Respiratory Infections	26.1%	49.0%	**0.00**		19.7%	43.0%	**0.00**
General Lack of Medical Attention	21.7%	27.0%	0.07		17.7%	21.3%	0.30
Fever	11.7%	17.0%	**0.04**		8.3%	12.0%	0.18
Measles	2.0%	9.0%	**0.00**		3.0%	6.3%	0.06
Lack of Prenatal and Postnatal Care	8.7%	7.7%	0.66		10.7%	4.3%	**0.01**
Malnutrition/Food Insecurity	5.4%	1.7%	**0.02**		3.7%	4.3%	0.84
Lack of transportation to health facilities	6.7%	4.7%	0.19		10.0%	3.7%	**0.00**
Lack of Clean, Safe Deliveries	6.0%	4.3%	0.36		8.7%	3.7%	**0.02**
Strokes	1.3%	1.0%	0.73		0.7%	3.7%	**0.02**
Diabetes	1.0%	4.3%	**0.02**		1.3%	2.7%	0.38
Accidents	4.3%	1.7%	0.06		3.3%	2.3%	0.62
Lack of Family Planning	1.7%	2.3%	0.77		0.7%	1.3%	0.69
Heart Disease	1.7%	0.3%	0.12		0.7%	1.0%	1.00
Obstetric Emergencies	2.0%	2.0%	1.00		1.7%	0.6%	0.45
Health personnel who do not respect us	1.0%	0.7%	1.00		1.0%	0.0%	0.25
Other	9.7%	17.0%	**0.00**		5.3%	10.0%	0.000

Limitations

1) The large increase in the population of San Miguel Acatán Phase 1 communities from Baseline to Final meant that the proportion of population from that municipality represented in the Final Phase 1 KPC sample was significantly higher than for the Phase 1 Baseline KPC. Conversely, the proportion from Santa Eulalia in Phase 1 was significantly lower for the final KPC than for the Baseline. If results were significantly different in those municipalities compared to the overall Phase, it skews final Phase 1 results and the final Phase 1/Phase 2 comparisons.

2) Project implementation is highly variable from community to community, with some communities refusing or reluctant to participate, while others are highly receptive and cooperative. The random cluster sampling of communities may not have reflected the actual proportion of cooperative communities, thus skewing the results.

3) Most of the interviewers were newly trained and despite the rigorous supervision and quality control efforts, may have lacked the skills to do adequate interviewing and/or anthropometric measurements.

4) There are seasonal differences in disease incidence in the area, with pneumonia more prevalent during the dry/cold season (Dec-March), when the Baseline KPC was done, and diarrhea more prevalent during the rainy season (June-October), when the final KPC was done. This could have skewed the results with respect to incidence and treatment of these diseases as well as underweight, with diarrhea tending to provoke more underweight due to fluid and nutrient loss.

Discussion and Conclusions

The health system in Guatemala is still weak in rural areas. The main challenge faced by the Curamericas project was related to successful coverage of evidence-based effective health interventions to contribute to mothers and children´s improvement of their health. The final KPC evidence shows that Curamericas Guatemala through the implementation of the CBIO+Care Group methodology and community-based structures such as Care Groups and "Casa Maternas" made a step forward in strengthening the rural health system, demonstrating the feasibility to provide effective, cost-efficient primary health care with quality to rural low-income people, in the context of the Guatemalan indigenous population, with real participation of the civil society, communities and families. This experience has the potential to be sustained and scaled up at the national and even to international levels if recognized and included into the Guatemalan Health System, this experience can also contribute to global health learning.

The most dramatic and consistent improvements were noted in the significantly increased coverage of maternal/neonatal care indicators, which correlates with the project's success in dramatically lowering maternal mortality in Phase 1 communities. The project also has significantly increased the health knowledge of mothers and stimulated significant behavior changes that were related to Care Group participation, such as knowledge of danger signs in pregnancy, delivery, post-partum; proper treatment of ARI and diarrhea; proper infant/young child feeding practices; and particularly in the area of water and sanitation, such as hand-washing at critical times..

Indicators related to the effect of the loss of the MSPAS Extension of Coverage program - such as immunizations, vitamin A supplementation of children, and contraceptive use - did not show expected improvements since they depended heavily on this program.

Further investigation is required in relation to the causes and effects of the increase of Spanish-speaking mothers; the impact of the Casa Maternas; the contribution of the Care Groups; the disconnect between significantly improved complementary feeding practices and unchanged prevalence of underweight; the disconnect between increased knowledge of the benefits of family planning and increased female decision-making autonomy with respect to contraceptive use, and the lack of change in the use of contraceptives; and the factors affecting women´s control of money, women's decision-making autonomy, and communities´ solidarity.

Curamericas Guatemala and the MSPAS and other key stakeholders should disseminate the results of the project through testimonials, videos and success histories, which will reinforce the efforts to disseminate the project's results, and find a way to sustainability of "Casa Maternas" and the overall project strategy.

Recommendations

Explore the way to gain sustainability, including MSPAS support, and the support of other stakeholders that continue working in the area.

Prepare a document of lessons learned to disseminate successful key interventions and innovations. Discuss with MSPAS and with regional health authorities, using the results of the Child Survival project final evaluation, how to apply these lessons learned and replicate successful project innovations such as the community based methodologies and Casa Maternas, and convert the best-proved interventions into public policy.

Plan further research activities and corresponding interventions to address specific challenges, such as decreasing child malnutrition and increasing use of family planning.

References

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2 National Statistics Institute, cited in   Cifras para el Desarrollo Humano, PNUD Guatemala, 2011

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5 Informe nacional de desarrollo humano 2009/2010, PNUD 2010:45

6 Ministerio de Salud y Pública y Asistencia Social Guatemala, Segeplan / MSPAS Estudio Nacional de Mortalidad Materna Guatemala, Serviprensa, noviembre de 2011

7 Curamericas Guatemals DIP document 2011,

8 Guatemala MPHSW/SIAS. 2010-11. Epidemiological Surveillance Basic Indicators of Health Situational Analysis.

9 Estimated 2015 population is based on Project´s Vital Events registries

CURAMERICAS GUATEMALA
PROYECTO SUPERVIVENCIA INFANTIL
Huehuetenango, Guatemala
CUESTIONARIO
Encuesta Familiar Dirigida a Madres con Hijos 0 a 23 Meses
Conocimientos, Prácticas y Coberturas sobre el Cuidado de los Niños Entre 0 y 23 Meses

a. Verificar las edades de los niños en la casa. Si hay un niño 0 a 23 meses, use este cuestionario. Si no hay niños de 0 a 23 meses, pase a la próxima casa. Si hay más de un niño 0 a 23 meses, seleccione uno al azar (usar una moneda).
b. Si la madre de este niño está en casa:
   ➢ Pasar el consentimiento para explicar el propósito de la encuesta y continuar con la encuesta.
c. Si la madre no está en casa, proceda 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 el municipio. Su participación de más o menos 45 minutos puede ayudarnos y a su comunidad, y todo lo usted me diga será confidencial. Tiene el derecho para no participar en la encuesta. ¿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 casa**

Firma (o huella digital) de la madre o encuestada: _____

Fecha:_____/_____/_____

Datos de la vivienda: _____ _____ _____
                        Sector   No. vivienda Barrio   Cantón ó caserío

IDENTIFICACIÓN	
1. NÚMERO DE FASE (01 o 02)	---------- ------------
2. NÚMERO DE AGRUPAMIENTO (COMUNIDAD) (01 hasta 30)	---------- ------------
3. NÚMERO DE ENTREVISTA (01 hasta 10)	---------- ------------

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	____ ____ ____ ____

No.		Codificación	
9.	¿Cuantos años ha cumplido usted?	_____años	
10.	Nombre del niño seleccionado para la entrevista **(SI TIENE MÁS DE UN NIÑO EN ESTE 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 **(Use 0 si el niño no ha cumplido un mes. Si la madre no recuerda la fecha de nacimiento, use <u>el calendario de eventos</u> para determinar la edad en meses)**	_____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 todo documento (tarjetas/carnets/hojas/fichas de salud) que tenga de (NOMBRE DEL NIÑO) -- vacunación, control de citas, crecimiento/peso, entrega de alimentos — y las que corresponden 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.	¿Tiene su casa un lugar específico para lavarse las manos?	**A.** Sí **B**. No--→	**#16**
15.	Dígale que le muestre el lugar dedicado para lavarse las manos. Averiguar si haya las tres cosas siguiente: agua, jabón/ceniza/otro producto de limpieza, y un recipiente para el agua	**A**. Agua (recipiente o llave)………... Sí No **B**. Jabón, ceniza u otro producto de limpieza…………………..……… Sí No **C**. Recipiente (balde/palangana)…… Sí No	

No.	Preguntas	Codificación	Saltos
16.	¿Con que se lavan las manos?	**A.** Con agua solamente ------------------------------→ **B**. Con agua y jabón o con ceniza, u otro producto de limpieza **C** Otro --→ (ESPECIFICAR:_____)	**#18** **#18**
17.	Si la respuesta es con jabón o ceniza: ¿en qué momentos se lava las manos con jabón o ceniza? **No lea las opciones- solamente marque todos los momentos mencionados**.	**(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 **X**. Otro_____	
18.	¿Hace usted el tratamiento de agua para que el agua sea potable (segura para tomar)?	**A.** SÍ **B.** NO---→	 **#21**
19.	¿Qué hace usted usualmente para tratar el agua? **Chequear más de un método solamente si se usan juntos (por ejemplo, colar por tela y cloro)**	**A**. Dejar asentarse (que caigan los sedimentos) **B.** Colar con tela **C**. Hervir **D**. Echar cloro **E**. Filtrar (filtro cerámico, arena, compósito) **F**. Desinfección solar **G**. Otro_____ (Especificar) **X**. No sabe	
20.	¿Cuándo fue la última vez que usted trató el agua con este método?	**A**. Hoy **B**. Ayer **C.** Hace más de un día/menos de una semana **D**. Hace una semana/menos de un mes **E**. Hace un mes o más de un mes **X.** No recuerda	

No.	Preguntas	Codificación	Saltos
21.	¿La última vez que [**NOMBRE DE NIÑO**] hizo popo, en dónde echó usted el popo? **[Si la respuesta es " limpió con agua", preguntar específicamente a dónde fue botada el agua sucia].** **Si la respuesta es "botó el popo", preguntar a dónde específicamente fue botada el popo]**	**A.** Botó el popo en el servicio sanitario o letrina Botó el agua sucia: **B**. El agua sucia fue botada en el servicio sanitario o la letrina **C.** El agua sucia fue botada en un lavadero conectado a un sistema de drenaje **D.** El agua sucia fue botada afuera Botó el popo: **E**. En la basura o en un basurero **F**. En alguna parte en el patio **G**. En alguna parte afuera de la casa **H.** Enterró el popo **I.** Nada/dejó el popo donde estaba **J.** Otro _____ (Especificar) **X.** No sabe	
22.	¿Cómo guarda usted el agua potable?	**A.** En recipientes (balde, botella, olla, jarra, barril etc.) **B.** Tanque en el techo o cisterna----------------------→ **C**. Ningún agua guardada------------------------------→	**#26** **#26**
23.	Si la respuesta es "A" (en recipientes), ¿puedo ver los recipientes?	**A.** Sí **B.** No--→	**#26**
24.	¿Cuáles son los tipos de recipientes? **Observar e indicar los tipos que existen.** **"Boca estrecha" significa una abertura de no más de <u>3 centímetros.</u>**	**A.** Con boca estrecha **B**. Con boca ancha **C.** De ambos tipos	
25.	¿Los recipientes están cubiertos? **Observar e indicar.**	**A.** Todos lo están **B.** Algunos lo están **C.** Ningún lo está	

INFORMACION SOBRE LA ENTREVISTADA Y EL HOGAR

No.	Preguntas	Codificación	Saltos
26.	¿Por cuantos años asistió a clases? **(Si nunca estudió, marcar 0)**	Años de educación cumplidos _____	
27.	¿Cuales idiomas habla usted?	**(Puede marcar varias opciones)** **A.** Español **B.** Akateko **C.** Chuj **D.** Mam **E**. Q'anjob'al **F.** Otro_____	
28.	¿En cuál idioma es <u>más</u> cómodo/fácil para expresarse/comunicar con otros?	**(Marcar sola una opción)** **A.** Español **B.** Akateko **C.** Chuj **D.** Mam **E**. Q'anjob'al **F.** Otro_____	
29.	¿El padre de **[NOMBRE DEL NIÑO]** vive en esta casa?	**A.** Sí **B.** No **X**. No sabe	
30.	¿A qué se dedica usted?	**(Puede marcar varias opciones)** **A.** Ama de casa (no trabaja para ganar dinero) **Trabaja en la casa:** **B.** Artesana en la casa **C.** Tienda en la casa **D.** Otro_____ **Trabaja afuera de la casa:** **E.** Obrera agrícola **F.** Vende comida **G.** Trabaja en una tienda/vendedora **H.** Empleada doméstica **I.** Trabajadora asalariada **J**. Otro_____	

MODULO 2: LACTANCIA MATERNA, ALIMENTACIÓN Y MICRONUTRIENTES

No.	Preguntas	Codificación			Saltos
31.	¿Actualmente le está dando pecho a **[NOMBRE DEL NIÑO]**?	**A.** Sí **B.** No			
32.	Quisiera preguntarle acerca de los líquidos y la comida qué **[NOMBRE DE NIÑO]** tomó y comió ayer en el día y en la noche. ¿Tomó o comió [**NOMBRE DE NIÑO**]?: **(Lea la lista de líquidos y comidas, A hasta F).**	**Leer la opción y marcar con X lo que afirma la madre**			
			SI	**NO**	
		A Leche materna			
		B Agua			
		C Leche de bote			
		D Comida comercial complementada por vitaminas/ nutrientes			
		E Cereales u otra comida colada/puré/machacada			
		F Alguna otra comida			
		X No sabe/No recuerda			
	Refierase a la pregunta #13 arriba. *¿El niño tiene 0-5 meses de edad?*	**A.** Si --------------------------------------→ **B.** No			**#38**

No.	Preguntas	Codificación		Saltos
33.	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.	**Leer la comida y marcar con "X" lo que afirma la madre**		

			SI	NO
A	Leche materna			
B	Leche (enlatada, o en polvo, o leche fresca del animal)			
	Productos lácteos- Requesón, crema, queso, yogur.			
C	Café o té			
	Agüitas claras/refrescos			
D	Algo con tomates o pasta de tomates			
	Frutas amarillas (ej. mango, papaya)			
	Comida naranja o amarilla adentro, tal como calabaza, camote amarillo, zanahoria, güicoy, güisquil			
E	Granos (maíz, tortilla, arroz, fideos, avena, mosh, pan, pasta, incaparina, pinolillo, cebada)			
	Comida hecha con tubérculos (papa, yuca, malanga)			
F	Hojas verdes (hoja de rábano, quilete, hierba buena, cilantro)			
G	Otras frutas (manzana, banano, aguacate, durazno)			
H	Carnes (pescado, pollo, res, oveja)			
I	Huevos			
J	Leguminosas (frijoles, lentejas, maní o soya)			
K	Comida hecha con aceite, manteca, mantequilla			
Q	Cualquier otro alimento que no mencioné			
R	Sal **CON YODO** (VERIFICAR)			
S	Otro (ESPECIFICAR):			

No.	Preguntas	Codificación	Saltos
34.	¿Cuántas veces [**NOMBRE DEL NIÑO**] comió ayer en el día y en la noche? (Comida sólida, o comida blanda/semi-sólida. **No se incluyen ningún líquidos, ni leche materna**) Queremos saber cuántas veces comió el niño **hasta sentirse satisfecho**. No incluyendo refacciones pequeñas, o meriendas tales como uno o dos bocados de comida. Se incluyen comida puré/machacada, sopas con carne/legumbres/tubérculos, frutas, verduras. No se incluyen sopas livianas/ claras, ni ningún líquido, ni leche materna**.** **Haga preguntas para ayudar a la madre a recordar todas las veces que comió el niño ayer.**	**A**. _____veces (Si la respuesta es 7 o más de 7, entra "7") **X**. No sabe/no recuerda	
35.	Cuándo necesita comprar comida para [**NOMBRE DEL NIÑO**], ¿usted tiene que pedir le dinero a su marido/pareja?	**A**. Sí **B**. No **X**. No sabe	
36.	¿Ha recibido [**NOMBRE DEL NIÑO**] vitamina A durante los últimos 6 meses? **(mostrar cápsula)**	**A**. Sí **B**. No **X**. No sabe/No recuerda	
37.	¿Tiene tarjeta donde está anotado los datos de vitamina A de [**NOMBRE DEL NIÑO**]? **(Buscar en las tarjetas que tiene la madre.)** **¿Fecha de la última dosis es menos de 6 meses antes de la entrevista?**	**A**. Sí B. No Fecha de la última dosis: _____/_____/_____ **A**. Si **B**. No	
	Refiérase a la pregunta #13 arriba. El niño tiene 12-23 meses de edad?	**A.** Sí ----------------------------→ **B.** No----------------------------→	**#38** **#40**

47

MODULO 4A: VACUNACIÓN

No.	Preguntas	Codificación	Saltos
38.	¿Tiene una ficha del **[NOMBRE DEL NIÑO]** donde está información sobre las vacunas?	**A.** Sí **B.** Carnet no está disponible/perdido---→ **C.** Nunca tuvo carnet ----------------------→	**#40** **#40**
39.	Indica "si" o "no" el niño recibió la vacuna de acuerdo con el carnet.	<table><tr><td></td><td></td><td>Si</td><td>No</td></tr><tr><td>A.</td><td>BCG</td><td></td><td></td></tr><tr><td>B.</td><td>VPO/Polio Primera Dosis</td><td></td><td></td></tr><tr><td>C.</td><td>VPO/Polio Segunda Dosis</td><td></td><td></td></tr><tr><td>D.</td><td>VPO/Polio Tercera Dosis</td><td></td><td></td></tr><tr><td>E.</td><td>PENTA Primera Dosis</td><td></td><td></td></tr><tr><td>F.</td><td>PENTA Segunda Dosis</td><td></td><td></td></tr><tr><td>G.</td><td>PENTA Tercera Dosis</td><td></td><td></td></tr><tr><td>H.</td><td>SPR/Tres Viral</td><td></td><td></td></tr></table> OTRO _____ especificar	

MODULO 4C: DIARREA

No.	Preguntas	Codificación	Saltos
40.	¿Ha tenido diarrea durante las últimas dos semanas [**NOMBRE DEL NIÑO**]?	**A**. Sí **B.** No ------------------------------ → **C.** No sabe ------------------------------ →	**#44** **#44**
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.** Píldora o jarabe **con cinc** **E.** Píldora o jarabe sin cinc **F.** Inyección **G.** Suero (en vena) **H**. Remedio casero/hierbas con mucho agua **I.** Remedio casero/hierbas con poco agua Otro_____	
42.	¿Cuando [**NOMBRE DEL NIÑO**] estuvo con diarrea, le dio menos, igual o mayor cantidad de líquidos (incluyendo leche materna) de lo acostumbrado?	**A.** Menos de lo acostumbrado **B**. Igual a lo acostumbrado **C.** Más de lo acostumbrado **D.** No le dio líquidos **X.** No sabe	
43.	¿Cuando estuvo [**NOMBRE DEL NIÑO**] con diarrea, le dio menos, igual o mayor cantidad de comida/alimentos de lo acostumbrado?	**A.** Menos de lo acostumbrado **B**. Igual a lo acostumbrado **C.** Más de lo acostumbrado **D.** No le dio comida/alimentos **X**. No sabe	

MODULO 4D: INFECCIONES RESPIRATORIAS AGUDAS

No.	Preguntas	Codificación	Saltos
44.	¿Ha tenido [**NOMBRE DEL NIÑO**] una enfermedad con tos durante las últimas dos semanas?	**A**. Sí **B**. No --------------------------------- → **X**. No sabe---------------------------- →	**#51** **#51**
45.	Cuando [**NOMBRE DEL NIÑO**] estuvo con tos ¿también tuvo dificultad para respirar o estuvo respirando más rápidamente de lo normal?	**A**. Sí **B**. No --------------------------------- → **X**. No sabe --------------------------- →	**#51** **#51**
46.	Cuando [**NOMBRE DEL NIÑO**] estuvo con tos y la respiración dificultosa o rápida, ¿buscó ayuda o su tratamiento?	**A**. Sí **B**. No --------------------------------- →	**#50**
47.	¿A quién acudió para consejos y tratamiento para la tos con respiración rápida/dificultosa de [**NOMBRE DEL NIÑO**]?	**a.** Doctor **b.** Enfermera **c.** Auxiliar de enfermería **d.** Partera/Comadrona **e.** F.C./Promotor de salud **X**. Otro _____ **Z.** Nadie ------------------------→	**#50**
48.	¿A los cuántos días de la aparición de la tos con respiración rápida/dificultosa buscó ayuda?	**A**. El mismo día **B**. El día siguiente **C**. Dos días siguientes **D**. Tres o más días después **X**. No sabe/no recuerda	
49.	¿Cuales remedios/medicinas le dio a [**NOMBRE DEL NIÑO**]?	**(Puede marcar varias opciones)** **a.** Ningún remedio **b.** Aspirina **c.** Panadol **d.** Antibiótico **X.** Otro **Z.** No sabe (preguntar si tiene el frasco)	
50.	Cuándo [**NOMBRE DEL NIÑO**] estuvo con tos y la respiración dificultosa o rápida, ¿quién tomó la decisión final de buscar ayuda o su tratamiento?	**A**. La madre **B**. La madre con su marido/pareja **C**. La madre con otra persona **D**. El marido/pareja **E**. Otra persona	

MODULO 5A. CUIDADOS DE LA MUJER GESTANTE

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

No.	Preguntas	Codificación	Saltos
51.	¿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 **C**. Auxiliar de enfermería **D**. Partera/comadrona **E**. F.C./Promotor de Salud **F**. Otro_____ **G**. Nadie----------------------------- →	 **#53**
52.	¿Cuántos controles le hicieron durante su último embarazo?	_____ controles	
53.	Durante su último embarazo o antes de quedar embarazada de [**NOMBRE DEL NIÑO**], ¿recibió usted una inyección en el brazo (DT/TD/tétano toxoide/TT) para prevenir el tétano (convulsiones) en el bebe?	**A**. Sí **B**. No----------------------------→ **X**. No sabe---------------------→	 **#55** **#55**
54.	¿Cuántas inyecciones para prevenir el tétano recibió usted?	_____inyecciones	
55.	¿Tiene usted un carnet del último embarazo? **Anote número de controles que se hizo durante el embarazo de [NOMBRE DEL NIÑO].**	**A**. Sí, encuestador lo vio _____ controles **B**. No lo tiene disponible------→ **C**. Nunca tuvo carnet----------→	 **#57** **#57**
56.	**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.	Preguntas	Codificación	Saltos
57.	¿Qué problemas o señas de peligro durante el embarazo harían que usted buscara ayuda urgentemente con el personal de salud? **(No leer la lista)** La madre mencionó al menos 2 señas a-k	(*Puede marcar varias opciones*) **a.** Hemorragia vaginal **b.** Dificultad para respirar/falta de aire **c.** Fiebre **d.** Dolor abdominal fuerte **e.** Dolor de cabeza/vista nublada **f.** Convulsiones/ataques **g.** Flujo con mal olor por la vagina **h.** El bebe ya no se mueve **i.** Flujo de color café o verde por la vagina **j.** Hinchazón de los pies, cara, cuerpo **k.** Se rompió la fuente **X**. Otro_____ **Z.** No sabe	
58.	Durante su último embarazo, ¿usted recibió o compró tabletas o jarabe de hierro? *(mostrar tableta/jarabe de hierro)*	**A.** Sí **B**. No-----------------------------→ **X**. No sabe-----------------------→	**#60** **#60**
59.	¿Por cuánto tiempo tomó las tabletas o jarabe de hierro? **(Marcar una sola opción)**	_____ días _____ semanas _____ meses _____ No recuerda	

MODULO 5B: PARTO Y CUIDADO DEL RECIÉN NACIDO

No.	Preguntas	Codificación	Saltos

60.	¿Dónde fue atendido el parto de [**NOMBRE DEL NIÑO**]? .	**A**. Casa de entrevistada
		B. Casa de otra persona
		C. Hospital
		D. Centro de Salud
		E. Clínica Privada
		F. Casa Materna
		  a. Calhuitz
		  b. Casa Materna Santo Domingo
		  c. Casa Materna Tuxlaj
		  d. Casa Materna Pett
		G. Puesto de Salud
		H. Otra entidad medica _____
		
		I. Otro _____
		X. No sabe/no recuerda	

61.	Si fue atendida en hospital o clínica privada el parto de [**NOMBRE DEL NIÑO**] fue:	**A. Parto Normal** **B. Cesarea**	
62.	¿Quién le atendió durante su último parto? **No leer las opciones**	**(Puede marcar varias opciones)** **A.**. Doctor **B**. Enfermera Profesional **C**. Auxiliar de enfermería **D.**Comadrona tradicional capacitada **E.** Promotor de salud **F.** Comadrona tradicional no capacitada **X** Otro _____ **Z.** Nadie	
63.	¿Quién tomó la decisión final del lugar de su último parto y de quién le atendió?	**A**. La madre **B**. La madre con su marido/pareja **C**. La madre con otra persona **D.** El marido/pareja **E**. Otra persona **X**. No sabe/no recuerda	
64.	¿Qué instrumento se usó para cortar el cordón umbilical? **No leer las opciones**	**A.** Hoja de afeitar nueva **B.** Hoja de afeitar nueva y hervida **C.** Hoja de afeitar usada **D.** Hoja de afeitar usada y hervida **E.** Tijeras nuevas **F.** Tijeras nuevas y hervidas **G.** Tijeras usadas **H.** Tijeras usadas y hervidas **I.** Navaja/cuchillo **J.** Otro_____ (Especificar) **X**. No sabe/no recuerda	

No.	Preguntas	Codificación	Saltos
65.	Después que cortaron el cordón umbilical de (**NOMBRE DEL NIÑO**) ¿qué le pusieron para prevenir que este no se infectara?	**A.** Nada **B**. Antiséptico **C.** Cenizas **D.** Otro _____ (Especificar) **X**. No sabe/No recuerda	
66.	Inmediatamente después del parto, y antes de que saliera la placenta, ¿[**NOMBRE DE NIÑO**] fue secado y envuelto en una tela o manta tibia? **Marque "A. Si" solamente si ambos actos – secar y envolver- se hicieron.**	**A.** SI (secado **y** envuelto) **B.** NO **X.** No sabe/No recuerda	
67.	Después del parto, ¿en qué momento le dio de mamar [**NOMBRE DEL NIÑO**]?	**A**. Inmediatamente/dentro de la primera hora **B.** Después de la primera hora **X**. No recuerda o nunca le dio de mamar	

No.	Preguntas	Codificación	Saltos
68.	Inmediatamente después de que [**NOMBRE DE NIÑO**] naciera, y antes de que saliera la placenta, ¿le aplicaron a usted una inyección para prevenir la hemorragia excesiva?	**A.** SI **B.** NO **X.** No sabe/No recuerda	
69.	La persona que la atendió durante el parto, ¿sujetó su abdomen y sostuvo el cordón para que saliera la placenta?	**A.** SI **B.** NO **X.** No sabe/No recuerda	
70.	Inmediatamente después de la salida de la placenta, ¿alguién le masajeó el útero para que este se contrajera y así prevenir la hemorragia excesiva?	**A.** SI **B.** NO **X.** No sabe/No recuerda	

No.	Preguntas	Codificación	Saltos
71.	¿Qué problemas o señas de peligro durante el parto harían que usted buscara ayuda urgentemente con el personal de salud? **No lea las opciones – solamente marque las que ella mencionó**. La madre mencionó al menos 2 señales A-G	**A**. Convulsiones **B**. Fiebre **C**. Hemorragia abundante **D**. Respiración rápida/dificultosa **E**. Placenta que no sale **F**. Dolor fuerte de cabeza/vista nublada **G**. Parto muy demorado **H**. Otro_____ **X**. No sabe **Y**. Si **Z**. No	
72.	Por si acaso hay señas de peligro durante el parto o durante el mes después del parto, o si el recién nacido está enfermo, ¿tiene la comunidad un plan para llevar a la madre y/o niño/a lo más pronto posible al hospital o centro de salud más próximo?	**A.** SI **B.** NO **X.** No sabe/No recuerda	

MODULO 5C: CUIDADOS POST-NATALES

No.	Preguntas	Codificación	Saltos
73.	Después del parto de **[NOMBRE DEL NIÑO]**, ¿alguien le chequeo la salud de usted **y** de [**NOMBRE DEL NIÑO**]?	**A**. Sí **B**. No ------------------------------→ **X**. No sabe/no recuerda------------→	**#75** **#75**
74.	Después del nacimiento de [**NOMBRE DEL NIÑO**], ¿al cuánto tiempo le hicieron el primer chequeo de usted y de [**NOMBRE DEL NIÑO**]?	**A**. Dentro de los primeros 2 días **B**. Después de los primeros 2 días **X**. No sabe/no recuerda	
75.	¿Quién hizo el chequeo post-natal a usted y a [**NOMBRE DEL NIÑO**]? ¿ALGUIEN MÁS LES VIO? **Indague para descubrir persona más calificada, no lea las opciones.**	**A**. Doctor **B**. Enfermera **C**. Auxiliar de enfermería **D**. Comadrona capacitada **E**. Promotor de salud/Educadora **F**. comadrona no capacitada **G**. Pariente, vecino, o amigo **H**. Mujer de apoyo Casa Materna **X**. Otro _____ **Z**. Nadie	
76.	¿Recibió usted una dosis de vitamina A durante los 2 meses después del parto? **(mostrar cápsula)**	**A**. Sí **B**. No **C**. No sabe/No recuerda	
77.	¿Cuáles problemas o señas de peligro durante los 40 días después del parto (la cuarentena) harían que usted buscará ayuda urgentemente con personal de salud? **No lea la lista. Solamente indicar las opciones mencionadas.**	(*Puede marcar varias opciones*) **a.** Hemorragia vaginal excesiva **b.** Respiración rápida/dificultosa **c.** Fiebre **d.** Dolor abdominal fuerte **e.** Dolor de cabeza fuerte/vista nublada **f.** Convulsiones/desmayo **g.** Flujo vaginal con mal olor **h.** Dolor de pantorrilla **i.** Comportamiento peligroso al bebe y/o a ella misma **X**. Otro _____ **Z.** No sabe	

No.	Preguntas	Codificación	Saltos

78.	¿Cuales son las señales o signos que indican que un recién nacido está enfermo?
	
	No lea la lista. Solamente marque las opciones que ella mencionó.
	
	La madre mencionó al menos 2 señales A - J
		(*Puede marcar varias opciones*)
		  a. Convulsiones/ataques
		  b. Fiebre
		  c. No mama/come bien
		  d. Respiración rápida/dificultosa
		  e. El bebe está muy frío
		  f. El bebe es demasiado pequeño y/o el bebe nació antes de tiempo
		  g. Palmas/plantas/ojos/piel amarilla
		  h. Abdomen hinchado
		  i. Inconsciente
		  j. Ombligo rojizo con pus o mal olor
		  k. Letárgico
		  X. Otro _____
		  Z. No sabe
		
		1. Si
		2. No	

MODULO 6: ESPACIMIENTO DE EMBARAZOS

Diga: Ahora solamente nos falta pocas preguntas. Algunas de las preguntas son personales y de temas sensibles.

No.	Preguntas	Codificación	Saltos
79.	¿Cuántos partos tuvo usted	_____partos	
80.	¿Puede decirme el sexo y la fecha de nacimiento de sus dos hijos más chiquitos? **Para calcular el tiempo entre partos, sustraer la edad en meses del hijo menor de la edad en meses del niño #2**.	**Niño #1 (hijo menor)** Nombre_____ Masculino _____ Femenino _____ Fecha de nacimiento (día/mes/año) _____/_____/_____ Edad en meses _____ **Niño #2** Nombre_____ Masculino_____ Femenino_____ Fecha de nacimiento (día/mes/año) _____/_____/_____ Edad en meses_____ Tiempo entre partos- _____meses	
81.	Actualmente ¿está embarazada?	**A.** Sí **B.** No **X**. No sabe/no esta segura	
82.	¿Cuáles son las consecuencias de quedar embarazada poco después del parto de un niño? **No leer las opciones.** **La madre mencionó al menos 2 opciones A-E**	**Puede marcar varias opciones.** **A.** El bebe nace demasiado chiquito **B.** El bebe nace antes de tiempo **C.** La madre puede morirse **D.** La madre puede abortar espontáneamente **E.** La madre puede padecer de anemia **F.** Otro _____ (Especificar) **X**. No sabe **1. Si** **2. No**	

No.	Preguntas	Codificación	Saltos
83.	Actualmente, ¿que hace usted para espaciar sus embarazos (no quedar embarazada) (que hace usted o su esposo para protegerse y prevenir el embarazo)?	**(Marcar una opción solamente – el método más usado)** **A.** Ningún método **B.** Norplant/implantes bajo de la piel **C.** lnyección/DepoProvera **D.** Píldoras/pastillas anticonceptivas **E.** T de Cobre/Dispositivo Intrauterino (DIU) **F.** Diafragma **G.** Condón **H.** Espuma/gel/espermicida/óvulo/ crema/tableta **I.** Esterilización quirúrgica femenina **J.** Esterilización quirúrgica masculina/ Vasectomía **K.** Método de la amenorrea de la lactancia (MELA) **L.** Ritmo/calendario/moco cervical/ temperatura basal/collar **M.** Abstinencia **N.** Coito interrumpido **O.** Otro_____ (Especificar)	
84.	¿Quién tomó la decisión final de usar o no usar un método para prevenir el embarazo, y de cual método usar?	**A**. La madre **B.** La madre con su marido/pareja **C.** La madre con otra persona **D.** El marido/pareja **E**. Otra persona **X**. No sabe/no recuerda	

ANTROPOMETRIA

No.	Preguntas	Codificación	Saltos
85.	**ENTREVISTADOR: PESAR AL NIÑO Y MARCAR EL PESO DEL NIÑO AQUÍ.** **ENTREVISTADOR: TAMBIÉN VERIFICAR SI HAY EDEMA (HINCHAZON) EN AMBOS PIES- SI HAY, NOTA EN LOS COMENTARIOS ABAJO.**	**Peso en kilos**: Peso:_____. _____kilos Edad de niño (meses)_____ **(Mira pregunta #13 en p. 2 arriba)**	
	De acuerdo con la tabla de referencia del sexo del niño, ¿el niño está **bajo** de 2 desviaciones estándar?	**A.** Si **B.** No **X.** Niño no fue pesado	

No.	Preguntas	Codificación	Saltos
86	**ENTREVISTADOR: MEDIR AL NIÑO Y MARCAR LA TALLA DEL NIÑO AQUÍ.** **ENTREVISTADOR: TAMBIÉN VERIFICAR SI HAY EDEMA (HINCHAZON) EN AMBOS PIES- SI HAY, NOTA EN LOS COMENTARIOS ABAJO.**	Centimetros_____ Edad de niño (meses)_____ (Mira pregunta #13 en p. 2 arriba)	
	De acuerdo con la tabla de referencia del sexo del niño, ¿el niño está bajo de 2 desviaciones estándar?	**A.** Si **B.** No **X**. Niño no fue pesado	

PARTICIPACIÓN COMUNITARIA

No.	Preguntas	Codificación	Saltos
87.	Durante el mes previo, ¿tuvo usted algún contacto con el Grupo de Cuidado o Grupo de autocuidado de su comunidad? Si dice "sí," ¿cómo? **No leer las opciones**.	**Marque todas la respuesta que ella menciona:** **A.** No hay Grupo de Cuidado o Grupo de Autocuidado en la comunidad **B.** Hay Grupo de Cuidado y Grupo de Autocuidado, pero no tuvo ningún contacto **C.** La madre es voluntaria del Grupo de Cuidado (Comunicadora) **D**. La madre es líder del Grupo de Cuidado o Facilitadora Comunitaria **E.** Asistió a una reunión del Grupo de Cuidado **F**. Asistió en reunión de Grupo de Autocuidado o recibió información y/o consejo de una voluntaria del Grupo de Cuidado (Comunicadora) **X.** No sabe/no recuerda	
88.	Durante los últimos tres meses ¿tuvo la comunidad una reunión que se trató de un problema o proyecto comunitario?	**A**. Si **B.** No--→ **X.** No sabe/no recuerda--------------------------→	#89 #89
89.	¿Asistieron algunas mujeres a la reunión? Y si asistieron, ¿expresaron sus opiniones en la reunión?	**A.** Las mujeres asistieron **y** expresaron sus opiniones **B.** Las mujeres asistieron pero no expresaron sus opiniones **C**. Ninguna mujer asistió----------------→ **X**. No sabe/no recuerda--------------------------→	#89 #89
90.	¿Asistió usted a la reunión? Y si asistió, ¿expresó sus opiniones en la reunión?	**A.** Asistió **y** expresó sus opiniones **B.** Asistió pero no expresó sus opiniones **C.** No asistió **X**. No sabe/no recuerda	
91.	Durante los últimos tres meses, ¿la comunidad logró algún éxito trabajando juntos?	**A**. Si---→ **B**. No--→ **X.** No sabe/no recuerda----------------------→	#90 #91 #91

92	Si dice, "sí", ¿Qué fue el proyecto o la actividad?	**Marque todas que menciona:** **A**. Instalar y/o reparar la electricidad **B.** Instalar y/o reparar una fuente de agua potable (pozo, tubería de agua potable, etc) **C.** Instalar o reparar las letrinas o alcantarilla/drenaje **D.** Mejorar las cosechas **E.** Aumentar los ingresos de dinero **F.** Mejorar la educación y/o el bienestar de los niños **G.** Construir o reparar casas o edificios comunitarios (escuela, clínica, Casa Materna, centro comunitario, etc.) **H.** Construir o mejorar calles, senderos, caminos, puentes, etc. **I**. Otro_____ **X.** No sabe/no recuerda	
93.	En su opinión, ¿cuáles son las necesidades de salud, de la comunidad, más urgentes? (¿Cuáles problemas de salud son los más serios?) **NO LEA LAS OPCIONES - MANTENGA LA PREGUNTA ABIERTA.** **Escriba cualquiera respuesta→ que mencionó que no se encuentra en las opciones**	**A.** Neumonía/infecciones respiratorias/tos **B.** Diarrea **C.** Desnutrición/escasez de comida **D.** Partos - falta de atención y no seguros **E.** Falta de atención prenatal y/o postnatal **F.** Emergencias obstétricas **G.** Sarampión **H.** Accidentes **I.** Diabetes **J.** Infartos **K.** Ataques cerebral **L.** Falta de planificación familiar **M.** Falta general de atención médica **N.** Falta de transporte a las entidades de salud **O.** Personal de salud que no, nos respetan **P**. Otro_____ Otro_____ Otro_____ **X**. No sabe	

REVISAR EL CUESTIONARIO

¡Agradezca la colaboración!

Comentarios:_____

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Revisado por (Nombre del supervisor)_____

Firma del supervisor:_____

Appendix B- Quality Control Checklist

Curamericas Guatemala: Encuesta CPC Final
Lista Para el Control de Calidad de la Entrevista

Nombres de los Entrevistadores:_____ _____

Nombre del Supervisor:_____

Agrupamiento/ Comunidad: _____**Fecha:** _____/_____/_____

	La entrevista	SÍ	NO
1.	¿Seleccionó la comunidad y la casa correctamente?		
2.	¿Seleccionó la entrevistada correctamente? ¿La madre está elegible?		
3.	¿Se presentó correctamente, con claridad y cortesía?		
4.	¿Consiguió correctamente el consentimiento informado de la entrevistada? ¿Con firma o huella digital?		
5.	¿Habló claramente y lentamente?		
6.	¿Se comportó con cortesía y paciencia?		
7.	¿Usó un tono de voz, gestos y lenguaje corporal apropiados?		
8.	¿Se mantuvo neutral en su expresión de cara y lenguaje corporal? ,		
9.	¿No dijo ni hizo algo para influenciar las respuestas de la entrevistada?		
10.	¿Tradujo en el idioma Maya las preguntas exactamente como están escritas?		
11.	¿Siguió todas las instrucciones para cada pregunta?		
12.	Cuándo la entrevistada no entendió la pregunta, ¿Hizo la pregunta de otra manera hasta que ella entendiera?		
13.	¿Pesó correctamente el niño? (fijó bien la balanza; ajustó la balanza a cero; colgó correctamente el niño; quitó y pesó la ropa; sustrajo el peso de la ropa, etc)		
14.	¿Talló correctamente el niño? (cabeza en contacto con la tabla; niño puesto boca arriba, bien fijado; piernas extendidas; etc)		
15.	¿Se despidió en una manera apropiada- agradeció a la madre?		
	El cuestionario		
16.	¿Determinó correctamente el código de la entrevista y lo escribió en cada página?		
17.	¿Escribió legiblemente con un lápiz? ¿Borró sus errores?		
18.	¿Indicó muy claramente las repuestas de la madre?		
19.	¿Anotó correctamente toda la información de las dos primeras páginas del cuestionario? (números de Fase, comunidad, entrevista; edades, etc.)		
20.	¿Siguió correctamente todos los saltos? ¿Marcó con diagonal las preguntas saltadas?		
21.	¿Hizo correctamente el cálculo de la edad del niño en meses?		
22.	¿Hizo correctamente el cálculo del intervalo entre los partos?		
23.	¿Indicó correctamente si el niño es menos de dos desviaciones estándar de peso y talla?		
24.	Al final, ¿revisó el cuestionario e hizo su proprio control de calidad?		

En una escala de 1 [de mala calidad] a 10 [excelente], califique la calidad de la entrevista de acuerdo con los criterios listados arriba. Marque el número apropiado:

1	2	3	4	5	6	7	8	9	10
Mala calidad									Excelente

- Comentario [se puede usar el revés de la hoja]_____
FIRMA DEL SUPERVISOR: _____ _____
FECHA_____

Appendix C -Tabulation Plan

TABULATION PLAN

INDICATOR	DESCRIPTION/DEFINITION
Appropriate Hand Washing Station Percentage of households with a designated hand-washing facility that has soap or other cleansing agent, water, and water recipient	Number of households with all three ingredients of adequate handwashing station: $$\frac{(Q15 = A, B \text{ and } C)}{\text{Total no. of surveyed households}} \times 100$$
Handwashing at Critical Times Percent of mothers of children 0-23 months having soap who used soap for washing hands during 24 hours recall at 4 critical times: after defecation, before cleaning a young child, before preparing food, before feeding a child)	Number of mothers of children age 0-23 months who used soap for washing hands during 24 hours recall at 4 critical times: after defecation, before cleaning a young child, before preparing food, before feeding a child): $$\frac{(Q16= B) \text{ and } (Q17= B, C, D \text{ and } E)}{\text{Total number of households in the survey}} \times 100$$
Regular Point of Use Water Treatment Percent of households that apply effective water treatment regularly	Number of households with responses: $$\frac{(Q19 = C, D, E \text{ or } F) \text{ AND } (Q20=A \text{ or } B)}{\text{Total no. of surveyed households}} \times 100$$
Safe Water Storage Percent of households that store water safely* *Cisterns and roof tanks are classified as safe without observation*	Number of households with responses: $$\frac{\begin{array}{c}(Q22=B)\\ OR\\ [(Q22=A) \text{ AND } (Q24=A) \text{ AND } (Q25=A)]\end{array}}{\text{Total number of surveyed households}} \times 100$$
Safe Feces Disposal Percent of households who safely disposed of their child's feces the last time s/he passed stool	Number of households with responses: $$\frac{(Q21=A \text{ or } B \text{ or } C)}{\text{Total number of surveyed households}} \times 100$$

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INDICATOR	DESCRIPTION/DEFINITION
Exclusive Breastfeeding (0-5 months) Percent of infants aged 0-5 months who were given breast milk only in the 24 hours preceding survey **[RAPID CATCH]**	Number children aged 0-5 months with response: (Q31=A) AND (Q32 A=SÍ AND all other responses=NO) _____ x 100 Total number children aged 0-5 months
Vitamin A Supplementation for Child Percent of children aged 6-23 months receiving vitamin A supplementation in 6 months preceding survey (card verified or mother's recall) **[RAPID CATCH]**	Number of children aged 6-23 months with response: (Q36=A) OR (Q37=A and date < 6 months before survey) _____ x 100 Total number children aged 6-23 months
IYCF Practice Indicator (6-23 months) Percent of infants and young children aged 6-23 months fed according to a minimum of appropriate feeding practices **[RAPID CATCH]** Based upon a 24 hour recall of food groups fed to the child age 6-23 months. The eight food groups are: 1. infant formula, milk other than breast milk, cheese or yogurt (Q.33B); 2. foods made from grains, roots, and tubers, including porridge, fortified baby food from grains (Q.33E; 3. vitamin A-rich fruits and vegetables (and red palm oil) (Q33D) ; 4. other fruits and vegetables (Q33G); 5. eggs (Q33I); 6. meat, poultry, fish, and shellfish (and organ meats) (Q33H); 7. legumes and nuts (Q33J); 8. foods made with oil, fat, butter (Q33K).	For breastfed children: Number of *breastfed* children aged 6-8 months with responses: (Q31=A) AND (Q33= At least 3 of the following: D,E,F,G,H,I,J,K) AND (Q34=2 or more times) OR: Number of *breastfed* children aged 9-23 months with responses: (Q31=A) AND (Q33= At least 3 of the following: D,E,F,G,H,I,J,K) AND (Q34=3 or more times) OR: For non-breastfed children: Number of *non-breastfed* children aged 6-23 months with responses: (Q31=B) AND (Q33=B) AND (Q33 = At least 4 of the following: B,D,E,F,G,H,I,J,K) AND (Q34=4 or more times) _____ x 100 Total number children aged 6-23 months

INDICATOR	DESCRIPTION/DEFINITION
Immunization Coverage Percent of children age 12-23 months who received all required antigens and doses by the time of the survey as verified by vaccination card	Number of children age 12-23 months who received antigen and dose by the time of the survey as verified by vaccination card or health booklet: (Q39a<>" " AND Q39b<>" " AND Q39c<>" " AND Q39d<>" " AND Q39e<>" " AND Q39f<>" " AND Q39g<>" " AND Q39h<>" _____ x 100 Total number of children age 12-23 months in the survey
ORT Use During a Diarrheal Episode Percent of children aged 0-23 months with diarrhea in the last two weeks who received oral rehydration solution (ORS) and/or recommended home fluids (RHF) **[RAPID CATCH]**	Number of children with responses: Q41= B OR C OR H _____ x 100 No. of children with response Q40=A
Increased Fluid Intake During a Diarrheal Episode Percent of children aged 0-23 months with diarrhea in the last two weeks who were offered more fluids during the illness	Number of children with response: Q42=C _____ x 100 Number of children with response Q40=A
Increased Food Intake During a Diarrheal Episode Percent of children aged 0-23 months with diarrhea in the last two weeks who were offered the same amount or more food during the illness	Number of children with response: Q43=C _____ x 100 No. of children with response Q40=A
Zinc Treatment for Diarrhea Pecent of children aged 0-23 months with diarrhea in the last two weeks who were treated with zinc supplements	Number of children with response: Q41=d _____ x 100 No. of children with response Q40=A

INDICATOR	DESCRIPTION/DEFINITION
Appropriate Care Seeking for Pneumonia Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider **[RAPID CATCH]**	Number of children age 0-23 months with chest-related cough and difficult breathing in the last two weeks: (Q44=A) AND (Q45= A) AND who were taken to an appropriate health provider: (Q47 = a,b,or c) _____ x 100 Total number of children age 0-23 months with chest-related cough in the last two weeks [(Q44=A) AND (Q45= A)]
Quality Antenatal Care Percentage of mothers of children age 0-23 months who had four or more antenatal visits with a skilled provider when they were pregnant with the youngest child. **[RAPID CATCH]**	Number of mothers of children age 0-23 months who had at least four antenatal visits with skilled provider while pregnant with their youngest child: (Q51= a, b, or c) AND (Q52 ≥ 4 OR Q55≥ 4) _____ x 100 Total number of mothers of children age 0-23 months in the survey
Knowledge of Danger Signs during Pregnancy Percentage of mothers of children 0-23 months who knew at least two danger signs during pregnancy.	Number of mothers of children 0-23 months who know at least two danger signs during pregnancy: (Q57= any two responses a-k) _____ x 100 Total number of mothers of children age 0-23 months in the survey
Tetanus Toxoid Percentage of mothers with children age 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child. **[RAPID CATCH]**	Number of mothers with children age 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child: [Q53=A AND Q54≥2] OR (Q56 ≥ 2) _____ x 100 Total number of mothers of children age 0-23 months in the survey

INDICATOR	DESCRIPTION/DEFINITION
Iron Tablets for Pregnant Women Percentage of mothers of children age 0-23 months who took iron tablets before the birth of their youngest child*.*	Number of mothers of children age 0-23 months who received iron tablets and consumed them for at least 90 number of days: (Q58=A) AND (Q59 = ≥ 90 days OR ≥ 9 weeks OR ≥ 3 months) _____ x 100 Total number of mothers of children age 0-23 months in the survey
Skilled Birth Attendant Percentage of children age 0-23 months whose births were attended by skilled personnel*.* **[RAPID CATCH]**	Number of children age 0-23 months whose birth was attended by a doctor, nurse, midwife, auxiliary midwife or other health staff with midwifery skills: (Q62 = a or b or c) _____ x 100 Total number of mothers of children age 0-23 months in the survey
Health Facility Delivery Percentage of children age 0-23 months whose births were attended by skilled personnel in a health facility	Number of children age 0-23 months whose birth was attended by a doctor, nurse, midwife, auxiliary midwife or other health staff with midwifery skills in a health facility (hospital/clinic/Casa Materna: (Q60 = , c ,d, f, g o h) _____ x 100 Total number of mothers of children age 0-23 months in the survey
Births by Cesarean Section at health facility Percent of pregnant women whose last delivery was by a cesarean section (C-section).	Number of births by Cesarean Section of mothers of children age 0-23 months whose birth was at a health facility: (Q61 = B) _____ x 100 Total number of mothers of children age 0-23 months in the survey
Knowledge of Maternal Danger Signs During Delivery Percentage of mothers of children 0-23 months who know at least two danger signs during delivery.	Number of mothers of children 0-23 months who know at least two danger signs during delivery: (Q71 = any <u>two</u> responses A-G) _____ x 100 Total number of mothers of children age 0-23 months in the survey

INDICATOR	DESCRIPTION/DEFINITION
Essential Newborn Care Percentage of children age 0-23 who received all three elements of essential newborn care: thermal protection immediately after birth, clean cord care, and immediate and exclusive breastfeeding.	Number of children age 0-23 months who had clean cord care at birth AND Were immediately dried and wrapped AND Were immediately breastfed: (Q64 = a, b, d, f or h) AND (Q65= a or b) AND (Q66 = A) AND (Q67= A) _____ x 100 Total number of children age 0-23 months in the survey

INDICATOR	DESCRIPTION/DEFINITION
Active Management of the third stage of labor (AMTSL) Percent of mothers of children age 0-23 months who received AMTSL after the birth of her youngest child.	Number of mothers of children age 0-23 months who immediately after the birth of their youngest child received an injection of uterotonic drug AND Controlled cord traction was performed AND Received uterine massage after the delivery of the placenta: (Q68=A) AND (Q69=A) AND (Q70=A) _____ x 100 Total number of mothers of children age 0-23 months in the survey
Post-Partum Visit for the Mother and Newborn Percentage of mothers of children age 0-23 who received a post-partum visit from an appropriate trained health worker within two days after the birth of the youngest child to check on her health AND the health of the newborn.	Number of mothers of children age 0-23 months who received a post-partum visit AND within two days after birth AND by an appropriate health worker: (Q73=A) AND (Q7473=A) AND (Q75= a, b, c , d, or e) _____ x 100 Total number of mothers of children age 0-23 months in the survey
Knowledge of Post-partum Danger Signs Percentage of mothers of children age 0-23 months who knew at least two post-partum danger signs.	Number of mothers of children 0-23 months who know at least two post-partum danger signs: (Q77 = any two responses a-i) _____ x 100 Total number of children age 0-23 months in the survey

INDICATOR	DESCRIPTION/DEFINITION
Knowledge of Neonatal Danger Signs Percentage of mothers of children age 0-23 who know at least two neonatal danger signs.	Number of mothers of children 0-23 months who know at least two neonatal danger signs (Q78 = any <u>two</u> responses a-j) _____ x 100 Total number of mothers of children age 0-23 months in the survey
Vitamin A Supplementation for Mother Percentage of mothers of children age 0-23 months who received Vitamin A supplementation with 2 months post-partum	Number of mothers who received dose of Vitamin A within 2 months of delivery (Q76=A) -- x 100 Total number of mothers of children age 0-23 months in the survey
Knowledge of Risk Associated with Birth to Pregnancy Intervals Less than 24 Months Percentage of mothers of children age 0-23 months who know at least two risks of having a birth to pregnancy interval of less than 24 months**.**	Number of mothers of children age 0-23 months who know at least two risks associated with having a birth to pregnancy interval of less than 24 months: (Q82= any two responses A-E) _____ x 100 Number of mothers of children age 0-23 months in the survey
Current Contraceptive Use Among Mothers of Young Children Percentage of mothers of children age 0-23 months who are using a modern contraceptive method **[RAPID CATCH]**	Number of mothers of children age 0-23 months who are using a modern method of contraception: (Q83 = Any answer b – l) _____ x 100 Total number of mothers of children age 0-23 months in the survey

INDICATOR	DESCRIPTION/DEFINITION
Underweight Percentage of children age 0-23 months who are underweight (-2SD) for the median weight for age, according to WHO/NCHS reference population) **[RAPID CATCH]**	Number of children age 0-23 months with weight/age -2 SD for median weight for age, according to WHO/NCHS reference population: (Q85= A) _____ x 100 Total number of children age 0-23 months in the survey (less outliers)
Stunting Percentage of children age 0-23 months who measure 2 or more SD below the median height for age, according to WHO/NCHS reference population	Number of children age 0-23 months with height/age -2 SD for median height for age, according to WHO/NCHS reference population: (Q86= A) _____ x 100 Total number of children age 0-23 months in the survey (less outliers)
Decision-making re: ARI Treatment Percentage of ARI episodes in 0-23 month old children in the past two weeks in which either the mother or mother jointly with another person decided the care-seeking and/or treatment.	Number of children age 0-23 months with chest-related cough and difficult breathing in the last two weeks whose mother participated in the final decision for care-seeking: [(Q44=A) AND (Q45= A)] and Q50=A or B or C _____ x 100 Total number of children age 0-23 months with chest-related cough in the last two weeks [(Q44=A) AND (Q45= A)]
Decision-making re: location of delivery and birth attendant Percentage of households with children 0-23 months in which either the mother or the mother jointly with another person decided the location and birth attendant of her last delivery.	Number of mothers of children 0-23 months who participated in the final decision for the location and birth attendant of her last delivery. (Q63 =A or B or C) _____ x 100 Total number of mothers of children age 0-23 months in the survey

INDICATOR	DESCRIPTION/DEFINITION
Control of Money for Food for Children Percentage of mothers of children 0-23 months who indicate that they do not need to ask for the money needed to buy the food necessary to meet the minimum acceptable feeding practices for infants and young children.	Number of mothers of children 0-23 months who do not need to ask for money to buy food for children. (Q35 = B) _____ x 100 Total number of mothers of children age 0-23 months in the survey
Decision-making re: Contraception Percentage of households with children 0-23 months in which either the mother or the mother jointly with her husband/partner decided if the mother and/or her husband/partner would practice contraception, and, if so, the method.	Number of mothers of children 0-23 months who decided if the mother and/or her husband/partner would practice contraception, and, if so, the method. (Q84 = A or B or C) _____ x 100 Total number of mothers of children age 0-23 months in the survey
Community OE Response Plan Percentage of mothers of children 0-23 months old who report that their community has in place an emergency response plan that would provide transport for them and/or their newborn child to the nearest health facility in the event of a difficult delivery or danger signs in pregnancy or during the post-partum period.	Number of mothers of children 0-23 months who report that their community has in place an emergency response plan: (Q72 = A) _____ x 100 Total number of mothers of children age 0-23 months in the survey

INDICATOR	DESCRIPTION/DEFINITION
Care Group Activity Percentage of mothers of children 0-23 months old who report that in the past month they have either been a Care Group volunteer, participated in a Care Group meeting, or have been instructed by a Care Group member.	Number of mothers of children 0-23 months who report that in the past month they have either been a Care Group volunteer, participated in a Care Group meeting, or have been instructed by a Care Group member. $$\frac{(Q87=C \text{ or } D \text{ or } E \text{ or } F)}{\text{Total number of mothers of children age 0-23 months in the survey}} \times 100$$
Women's Participation in Community Meetings Percentage of mothers of 0-23 month old children who report that in the past month they both attended and expressed their opinion at a community meeting.	Number of mothers of 0-23 month old children who report that in the past month they both attended and expressed their opinion at a community meeting. $$\frac{(Q88=A \text{ and } Q89=A \text{ and } Q90=A)}{\text{Total number of mothers of children age 0-23 months in the survey}} \times 100$$
Community Solidarity Percentage of mothers of 0-23 month old children who report that their community has worked together to solve a community problem or make a community improvement in the past 3 months.	Number of mothers of 0-23 month old children who report that their community has worked together to solve a community problem or make a community improvement in the past 30 days. $$\frac{(Q91 = A) \text{ AND } (Q92=A, B,C,D,E,F,G,H, \text{ or } I)}{\text{Total number of mothers of children age 0-23 months in the survey}} \times 100$$

Appendix D- Training Agenda

Monday			FOR INTERVIEWERS AND INTERVIEWER SUPERVISORS	
Time	**Time needed**	**Theme**	**Activity and purpose**	**Materials Needed**
9:30	20	Introductions	Give everyone chance to introduce self – animal game	
9:50	10	Review agenda, schedule, and logistics. Review training goals and objectives.	Review agenda/schedule for today and for whole training; review goals of the training; note breaks; locate baños; other housekeeping issues	Copy for everyone of: 1) agenda; and 2) guia (printout of the PowerPoint slides with appendices (exercises, etc)
10:00	65	Child Survival Project overview, theory of KPC Survey	Review goals and objectives of CS project (15 min)	Handout with project objectives and indicators, and coverage goals
			Review interventions/methodologies of Supervivencia project (20 min)	PowerPoint slides
			Define and give examples of conocimientos, prácticas, and cobertura (10 min). What people know; what they do (behaviors); health services they receive. E.g. - conocimientos - peligros en embarazo, peligros de intervalo menos de 24 meses; practicas - lavado de las manos; disposicion de heces, SRO for diarrhea; cobertura - 4 ANC, partos institucionales, vacunas, VA, etc.	
			Return to objectives - How do we know when we've met the objective? Introduce idea of indicator and the process of evaluation of indicators to determine if objective has been met (10 min)	
			Introduce the indicators of project- review handout with list of indicators. Quick activity: I give them hypothetical numerator and denominator for an indicator and they compute percentage and tell me if the objective has been met (10 min)	Handout with project objectives and indicators, and coverage goals
11:05	15	Break, refreshments, coffee		
11:20	10	Project indicators	Review how CPC measures the project indicators- cycle of establishing goals, defining objectives to attain goals, defining indicators, evaluating indicators using KPC, acting on findings - 10 min.	PowerPoint slides showing evaluation cycle
11:30	10	Steps of the KPC Survey	Review steps of the entire KPC survey process from start to finish (10 min)	PowerPoint slide listing steps in KPC process'

11:40	50	Familiarize with the questionnaire	Exercise to familiarize them with the questionnaire: working in pairs or triads, they review the questionnaire and for each question identify which project indicator the question is evaluating - thus they understand the purpose of each question (50 min)	Handout with project objectives , indicators, and coverage goals with column for listing questionnaire questions that apply to the indicator; Copy of KPC questionnaire for all
12:30	15	Interview products	Review the dual products of the interview- 1) accurate data and 2) maintaining good relationship with the community. (10 min)	PowerPoint slides
			Si basura entra, basura sale – importance of collecting accurate data in the KPC interview (5 min)	
12:45	15	Quality assurance. Continuous Quality Improvement:	Introduce the cycle of Continuous Quality Improvement: define task, define standards of excellence for task; perform task; evaluate performance of task against the standards of excellence (using quality control checklist); identify areas needing improvement; training or changes to realize improvements; repeat cycle of performance and evaluation (15 min)	PowerPoint slides showing cycle of CQI
1:00	60	Lunch		
2:00	60	Criteria for a quality KPC interview	Working in triads or quads, have them draft a list of criteria (standards of excellence) for a quality KPC interview; then have representative of each group share lists taped to wall; discussion of group work (40 min)	
			Review list of criteria of quality KPC interview and correctly done questionnaire (handout and slides) (20 min)	Handout with list of criteria of excellence
3:00	35	Quality control of the KPC	Explain how Quality Control comprises the formal processes/procedures of evaluation of work to ensure quality (5 min)	PowerPoint slide
			Review general role of Supervisor in Quality Control of the KPC (10 min)	PowerPoint slide
			Review quality control checklist for KPC interview and questionnaire (15 min)	Quality Control Checklist for KPC interview and completed questionnaire
			Review why supervisory control not enough – importance of auto-control, internalizing the standards of excellence; sharing examples of how we do that (5 min)	
3:35	25	Supervisor´s role	Review role/specific duties of supervisors - 1) ensuring interviewers properly supplied; 2) coordinating logistics; 3) observing and evaluating interviews; 4) helping interviewers improve their work; 5) reviewing and approving questionnaires before leaving village; 6) safeguarding completed questionnaires; 7) delivering questionnaires to data entry team; 8) troubleshooting, reporting problems, etc. (20 m)	Slide and Handout: list of supervisor duties; Slide and Handout: procedures for quality control in the field
		Supportive Supervision	Quickly review concept of Supportive Supervision (5 min)	
4:00	15	Break, refreshments, coffee		

			Review list of 60 communities to be visited; explain briefly how selected (5 min).	List of selected communidades organized by municipio with number of agrupamiento for each community
4:15	30	How to select women to be interviewed	Review criteria for women to be interviewed - mother of under-two child, permanent resident of the community (5 min)	PowerPoint slide; handout with criteria for interview and selection procedures
			Review procedures for selecting households and women to interview - identifying boundaries and center of village; spinning bottle; working from center out to periphery; repeating process as needed (10 min)	PowerPoint slides
			Practice exercise - working in pairs with a map of a hypothetical village (wth numbered houses) they identify which at which houses they will interivew.(10 min)	Handout with map of hypothetical village
4:45	15	How to introduce themselves using a script "guion"	Introduce idea of having a "script" (guion) they use to introduce themselves and the project to community/interviewees. Have them draft their script. A few share their scripts with the full group for comments. Tomorrow they try out their guion in the interview role-playing. (15 min)	
			If time: do a role-play with one participant playing an interviewer and another playing a suspicious mother needing convincing to do the interview.	
5:00	45	The devil in the details – questionnaire and interview procedures	How to number the interview and answer the questions 1-3; putting the number on top of every page (5 min)	
			Practice – I give them name of community and the number of the interview (e.g., 5th interview in Chenen) – what is the number of the questionnaire? (10 min)	Handout: worksheet for practice exercise numbering the questionnaires
			CONSENTIMIENTO INFORMADO – review of text and reason for it; signatures and fingerprinting to confirm informed consent; working in pairs - quick practice fingerprinting each other (15 min)	Inkpads to practice with
			Review of calculations of 1) child's age in month and 2) birth interval (in months) between most recent two children: working in pairs, they practice calculating - compare answers - prize to winners with no errors (15 min)	Worksheet with 1) date of interview and date of birth of child; 2) dates of birth of the youngest two children.
5:45	15	Review, evaluation	Review what we covered; answer questions; quickly review tomorrow's agenda; have them do daily evaluation sheet before they leave	Daily evaluation
6:00		End of the day		

Tuesday				
8:00	20	Previous day review, today´s agenda, questions	Review what we covered yesterday with game (throwing ball or musical chairs) ; answer questions; review today's agenda	
8:20	40	The questionnaire: quality control practice	Practice exercise: working in pairs, they review a completed questionnaire with lots of errors - missed saltos; multiple answers where only one answer permitted; incorrect age or birth interval calculated; interview numbered incorrectly/not numbered on every page, etc. Team that identifies most errors gets prize. (40 min)	Completed questionnaire with errors.
9:00	15	Reference materials - Carnets	Distribute carnets for them to look at. Exercise - working in triads, they identify data on the carnet that they will need for the questionnaire and name the question #. (15 min)	A blank carnet (child, mother) for every 3 persons
9:15	90	Questionnaire translation	Working In three separate locations: the teams for each municipio form a circle and go through the questionnaire and reach consensus on translation	Copy of questionnaire for everyone
10:45	15	Break, refreshments coffe		
11:00	120	Weighing and measuring kids – practical demonstration	First – explain desnutricion global and desnutricion cronica, and why we weigh and measure kids; distribute and explain tables; explain that -2SD determines if child is malnourished (global or cronica) (10 min);	Weight and height tables to determine if child is < 2 SD below reference population
10:45	15	Break, refreshments, coffee	Practice exercise using tables - given handout with ages and weights and heights of children, they consult tables and determine if child is less than 2 SD below reference population (15 min)	Handout with ages, weights, heights
11:00 1:00 2:00	120 60 90	Weighing and measuring kids – practical demonstration Lunch Interview practice	Demonstrations with live kids. Form four groups, each with a child - supervisoras demonstrate correct way to weigh and measure. (20 min)	Balanzas; tallimetros; ninos vivos (?)
			Then practice weighing dolls/pillows/whatever – work in triads with a supervisor using standardization worksheets to measure precision and accuracy. (75)	Balanzas; tallimetros; dolls/pillows; worksheets for supervisors
			Divide into groups of 3 to role play interviews. Roles: interviewer, supervisor (observing and doing a QC checklist, and interviewee). Have them role play the entire interview 3 times, each time switching roles until everyone has had a chance at each role. A supervisor also observes every interview and completes a quality control checklist, including revision of the completed questionnaire. Supervisor debriefs after each interview.	
3:30	15	Break, refreshments, coffee	Work groups take their break after practicing and debriefing 2 interviews	
3:45	60	Interview practice	Continue practice and debriefing	

4:45	20	Practice review	Groups convene and debrief in large group - identify main areas of challenge and how to respond	
5:05	20	Preparation for a field day; evaluation	Review destinations of each team, transportation, other logistics, time to be ready tomorrow. Prcedures for safe-guarding questionnaire - each community's 10 questionnaires in an envelope with name of community, date of interviews, numbers of questionnaires (numbering system), names of interviewers, name of supervisor, supervisor's signature and date indicating review of the contents. Daily evaluation	Handout - teams (with supervisors) with their destinations and transportation
5:20		End of the day		
Total min	**565**			
Hrs (con almuerzo)	**9,4**			

Wednesday				
7:00	30	Reunion and get ready for a field day	Distribute materials to teams – questionnaires, QC checklists, etc. Plus scales for weighing kids, comida, etc.	Balanzas, tallimetros, inkpads, questionnaires, reference tables for height and weight; lunches
Día Miércoles			Review destinations of each team.	
7:30 4:30	480 30	Practice interviews in the field Back from field, supervisors results review	Teams go to villages NOT in the KPC sample and spend the day doing as many interviews as possible; work in teams of three, a supervisor and two interviewers (these supervisors will be experienced Curamericas staff); supervisors observe and evaluate every interview, review every questionnaire, complete quality control checklist for every interview; supervisor will also weigh and measure every child and complete standardization worksheet to evaluate precision and accuracy of the interviewers' measures	
			Supervisors review their evaluations and discuss the results with their interviewers	
Total min	540			

Thursday				
8:00	30	Previous day review, today´s agenda, questions	Review what we covered Tuesday with game (throwing ball or musical chairs) ; answer questions; review today's agenda	
8:30	90	Previous day Evaluation – Successes, failures, solved problems, recommendations / Notices	The municipal teams meet in three different locations and discuss: successes, failures, challenges and how met, results of the supervisor's quality control, and recommendations for advice, changes, etc. Write answers on papers and tape to wall. (90 min)	
10:00	15	Break, refreshments, coffee		
10:15	90	Previous day Evaluation – Successes, failures, solved problems, recommendations / Notices	The three groups convene together and each group reviews its findings. Entire group discusses and agrees on recommendations/changes going forward; action items listed (90)	
11:45	30	Questions, doubts, suggestions	Any final thoughts, questions, ideas, etc.	
12:15	15	Final evaluation	Final evaluation of the training	
12:30		Lunch		

Thursday			**FOR DATA ENTRY STAFF AND SUPERVISORS**	
2:00	45	Apply Continuous Quality Improvement to the data entry process	Review of how we will apply CQI to the data entry process: 1) review of each questionnaire by Supervisor before accepted for processing; 2) during data entry, problems with questionnaire noted by data enterer and reviewed with Supervisor; 3) Epi Info data entry form for every questionnaire reviewed by a different data enterer (100% cross checking) and errors corrected; 4) errors detected during cross-checking counted and tally of errors kept in error log; 5) maintenance of graphs/tables recording error-rate of each data enterer ; 6) daily debriefing to discuss errors noted in error log, error avoidance, ways to improve accuracy; 7) daily action plan for individual data enterers and for team on basis of daily debriefing; 8) communication by Supervisor with field supervisors about quality control issues identified	
2:45	30	Maintaining work flow and confidentiality	Maintaining questionnaires organized in envelopes, with the 10 questionnaires for a community in the same envelope with name of community, date of interviews, code numbers of interviews, names of interviews, name of supervisor, and initials or signature of supervisor with date indicating they approved the packet. Then organizing envelopes is locked file drawers according to stage of process: 1) delivered from field, to be approved by Data Entry Supervisor; 2) approved by Supervisor, ready for data entry; 3) data entered, ready for cross check; 4) cross checked, process complete. Each person processing envelope adds their name, signature, and date to enveloped: approved by [name of supervisor]; entered by [name of data enterer]; cross-checked by [name of other data enterer].	
3:15	15	Break		
3:30	30	Evaluating quality	Constructing graphs and tables to track individual and team error rates; demonstration of how graphs/tables function- how we will track accuracy and time over time to see if 1) precision improving and 2) time decreasing (without sacrificing accuracy)	Easel pad paper taped to wall to create graphs and tables
4:00	60	Practicing questionnaires review	Entire team reviews questionnaires from field practice for errors, problems -- create an error report for reporting to field supervisors	Questionnaires from the field practice

Friday				
8:00	20	Previous day review	Review of material covered yesterday using game	
8:20	10	Questions	Review of questions they may have	
8:30	15	Data entry demonstration	Supervisor demonstrates data entry into Epi Info while teams looks on; works through an entire questionnaire, pointing out possible errors/pitfalls	
8:45	60	Data entry practice	Team enters the data from the field practice questionnaires	
9:45	15	Break		
10:00	180	Data entry practice	Team enters the data from the field practice questionnaires	
1:00	60	Lunch		
2:00	90	Cross checks practice	Team cross checks each other's work; notes errors - numbers, questions/types of errors, etc.	
3:30	15	Break		
3:45	60	Quality evaluation practice	Team calculates and records time, # errors, error rates, and creates error log; discussion of results, lessons learned, plans going forward	
	525			

Appendix E – Sample Clusters for Phases 1 and 2

FINAL KPC - SAMPLE – PHASE 1				
MUNICIPALITY	**JURISDICTION**	**COMMUNITY**	**POPULATION**	**CLUSTER NO.**
Santa Eulalia	1	Buena Vista	1.038	1
Santa Eulalia	1	Cristo Rey	746	2
Santa Eulalia	1	San Miguelito	857	3
Santa Eulalia	1	Satacna	1110	4
Santa Eulalia	1	Tzeltaj	769	5
Santa Eulalia	1	Vista Hermosa	1572	6
Santa Eulalia	2	Temux Grande	981	7
Santa Eulalia	2	Jolomku	364	8
Santa Eulalia	2	Yaxcacao	158	9
Santa Eulalia	2	Yul Xaq	485	10
Santa Eulalia	2	Chojsunil	1156	11
Santa Eulalia	2	Waxacoy	106	12
Santa Eulalia		Paxkil 1	374	13
San Sebastian Coatan	1	Chenen	415	14
San Sebastian Coatan	3	Biltac	426	15
San Sebastian Coatan	3	Sactenam	186	16
San Sebastian Coatan	3	Jolombojop	197	17
San Sebastian Coatan	3	Joom	122	18
San Sebastian Coatan	3	Ulná	438	19
San Sebastian Coatan	3	Yuchan	221	20
San Miguel Acatan	1	Caserío Bute	244	21
San Miguel Acatan	1	Casería Ixchoch Pueblo	348	22
San Miguel Acatan	3	Cantelaj	158	23
San Miguel Acatan	3	Chenicham II	792	24
San Miguel Acatan	3	Chimban	1252	25
San Miguel Acatan	3	Ixcu	376	26
San Miguel Acatan	3	Nachen	183	27
San Miguel Acatan	3	Payconop Chiquito	560	28
San Miguel Acatan	3	Pojnajap	419	29
San Miguel Acatan	3	Yucajo	257	30

Sampling Interval	**1448**
Population	
Sampling frame mean	493
Sample mean	544
Municipality	**No. Of Groups**
Santa Eulalia	13
San Sebastian Coatan	7
San Miguel Acatan	10

FINAL KPC - SAMPLE PHASE II				
MUNICIPALITY	**JURISDICTION**	**COMMUNITY**	**POPULATION**	**CLUSTER NO.**
Santa Eulalia	3 y 4	Altamiranda	378	1
Santa Eulalia	3 y 4	Chival Chiquito	662	2
Santa Eulalia	3 y 4	Esquipulas	323	3
Santa Eulalia	3 y 4	Ixtenam	1126	4
Santa Eulalia	3 y 4	Kanajaw Xixilac	644	5
Santa Eulalia	3 y 4	Moqlil Chiquito	435	6
Santa Eulalia	3 y 4	Mucan Jolom	561	7
Santa Eulalia	3 y 4	Nueva Florida	257	8
Santa Eulalia	3 y 4	Payconob	852	9
Santa Eulalia	3 y 4	Quantxotx Payconob	213	10
Santa Eulalia	3 y 4	Santa Rosa	257	11
Santa Eulalia	3 y 4	Xojobte	118	12
Santa Eulalia	3 y 4	Yatziquin, Payconob	307	13
Santa Eulalia	3 y 4	Yoch, Pett	319	14
San Sebastian Coatan	1	Caserío Tzulá	364	15
San Sebastian Coatan	1	Quiquilum	920	16
San Sebastian Coatan	2	Ixquebaj	1913	17
San Sebastian Coatan	2	Hiss	1527	18
San Sebastian Coatan	2	Poy	598	19
San Sebastian Coatan	2	Bolontaj	209	20
San Sebastian Coatan	2	Yalancamposanto	264	21
San Sebastian Coatan	2	Baireco	236	22
San Miguel Acatan	2	Akal Coyá	194	23
San Miguel Acatan	2	Cotzancanalaj	686	24
San Miguel Acatan	2	Elmul	374	25
San Miguel Acatan	2	Loma Bonita	384	26
San Miguel Acatan	2	Petanchim	446	27
San Miguel Acatan	2	Solomchoch Laguna	540	28
San Miguel Acatan	2	Ticajó	350	29
San Miguel Acatan	3	Yulaja Suntelaj	198	30

Sampling Interval	**1592**
Population	
Sampling frame mean	484
Sample mean	522
Municipality	**No. Clusters**
Santa Eulalia	14
San Sebastian Coatan	8
San Miguel Acatan	8

Appendix F - Raw Data Tables Baseline and Final KPC (Combined Phases)

Demographic Data

Baseline

Beneficiary Population 2011	San Sebastián Coatán	San Miguel Acatán	Santa Eulalia	Total
Total Population	22,889	24,639	42,183	89,711
Children 0-59 months	2,370	4,954	5,310	12,634
Women: 15-49 years	7,089	7,659	13,310	28,058
TOTAL BENEFICIARIES	**12,613**	**13**	**18,620**	**40,692**

Final KPC

Beneficiary Population 2015	San Sebastián Coatán	San Miguel Acatán	Santa Eulalia	Total
Total Population	**23,447**	**26,741**	**37,261**	**87,449**
Children 0-59 months	2,940	4,855	5,653	13,448
Women: 15-49 years	6,422	6,014	10,696	23,132
TOTAL BENEFICIARIES	**9,362**	**10,869**	**16,349**	**36,580**

Age, Education, Fecundity	Baseline				Final KPC			
	Mean	Median	Range		Mean	Median	Range	
Age of Mother	27	25	16	48	26	24	15	46
Age of Child (in months)	11	11	0	23	10	10	0	23
Years Mother Attended School	2.6	2.5	0	11.5	3.4	3	0	15
Number of Deliveries Mother Has Had	4	3	1	14	4	3	1	14

Gender of Child	Baseline				Final KPC			
	Numerator	Denominator	Pctg.	Margin of Error	Numerator	Denominator	Pctg.	Margin of Error
Male	310	599	51.8%	4.9%	290	600	48.3%	4.9%
Female	289	599	48.2%	4.9%	310	600	51.7%	4.9%

Languages Spoken by Mother	Baseline				Final KPC			
	Numerator	Denominator	Pctg.	Margin of Error	Numerator	Denominator	Pctg.	Margin of Error
Spanish	103	599	17.2%	3.7%	243	600	40.5%	4.8%
Akateko	149	599	24.9%	4.2%	205	600	34.2%	4.6%
Chuj	139	599	23.2%	4.1%	152	600	25.3%	4.3%
Mam	0	599	0.0%	0.0%	1	600	0.2%	0.4%
Q'anjob'al	322	599	53.8%	4.9%	278	600	46.3%	4.9%
Other	0	599	0.0%	0.0%	1	600	0.2%	0.4%

Language Preferred by Mother	Baseline				Final KPC			
	Numerator	Denominator	Pctg.	Margin of Error	Numerator	Denominator	Pctg.	Margin of Error
Spanish	6	599	1.0%	1.0%	13	600	2.2%	1.4%
Akateko	140	599	23.4%	4.2%	184	600	30.7%	4.5%
Chuj	138	599	23.0%	4.1%	146	600	24.3%	4.2%
Mam	0	599	0.0%	0.0%	0	600	0.0%	0.0%
Q'anjob'al	319	599	53.3%	4.9%	262	600	43.7%	4.9%
Other	0	599	0.0%	0.0%	1	600	0.2%	0.4%

Father/Partner Living with Mother	Baseline				Final KPC			
	Numerator	Denominator	Pctg.	Margin of Error	Numerator	Denominator	Pctg.	Margin of Error
Yes	533	599	89.0%	3.1%	527	600	87.8%	3.2%
No	63	599	10.5%	3.0%	72	600	12.0%	3.2%
NA	1	599	0.2%	0.4%	0	600	0.0%	0.0%

Mother's Occupation	Baseline				Final KPC			
	Numerator	Denominator	Pctg.	Margin of Error	Numerator	Denominator	Pctg.	Margin of Error
Housewife (no work for wages)	550	599	91.8%	2.7%	569	600	94.8%	2.2%
Artisan/craft worker in the house	10	599	1.7%	1.3%	8	600	1.3%	1.1%
Small Store in the house	19	599	3.2%	1.7%	23	600	3.8%	1.9%
Other work from the house	2	599	0.3%	0.6%	3	600	0.5%	0.7%
Agricultural laborer	6	599	1.0%	1.0%	20	600	3.3%	1.8%
Food Seller	9	599	1.5%	1.2%	1	600	0.2%	0.4%
Salesperson in a store	2	599	0.3%	0.6%	3	600	0.5%	0.7%
Domestic employee	7	599	1.2%	1.1%	6	600	1.0%	1.0%
Unpaid Worker	4	599	0.7%	0.8%	4	600	0.7%	0.8%
Other	4	599	0.7%	0.8%	4	600	0.7%	0.8%

Maternal and Newborn Care (40% LOE)

Pre-Natal Care	Baseline				Final KPC			
	Num.	Denom.	Pctg.	Margin of Error	Num.	Denom.	Pctg.	Margin of Error
Quality Antenatal Care: Percentage of mothers of children age 0-23 months who had four or more antenatal visits with a skilled provider (doctor, nurse, professional midwife)	59	599	9.8%	2.9%	355	600	59.2%	4.8%
Tetanus Toxoid: Percentage of mothers with children age 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child.	378	599	63.1%	4.7%	390	600	65.0%	4.7%
Iron Tablets for Pregnant Women: Percentage of mothers of children age 0-23 months who took iron tablets or syrup for at least 90 days before the birth of their youngest child.	95	599	15.9%	3.6%	272	600	45.3%	4.9%
Knowledge of Danger Signs during Pregnancy: Percentage of mothers of children 0-23 months who knew at least two danger signs during pregnancy.	130	599	21.7%	4.0%	434	600	72.3%	4.4%

Clean Safe Births	Baseline				Final KPC			
	Num.	Denom.	Pctg.	Margin of Error	Num.	Denom.	Pctg.	Margin of Error
Skilled Birth Attendant: Percentage of children age 0-23 months whose births were attended by skilled personnel (doctor, nurse, professional midwife)	64	599	10.7%	3.0%	129	600	21.5%	4.0%
Birth in Health Facility: Percentage of children age 0-23 months whose births were attended by skilled personnel (doctor, nurse, professional midwife) in a health facility.	69	599	11.5%	3.1%	125	600	20.8%	4.0%
Births in home of interviewee attended by comadrona	488	599	81.5%	3.8%	246	600	41.0%	4.8%
Essential Newborn Care: Percentage of children age 0-23 who received all three elements of essential newborn care: thermal protection immediately after birth, clean cord care, and immediate and exclusive breastfeeding.	33	599	5.5%	2.2%	210	600	35.0%	4.7%
Active Management of Third Stage of Labor (ATMSL): Percentage of mothers of children age 0-23 months who received AMTSL during their most recent delivery: uterotonic drug; uterine massage; controlled cord traction.	49	599	8.2%	2.7%	93	600	15.5%	3.5%
Knowledge of Maternal Danger Signs During Delivery: Percentage of mothers of children 0-23 months who know at least two danger signs during delivery.	80	599	13.4%	3.3%	360	600	60.0%	4.8%
Births by Cesarean Section at health facility : Percent of pregnant women whose last delivery was by a cesarean section (C-section).	ND	ND	ND	ND	33	600	5.5%	2.2%

Post- Natal Care	Baseline				Final KPC			
	Num.	Denom.	Pctg.	Margin of Error	Num.	Denom.	Pctg.	Margin of Error
Post-Partum Visit for the Mother and Newborn: Percentage of mothers of children age 0-23 and children age 0-23 months who received a post-partum visit from an appropriate trained health worker within two days after the birth of the youngest child.	115	599	19.2%	3.9%	172	600	28.7%	4.4%
Knowledge of Post-partum Danger Signs: Percentage of mothers of children age 0-23 months who knew at least two post-partum danger signs.	107	599	17.9%	3.8%	362	600	60.3%	4.8%
Knowledge of Neonatal Danger Signs: Percentage of mothers of children age 0-23 who know at least two neonatal danger signs.	171	599	28.5%	4.4%	370	600	61.7%	4.8%
Vitamin A Supplementation for Mother: Percentage of mothers of children 0-23 months who received Vitamin A supplementation within 2 months post-partum	117	599	19.5%	3.9%	223	600	37.2%	4.7%

Breastfeeding and Child Nutrition

Breastfeeding and Child Nutrition (30% LOE)	Baseline				Final KPC			
	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Exclusive breastfeeding (0-5 months): Percent of infants aged 0-5 months who were given breast milk only in the 24 hours preceding survey	120	156	76.9%	8.1%	131	170	77.1%	7.7%
Vitamin A Supplementation for Child: Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall	338	443	76.3%	4.9%	303	429	70.6%	5.3%
IYCF practice indicator (6-23 months): Percent of infants and young children aged 6-23 months fed according to a minimum of appropriate feeding practices	242	443	54.6%	5.7%	299	429	69.7%	5.3%
Underweight: Percentage of children age 0-23 months who are underweight (<2 SD for the median weight for age, according to WHO/NCHS reference population)	107	599	17.9%	3.2%	118	588	20.1%	3.3%
Stunting: Percentage of children age 0-23 months who are stunted (<2 SD for the median height for age, according to WHO/NCHS reference population)	ND	ND	ND	ND	268	588	45.6%	4.1%

Family Planning/Child Spacing

Child Spacing	Baseline				Final KPC			
	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Knowledge of Risk Associated with Birth to Pregnancy Intervals Less than 24 Months: Percentage of mothers of children 0-23 months who know at least two risks of having a birth to pregnancy interval of less than 24 months	55	599	9.2%	2.8%	241	600	40.2%	4.8%
Current Contraceptive Use Among Mothers of Young Children: Percentage of non-pregnant mothers of children age 0-23 months who are using a modern contraceptive method	188	599	31.4%	4.6%	177	600	29.5%	4.5%
Short Birth Interval: Percentage of women whose interval between the births of her two youngest children was equal to or less than 24 months	152	599	25.4%	4.3%	131	600	21.8%	4.0%

Care of Sick Child

Acute Respiratory Infections (15% LOE)	Baseline				Final KPC			
	Num.	Denom.	Pctg.	Margin of Error	Num.	Denom.	Pctg.	Margin of Error
Percentage of children with cough and rapid/difficult breathing in the two weeks previous to the interview.	155	599	25.9%	4.3%	120	600	20.0%	3.9%
Appropriate Care Seeking for Pneumonia: Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider	36	155	23.2%	8.1%	59	120	49.2%	11.0%

Diarrhea Prevention and Case Management (10% LOE)	Baseline				Final KPC			
	Num.	Denom.	Pctg.	Margin of Error	Num.	Denom.	Result	Margin of Error
Percentage of children with diarrhea episode in the two weeks preceding the interview	238	599	39.7%	4.8%	220	600	36.7%	4.7%
ORT Use During a Diarrheal Episode: Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution and/or recommended home fluids	70	238	29.4%	7.1%	89	220	40.5%	7.9%
Increased fluid intake during a diarrheal episode: Percent of children 0-23 months with diarrhea in the last two weeks who were offered more fluids during the illness	18	238	7.6%	4.1%	38	220	17.3%	6.1%
Increased food intake during a diarrheal episode: Percent of children 0-23 months with diarrhea in the last two weeks who were offered the same amount or more food during the illness	3	238	1.3%	1.7%	6	220	2.7%	2.6%
Zinc Treatment for Diarrhea: Percent of children 0-23 months with diarrhea in the last two weeks who were treated with zinc supplements	10	238	4.2%	3.1%	23	220	10.5%	5.0%

Water and Sanitation

Water and Sanitation	Baseline				Final KPC			
	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Regular Point of Use Water Treatment: Percentage of households of children age 0-23 months that treat water effectively and regularly	374	599	62.4%	4.7%	586	600	97.7%	1.5%
Safe Water Storage: Percent of households that store water safely	66	599	11.0%	3.1%	162	600	27.0%	4.4%
Safe Feces Disposal: Percentage of households that disposed of the youngest child's feces safely the last time s/he passed stool	245	599	40.9%	4.8%	291	600	48.5%	4.9%
Appropriate Hand Washing Station: Percentage of mothers of children age 0-23 months who live in households with soap, water, and recipient at a designated place for hand washing *	14	599	2.3%	1.5%	266	600	44.3%	4.9%
Hand washing at Critical Times: Percent of mothers who usually wash their hands with soap before food preparation, before feeding children, after defecation, and after attending to a child who has defecated	9	599	1.5%	1.2%	188	600	31.3%	4.5%

Childhood Immunization (5% LOE)

Childhood Immunization (5% LOE)	Baseline				Final KPC			
	Num.	Denom.	Pctg.	Margin of Error	Num.	Denom.	Pctg.	Margin of Error
Measles Immunization: Percentage of children aged 12-23 months who received Measles vaccination by the time of the survey (card verified).	212	268	79.1%	6.0%	145	241	60.2%	7.6%
Vaccination Coverage: Percentage of children aged 12-23 months who received all required antigens and doses by the time of the survey- BCG, PENTA1-3, Polio1-3, and Measles (card verified).	190	268	70.9%	6.7%	129	241	53.5%	7.7%

Community Support of Maternal and Child Health

Community Support of Maternal and Child Health	Baseline				Final KPC			
	Num.	Denom.	Pctg.	Margin of Error	Num.	Denom.	Pctg.	Margin of Error
Community OE Response Plan: Percentage of mothers of children 0-23 months old who report that their community has in place an emergency response plan that would provide transport for them and/or their newborn child to the nearest health facility in the event of a difficult delivery or danger signs in pregnancy or during the post-partum period	199	599	33.2%	4.6%	292	600	48.7%	4.9%
Care Group Activity: Percentage of mothers of children 0-23 months old who report that in the past month they have either been a Care Group volunteer, participated in a Care Group meeting, or have been instructed by a Care Group member.	56	599	9.3%	2.9%	349	600	58.2%	4.8%
Community Solidarity								
Community Solidarity: Percentage of mothers of 0-23 month old children who report that their community has worked together to solve a community problem or make a community improvement in the past 3 months	87	599	14.5%	3.5%	101	600	16.8%	3.7%

Women´s Empowerment

Women's Empowerment	Baseline				Final KPC			
	Num.	Denom.	Pctg.	Margin of Error	Num.	Denom.	Pctg.	Margin of Error
Decision-Making re: ARI Treatment: Percentage of ARI episodes in 0-23 months old children in the past two weeks in which either the mother or the mother jointly with another person decided the care-seeking and/or treatment	116	155	74.8%	8.4%	98	120	81.7%	8.5%
Decision-Making re: Location of Delivery and Birth Attendant: Percentage of households with children 0-23 months in which either the mother of the mother jointly with another person decided the location and birth attendant of her last delivery	418	599	69.8%	4.5%	463	600	77.2%	4.1%
Control of Money for Purchasing Food for Children: Percentage of mothers of children 0-23 months who indicate that they do not need to ask for the money needed to buy the food necessary to meet the minimum acceptable feeding practices for infants and young children	53	443	12.0%	3.7%	57	600	9.5%	2.9%
Decision-Making re: Contraception: Percentage of households with children 0-23 months in which either the mother or the mother jointly with her husband/partner (or another person) decided if she would practice contraception and, if so, the method to be used	336	599	56.1%	4.9%	502	600	83.7%	3.6%
Women's Participation in Community Meetings: Percentage of mothers of 0-23 month old children who report that in the past 3 months they both attended and expressed their opinion at a community meeting.	62	599	10.4%	3.0%	157	600	26.2%	4.3%

Appendix G - Raw Data Tables Baseline and Final KPC by Phase 1 and Phase 2

Curamericas Global -- Curamericas Guatemala -- Child Survival Project

Baseline and Final KPC Results

Demographic Data

Baseline

Demographic Data	PHASE I				PHASE II			
Age. Education. Fecundity	Mean	Median	Range		Mean	Median	Range	
Age of Mother	26.5	25.0	16.0	44.0	26.6	25.0	15.0	51.0
Age of Child (in months)	10.2	10.0	0.0	23.0	11.1	11.0	0.0	23.0
Years Mother Attended School	2.8	3.0	0.0	13.0	2.4	2.0	0.0	10.0
Number of Deliveries Mother Has Had	3.6	3.0	1.0	15.0	3.8	3.0	1.0	12.0

Final KPC

Demographic Data	PHASE I				PHASE II			
Age. Education. Fecundity	Mean	Median	Range		Mean	Median	Range	
Age of Mother	25.7	24	14	46	26.0	24	15.0	45
Age of Child (in months)	10.1	10.0	0.0	23.0	10.4	10	0.0	23.0
Years Mother Attended School	3.4	3.0	0.0	17	3.4	3	0.0	13
Number of Deliveries Mother Has Had	3.4	3.0	1.0	14	3.6	3.0	1.0	14

Baseline	PHASE I				PHASE II			
Gender of Child	Numerator	Denominator	Pctg.	Margin of Error	Numerator	Denominator	Pctg.	Margin of Error
Male	152	299	50.8%	6.9%	158	300	52.7%	6.9%
Female	147	299	49.2%	6.9%	142	300	47.3%	6.9%

Final KPC	PHASE I				PHASE II			
Gender of Child	Numerator	Denominator	Pctg.	Margin of Error	Numerator	Denominator	Pctg.	Margin of Error
Male	150	300	50%	5.8%	140	300	46.7%	5.8%
Female	150	300	50%	5.8%	160	300	53.3%	5.8%

Baseline	PHASE I				PHASE II			
Languages Spoken by Mother	Numerator	Denominator	Pctg.	Margin of Error	Numerator	Denominator	Pctg.	Margin of Error
Spanish	56	299	18.70%	5.40%	47	300	15.70%	5.00%
Akateko	63	299	21.10%	5.70%	86	300	28.70%	6.30%
Chuj	70	299	23.40%	5.90%	69	300	23.00%	5.80%
Mam	0	299	0.00%	0.00%	0	300	0.00%	0.00%
Q'anjob'al	171	299	57.20%	6.90%	151	300	50.30%	6.90%
Other	0	299	0.00%	0.00%	0	300	0.00%	0.00%

Final KPC	PHASE I				PHASE II			
Languages Spoken by Mother	Numerator	Denominator	Pctg.	Margin of Error	Numerator	Denominator	Pctg.	Margin of Error
Spanish	132	300	44.0%	5.80%	111	300	37.0%	5.70%
Akateko	104	300	34.7%	5.60%	101	300	34.0%	6.60%
Chuj	74	300	24.7%	5.20%	78	300	26.0%	5.30%
Mam	0	300	0.0%	0.00%	1	300	0.0%	0.00%
Q'anjob'al	131	300	43.7%	5.70%	147	300	49.0%	5.80%
Other	0	300	0.0%	0.00%	1	300	0.0%	0.00%

Baseline	PHASE I				PHASE II			
Language Preferred by Mother	Numerator	Denominator	Pctg.	Margin of Error	Numerator	Denominator	Pctg.	Margin of Error
Spanish	5	299	1.7%	1.8%	1	300	0.3%	0.8%
Akateko	61	299	20.4%	5.6%	79	300	26.3%	6.1%
Chuj	69	299	23.1%	5.8%	69	300	23.0%	5.8%
Mam	0	299	0.0%	0.0%	0	300	0.0%	0.0%
Q'anjob'al	168	299	56.2%	6.9%	151	300	50.3%	6.9%
Other	0	299	0.0%	0.0%	0	300	0.0%	0.0%

Final KPC	PHASE I				PHASE II			
Language Preferred by Mother	Numerator	Denominator	Pctg.	Margin of Error	Numerator	Denominator	Pctg.	Margin of Error
Spanish	10	300	3.3%	6.4%	3	300	1.0%	1.9%
Akateko	99	300	33.0%	5.6%	85	300	28.3%	5.5%
Chuj	72	300	24.0%	5.2%	74	300	24.7%	5.2%
Mam	0	300	0.0%	0.0%	0	300	0.0%	0.0%
Q'anjob'al	122	300	40.7%	5.8%	140	300	46.7%	5.8%
Other	1	300	0.3%	0.0%	0	300	0.0%	0.0%

Baseline	PHASE I				PHASE II			
Father/Partner Living with Mother	**Numerator**	**Denominator**	**Pctg.**	**Margin of Error**	**Numerator**	**Denominator**	**Pctg.**	**Margin of Error**
Yes	265	299	88.6%	4.4%	268	300	89.3%	4.3%
No	32	299	10.7%	4.3%	31	300	10.3%	4.2%
NA	0	299	0.0%	0.0%	1	300	0.3%	0.1%

Final KPC	PHASE I				PHASE II			
Father/Partner Living with Mother	**Numerator**	**Denominator**	**Pctg.**	**Margin of Error**	**Numerator**	**Denominator**	**Pctg.**	**Margin of Error**
Yes	261	300	87.0%	3.6%	266	300	88.7%	3.7%
No	38	300	12.7%	4.30%	34	300	11.3%	3.7%
NA	0	300	0.0%	0.0%	0	300	0.0%	0.0%

Baseline	PHASE I				PHASE II			
Mother's Occupation	**Numerator**	**Denominator**	**Pctg.**	**Margin of Error**	**Numerator**	**Denominator**	**Pctg.**	**Margin of Error**
Housewife (no work for wages)	266	299	89.0%	4.4%	284	300	94.7%	3.1%
Artisan/craft worker in the house	2	299	0.7%	1.1%	8	300	2.7%	2.2%
Small Store in the house	16	299	5.4%	3.1%	3	300	1.0%	1.4%
Other work from the house	2	299	0.7%	1.1%	0	300	0.0%	0.0%
Agricultural laborer	5	299	1.7%	1.8%	1	300	0.3%	0.8%
Food Seller	1	299	0.3%	0.8%	8	300	2.7%	2.2%
Salesperson in a store	1	299	0.3%	0.8%	1	300	0.3%	0.8%
Domestic employee	6	299	2.0%	1.9%	1	300	0.3%	0.8%
Unpaid Worker	2	299	0.7%	1.1%	2	300	0.7%	1.1%
Other	2	299	0.7%	1.1%	2	300	0.7%	1.1%

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Final KPC	PHASE I				PHASE II			
Mother's Occupation	Numerator	Denominator	Pctg.	Margin of Error	Numerator	Denominator	Pctg.	Margin of Error
Housewife (no work for wages)	283	300	94.3%	2.3%	286	300	95.3%	2.6%
Artisan/craft worker in the house	3	300	1.0%	2.0%	5	300	1.7%	1.7%
Small Store in the house	11	300	3.7%	1.7%	12	300	4.0%	2.4%
Other work from the house	2	300	0.7%	1.1%	1	300	0.3%	0.9%
Agricultural laborer	7	300	2.3%	2.4%	13	300	4.3%	2.5%
Food Seller	1	300	0.3%	1.5%	0	300	0.0%	0.0%
Salesperson in a store	3	300	1.0%	1.8%	0	300	0.0%	0.0%
Domestic employee	4	300	1.3%	2.5%	2	300	0.7%	1.2%
Unpaid Worker	2	300	0.7%	1.7%	2	300	0.7%	1.2%
Other	3	300	1.0%	1.9%	1	300	0.3%	0.9%

Maternal and Neonatal Care(40% LOE)

Baseline	PHASE I				PHASE II			
Pre-Natal Care	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Quality Antenatal Care: Percentage of mothers of children age 0-23 months who had four or more antenatal visits with a skilled provider (doctor. nurse. professional midwife)	40	299	13.4%	4.7%	19	300	6.3%	3.4%
Tetanus Toxoid: Percentage of mothers with children age 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child.	189	299	63.2%	6.7%	189	300	63.0%	6.7%
Iron Tablets for Pregnant Women: Percentage of mothers of children age 0-23 months who took iron tablets or syrup for at least 90 days before the birth of their youngest child.	65	299	21.7%	5.7%	30	300	10.0%	4.2%
Knowledge of Danger Signs during Pregnancy: Percentage of mothers of children 0-23 months who knew at least two danger signs during pregnancy.	66	299	22.1%	5.8%	64	300	21.3%	5.7%

Final KPC	PHASE I				PHASE II			
Pre-Natal Care	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Quality Antenatal Care: Percentage of mothers of children age 0-23 months who had four or more antenatal visits with a skilled provider (doctor. nurse. professional midwife)	195	300	65.0%	5.5%	160	300	53.3%	5.9%
Tetanus Toxoid: Percentage of mothers with children age 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child.	203	300	67.7%	4.9%	187	300	62.3%	5.4%
Iron Tablets for Pregnant Women: Percentage of mothers of children age 0-23 months who took iron tablets or syrup for at least 90 days before the birth of their youngest child.	193	300	64.3%	5.6%	79	300	26.3%	5.6%
Knowledge of Danger Signs during Pregnancy: Percentage of mothers of children 0-23 months who knew at least two danger signs during pregnancy.	235	300	78.3%	4.8%	199	300	66.3%	5.5%

Baseline	PHASE I				PHASE II			
Clean Safe Births	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Skilled Birth Attendant: Percentage of children age 0-23 months whose births were attended by skilled personnel (doctor. nurse. professional midwife)	46	299	15.4%	5.0%	18	300	6.0%	3.3%
Birth in Health Facility: Percentage of children age 0-23 months whose births were attended by skilled personnel (doctor. nurse. professional midwife) in a health facility.	49	299	16.4%	5.1%	20	300	6.7%	3.5%
Births in home of interviewee attended by comadrona	232	299	77.6%	5.8%	256	300	85.3%	4.9%
Essential Newborn Care: Percentage of children age 0-23 who received all three elements of essential newborn care: thermal protection immediately after birth. clean cord care. and immediate and exclusive breastfeeding.	18	299	6.0%	3.3%	15	300	5.0%	3.0%
Active Management of Third Stage of Labor (ATMSL): Percentage of mothers of children age 0-23 months who received AMTSL during their most recent delivery: uterotonic drug; uterine massage; controlled cord traction.	28	299	9.4%	4.0%	21	300	7.0%	3.5%
Knowledge of Maternal Danger Signs During Delivery: Percentage of mothers of children 0-23 months who know at least two danger signs during delivery.	40	299	13.4%	4.7%	40	300	13.3%	4.7%

Final KPC	PHASE I				PHASE II			
Clean Safe Births	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Skilled Birth Attendant: Percentage of children age 0-23 months whose births were attended by skilled personnel (doctor. nurse. professional midwife)	88	300	29.3%	5.2%	41	300	13.7%	3.9%
Birth in Health Facility: Percentage of children age 0-23 months whose births were attended by skilled personnel (doctor. nurse. professional midwife) in a health facility.	86	300	28.7%	5.1%	39	300	13.0%	3.8%
Births in home of interviewee attended by comadrona	214	300	71.3%	5.3%	214	300	71.3%	5.3%
Essential Newborn Care: Percentage of children age 0-23 who received all three elements of essential newborn care: thermal protection immediately after birth. clean cord care. and immediate and exclusive breastfeeding.	117	300	39.0%	5.5%	93	300	31.0%	5.2%
Active Management of Third Stage of Labor (ATMSL): Percentage of mothers of children age 0-23 months who received AMTSL during their most recent delivery: uterotonic drug; uterine massage; controlled cord traction.	60	300	20.0%	4.5%	33	300	11.0%	3.6%
Knowledge of Maternal Danger Signs During Delivery: Percentage of mothers of children 0-23 months who know at least two danger signs during delivery.	199	300	66.3%	5.3%	161	300	53.7%	5.6%
Births by Cesarean Section at health facility : Percent of pregnant women whose last delivery was by a cesarean section (C-section).	26	300	8.7%	3.4%	7	300	2.3%	1.9%

Baseline	PHASE I				PHASE II			
Post- Natal Care	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Post-Partum Visit for the Mother and Newborn: Percentage of mothers of children age 0-23 and children age 0-23 months who received a post-partum visit from an appropriate trained health worker within two days after the birth of the youngest child.	67	299	22.4%	5.8%	48	300	16.0%	5.1%
Knowledge of Post-partum Danger Signs: Percentage of mothers of children age 0-23 months who knew at least two post-partum danger signs.	51	299	17.1%	5.2%	56	300	18.7%	5.4%
Knowledge of Neonatal Danger Signs: Percentage of mothers of children age 0-23 who know at least two neonatal danger signs.	82	299	27.4%	6.2%	89	300	29.7%	6.3%
Vitamin A Supplementation for Mother: Percentage of mothers of children 0-23 months who received Vitamin A supplementation within 2 months post-partum	66	299	22.1%	5.8%	51	300	17.0%	5.2%

Final KPC

Post- Natal Care	PHASE I				PHASE II			
Maternal and Newborn Care (40% LOE)	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Post-Partum Visit for the Mother and Newborn: Percentage of mothers of children age 0-23 and children age 0-23 months who received a post-partum visit from an appropriate trained health worker within two days after the birth of the youngest child.	117	300	39.0%	5.8%	55	300	18.3%	4.3%
Knowledge of Post-partum Danger Signs: Percentage of mothers of children age 0-23 months who knew at least two post-partum danger signs.	199	300	66.3%	5.5%	163	300	54.3%	5.8%
Knowledge of Neonatal Danger Signs: Percentage of mothers of children age 0-23 who know at least two neonatal danger signs.	194	300	64.7%	5.5%	176	300	58.7%	5.7%
Vitamin A Supplementation for Mother: Percentage of mothers of children 0-23 months who received Vitamin A supplementation within 2 months post-partum	143	300	47.7%	5.8%	80	300	26.7%	5.1%

Breastfeeding and Child Nutrition (30% LOE)

Baseline	PHASE I				PHASE II			
Breastfeeding and Child Nutrition	**Num.**	**Denom.**	**Result**	**Margin of Error**	**Num.**	**Denom.**	**Result**	**Margin of Error**
Exclusive breastfeeding (0-5 months): Percent of infants aged 0-5 months who were given breast milk only in the 24 hours preceding survey	63	84	75.0%	11.3%	57	72	79.2%	11.5%
Vitamin A Supplementation for Child: Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall	170	215	79.1%	6.7%	168	228	73.7%	7.0%
IYCF practice indicator (6-23 months): Percent of infants and young children aged 6-23 months fed according to a minimum of appropriate feeding practices	114	215	53.0%	8.2%	128	228	56.1%	7.9%
Underweight: Percentage of children age 0-23 months who are underweight (<2 SD for the median weight for age. according to WHO/NCHS reference population)	48	298	16.1%	5.1%	59	300	19.7%	5.5%

Final KPC	PHASE I				PHASE II			
Breastfeeding and Child Nutrition	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Exclusive breastfeeding (0-5 months): Percent of infants aged 0-5 months who were given breast milk only in the 24 hours preceding survey	73	89	82.0%	8.0%	58	81	71.6%	9.8%
Vitamin A Supplementation for Child: Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall	156	210	74.3%	5.9%	147	219	67.1%	6.2%
IYCF practice indicator (6-23 months): Percent of infants and young children aged 6-23 months fed according to a minimum of appropriate feeding practices	156	210	74.3%	5.9%	143	219	65.3%	6.3%
Underweight: Percentage of children age 0-23 months who are underweight (<2 SD for the median weight for age. according to WHO/NCHS reference population)	59	294	20.1%	5.0%	59	294	20.1%	5.0%
Stunting: Percentage of children age 0-23 months who are stunted (<2 SD for the median height for age. according to WHO/NCHS reference population)	116	294	39.5%	5.7%	152	294	51.7%	5.9%

Family Planning/Child Spacing

Baseline	PHASE I				PHASE II			
Child Spacing	**Num.**	**Denom.**	**Result**	**Margin of Error**	**Num.**	**Denom.**	**Result**	**Margin of Error**
Knowledge of Risk Associated with Birth to Pregnancy Intervals Less than 24 Months: Percentage of mothers of children 0-23 months who know at least two risks of having a birth to pregnancy interval of less than 24 months	19	299	6.4%	3.4%	36	300	12.0%	4.5%
Current Contraceptive Use Among Mothers of Young Children: Percentage of non-pregnant mothers of children age 0-23 months who are using a modern contraceptive method	107	299	35.8%	6.7%	81	300	27.0%	6.2%
Short Birth Interval: Percentage of women whose interval between the births of her two youngest children was equal to or less than 24 months	75	299.	25.1%	6.3%	77	300	25.7%	6.1%

Final KPC	PHASE I				PHASE II			
Child Spacing	**Num.**	**Denom.**	**Result**	**Margin of Error**	**Num.**	**Denom.**	**Result**	**Margin of Error**
Knowledge of Risk Associated with Birth to Pregnancy Intervals Less than 24 Months: Percentage of mothers of children 0-23 months who know at least two risks of having a birth to pregnancy interval of less than 24 months	140	300	46.7%	5.6%	101	300	33.7%	5.3%
Current Contraceptive Use Among Mothers of Young Children: Percentage of non-pregnant mothers of children age 0-23 months who are using a modern contraceptive method	102	300	34.0%	5.4%	75	300	25.0%	4.9%
Short Birth Interval: Percentage of women whose interval between the births of her two youngest children was equal to or less than 24 months	56	300	18.7%	4.4%	75	300	25.0%	4.9%

Care of Sick Child

Baseline	PHASE I				PHASE II			
Acute Respiratory Infections (15% LOE)	**Num.**	**Denom.**	**Result**	**Margin of Error**	**Num.**	**Denom.**	**Result**	**Margin of Error**
Percentage of children with cough and rapid/difficult breathing in the two weeks previous to the interview.	77	299	25.8%	6.1%	78	300	26.0%	6.1%
Appropriate Care Seeking for Pneumonia: Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider	20	77	26.0%	12.0%	16	78	20.5%	11.0%

Final KPC	PHASE I				PHASE II			
Acute Respiratory Infections (15% LOE)	**Num.**	**Denom.**	**Result**	**Margin of Error**	**Num.**	**Denom.**	**Result**	**Margin of Error**
Percentage of children with cough and rapid/difficult breathing in the two weeks previous to the interview.	62	300	20.7%	6.1%	58	300	19.3%	6.1%
Appropriate Care Seeking for Pneumonia: Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider	32	62	51.6%	12.0%	27	58	46.6%	11.0%

Baseline	PHASE I				PHASE II			
Diarrhea Prevention and Case Management (10% LOE)	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Percentage of children with diarrhea episode in the two weeks preceding the interview	120	299	**40.1%**	6.8%	118	300	**39.8%**	6.8%
ORT Use During a Diarrheal Episode: Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution and/or recommended home fluids	34	120	**28.3%**	9.9%	36	118	**30.5%**	10.2%
Increased fluid intake during a diarrheal episode: Percent of children 0-23 months with diarrhea in the last two weeks who were offered more fluids during the illness	9	120	**7.5%**	5.8%	9	118	**7.6%**	5.9%
Increased food intake during a diarrheal episode: Percent of children 0-23 months with diarrhea in the last two weeks who were offered the same amount or more food during the illness	0	120	**0.0%**	0.0%	3	118	**2.5%**	3.5%
Zinc Treatment for Diarrhea: Percent of children 0-23 months with diarrhea in the last two weeks who were treated with zinc supplements	8	120	**6.7%**	5.5%	2	118	**1.7%**	2.9%

Final KPC	PHASE I				PHASE II			
Diarrhea Prevention and Case Management (10% LOE)	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Percentage of children with diarrhea episode in the two weeks preceding the interview	103	300	**34.3%**	5.4%	117	300	**39.0%**	5.5%
ORT Use During a Diarrheal Episode: Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution and/or recommended home fluids	42	103	**40.8%**	9.5%	47	117	**40.2%**	8.9%
Increased fluid intake during a diarrheal episode: Percent of children 0-23 months with diarrhea in the last two weeks who were offered more fluids during the illness	19	103	**18.4%**	7.4%	19	117	**16.2%**	6.6%
Increased food intake during a diarrheal episode: Percent of children 0-23 months with diarrhea in the last two weeks who were offered the same amount or more food during the illness	0	103	**0.0%**	0.0%	6	117	**5.1%**	4.0%
Zinc Treatment for Diarrhea: Percent of children 0-23 months with diarrhea in the last two weeks who were treated with zinc supplements	11	103	**10.7%**	5.9%	12	117	**10.3%**	5.5%

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Water and Sanitation

Baseline	PHASE I				PHASE II			
Water and Sanitation	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Regular Point of Use Water Treatment: Percentage of households of children age 0-23 months that treat water effectively and regularly	199	299	**66.6%**	6.5%	175	300	**58.3%**	6.8%
Safe Water Storage: Percent of households that store water safely	35	299	**11.7%**	4.5%	31	300	**10.3%**	4.2%
Safe Feces Disposal: Percentage of households that disposed of the youngest child's feces safely the last time s/he passed stool	129	299	**43.1%**	6.9%	116	300	**38.7%**	6.7%
Appropriate Hand Washing Station: Percentage of mothers of children age 0-23 months who live in households with soap. water. and recipient at a designated place for hand washing *	7	299	**2.3%**	2.1%	7	300	**2.3%**	2.1%
Hand washing at Critical Times: Percent of mothers who usually wash their hands with soap before food preparation. before feeding children. after defecation. and after attending to a child who has defecated	4	299	**1.3%**	1.6%	5	300	**1.7%**	1.8%

Final KPC	PHASE I				PHASE II			
Water and Sanitation	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Regular Point of Use Water Treatment: Percentage of households of children age 0-23 months that treat water effectively and regularly	293	300	**97.7%**	1.7%	293	300	**97.7%**	1.7%
Safe Water Storage: Percent of households that store water safely	84	300	**28.0%**	5.1%	78	300	**26.0%**	5.0%
Safe Feces Disposal: Percentage of households that disposed of the youngest child's feces safely the last time s/he passed stool	135	300	**45.0%**	5.6%	156	300	**52.0%**	5.7%
Appropriate Hand Washing Station: Percentage of mothers of children age 0-23 months who live in households with soap. water. and recipient at a designated place for hand washing *	134	300	**44.7%**	5.6%	132	300	**44.0%**	5.6%
Hand washing at Critical Times: Percent of mothers who usually wash their hands with soap before food preparation. before feeding children. after defecation. and after attending to a child who has defecated	102	300	**34.0%**	5.4%	86	300	**28.7%**	5.1

Childhood Immunization (5% LOE)								
Baseline	PHASE I				PHASE II			
Childhood Immunization (5% LOE)	**Num.**	**Denom.**	**Result**	**Margin of Error**	**Num.**	**Denom.**	**Result**	**Margin of Error**
Measles Immunization: Percentage of children aged 12-23 months who received Measles vaccination by the time of the survey (card verified).	96	121	**79.3%**	8.8%	116	147	**78.9%**	8.1%
Vaccination Coverage: Percentage of children aged 12-23 months who received all required antigens and doses by the time of the survey-BCG. PENTA1-3. Polio1-3. and Measles (card verified).	89	121	**73.6%**	9.6%	101	147	**68.7%**	9.2%
Vaccination Coverage: Percentage of children aged 12-23 months who received PENTA1 (card verified).	101	121	83.5%	8.1%	130	147	88.4%	6.3%
Vaccination Coverage: Percentage of children aged 12-23 months who received PENTA3 (card verified)	**96**	121	79.3%	8.8%	122	147	83.0%	7.4%

Final KPC	PHASE I				PHASE II			
Childhood Immunization (5% LOE)	**Num.**	**Denom.**	**Result**	**Margin of Error**	**Num.**	**Denom.**	**Result**	**Margin of Error**
Measles Immunization: Percentage of children aged 12-23 months who received Measles vaccination by the time of the survey (card verified).	79	122	**64.8%**	8.4%	66	119	**55.5%**	8.9%
Vaccination Coverage: Percentage of children aged 12-23 months who received all required antigens and doses by the time of the survey-BCG. PENTA1-3. Polio1-3. and Measles (card verified).	69	122	**56.6%**	8.8%	60	119	**50.4%**	9.0%

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Vaccination Coverage: Percentage of children aged 12-23 months who received PENTA1 (card verified).	114	122	**97.5%**	5.2%	114	119	**95.7%**	4.0%
Vaccination Coverage: Percentage of children aged 12-23 months who received PENTA3 (card verified)	106	122	**86.9%**	5.6%	91	119	**75.6%**	7.6%

Community Support of Maternal and Child Care

Baseline	PHASE I				PHASE II			
Community Support of Maternal and Child Health	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Community OE Response Plan: Percentage of mothers of children 0-23 months old who report that their community has in place an emergency response plan that would provide transport for them and/or their newborn child to the nearest health facility in the event of a difficult delivery or danger signs in pregnancy or during the post-partum period	88	299	**29.4%**	6.3%	111	300	**37.0%**	6.7%
Care Group Activity: Percentage of mothers of children 0-23 months old who report that in the past month they have either been a Care Group volunteer. participated in a Care Group meeting. or have been instructed by a Care Group member.	25	299	**8.4%**	3.8%	31	300	**10.3%**	4.2%
Community Solidarity								
Community Solidarity: Percentage of mothers of 0-23 month old children who report that their community has worked together to solve a community problem or make a community improvement in the past 3 months	39	299	**13.0%**	4.7%	48	300	**16.0%**	5.1%

Final KPC	PHASE I				PHASE II			
Community Support of Maternal and Child Health	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Community OE Response Plan: Percentage of mothers of children 0-23 months old who report that their community has in place an emergency response plan that would provide transport for them and/or their newborn child to the nearest health facility in the event of a difficult delivery or danger signs in pregnancy or during the post-partum period	134	300	**44.7%**	5.7%	158	300	**52.7%**	6.7%
Care Group Activity: Percentage of mothers of children 0-23 months old who report that in the past month they have either been a Care Group volunteer, participated in a Care Group meeting, or have been instructed by a Care Group member.	203	300	**67.7%**	5.4%	179	300	**59.7%**	5.6
Community Solidarity								
Community Solidarity: Percentage of mothers of 0-23 month old children who report that their community has worked together to solve a community problem or make a community improvement in the past 3 months	33	300	**11.0%**	3.5%	68	300	**22.7%**	4.8%

Women's Empowerment

Baseline	PHASE I				PHASE II			
Women's Empowerment	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Decision-Making re: ARI Treatment: Percentage of ARI episodes in 0-23 months old children in the past two weeks in which either the mother or the mother jointly with another person decided the care-seeking and/or treatment	56	77	**72.7%**	12.2%	60	78	**76.9%**	11.5%
Decision-Making re: Location of Delivery and Birth Attendant: Percentage of households with children 0-23 months in which either the mother of the mother jointly with another person decided the location and birth attendant of her last delivery	204	299	**68.2%**	6.5%	214	300	**71.3%**	6.3%
Control of Money for Purchasing Food for Children: Percentage of mothers of children 0-23 months who indicate that they do not need to ask for the money needed to buy the food necessary to meet the minimum acceptable feeding practices for infants and young children	27	215	**12.6%**	5.4%	26	228	**11.4%**	5.1%
Decision-Making re: Contraception: Percentage of households with children 0-23 months in which either the mother or the mother jointly with her husband/partner (or another person) would practice contraception and. if so. the method to be used	169	299	**56.5%**	6.9%	167	300	**55.7%**	6.9%
Women's Participation in Community Meetings: Percentage of mothers of 0-23 month old children who report that in the past 3 months they both attended and expressed their opinion at a community meeting.	30	299	**10.0%**	4.2%	32	300	**10.7%**	4.3%

Final KPC

Women's Empowerment	PHASE I				PHASE II			
	Num.	Denom.	Result	Margin of Error	Num.	Denom.	Result	Margin of Error
Decision-Making re: ARI Treatment: Percentage of ARI episodes in 0-23 months old children in the past two weeks in which either the mother or the mother jointly with another person decided the care-seeking and/or treatment	46	62	**74.2%**	10.9%	52	58	**89.7%**	7.8%
Control of Money for Purchasing Food for Children: Percentage of mothers of children 0-23 months who indicate that they do not need to ask for the money needed to buy the food necessary to meet the minimum acceptable feeding practices for infants and young children	35	300	**11.7%**	3.6%	22	300	**7.3%**	2.9%
Decision-Making re: Contraception: Percentage of households with children 0-23 months in which either the mother or the mother jointly with her husband/partner (or another person) would practice contraception and. if so. the method to be used	253	300	**84.3%**	4.1%	249	300	**83.0%**	4.3
Women's Participation in Community Meetings: Percentage of mothers of 0-23 month old children who report that in the past 3 months they both attended and expressed their opinion at a community meeting.	73	300	**24.3%**	4.8%	84	300	**28.0%**	5.1%

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Community health priorities

COMMUNITY HEALTH PRIORITIES	Baseline		Final KPC	
	PHASE I	PHASE II	PHASE I	PHASE II
Diarrhea	35.8%	37.0%	59.3%	53.3%
Pneumonia/Respiratory Infections	26.1%	19.7%	49.0%	43.0%
General Lack of Medical Attention	21.7%	17.7%	27.0%	21.3%
Fever	11.7%	8.3%	17.0%	12.0%
Measles	2.0%	3.0%	9.0%	6.3%
Lack of Prenatal and Postnatal Care	8.7%	10.7%	7.7%	4.3%
Malnutrition/Food Insecurity	5.4%	3.7%	1.7%	4.3%
Lack of transportation to health facilities	6.7%	10.0%	4.7%	3.7%
Lack of Clean. Safe Deliveries	6.0%	8.7%	4.3%	3.7%
Strokes	1.3%	0.7%	1.0%	3.7%
Diabetes	1.0%	1.3%	4.3%	2.7%
Accidents	4.3%	3.3%	1.7%	2.3%
Lack of Family Planning	1.7%	0.7%	2.3%	1.3%
Heart Disease	1.7%	0.7%	0.3%	1.0%
Obstetric Emergencies	2.0%	1.7%	2.0%	0.6%
Health personnel who do not respect us	1.0%	1.0%	0.7%	0.0%
Other	9.7%	5.3%	17.0%	10.0%

Appendix H - Rapid Catch Indicators

BASELINE INDICATORS	PHASE I AREA				PHASE II AREA			
	Num.	Denom.	Pctg	Margin of Error	Num.	Denom.	Pctg	Margin of Error
Quality Antenatal Care: Percentage of mothers of children age 0-23 months who had four or more antenatal visits with a skilled provider (doctor. nurse. professional midwife)	40	299	13.4%	4.7%	19	300	6.3%	3.4%
Tetanus Toxoid: Percentage of mothers with children age 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child.	189	299	63.2%	6.7%	189	300	63.0%	6.7%
Skilled Birth Attendant: Percentage of children age 0-23 months whose births were attended by skilled personnel (doctor. nurse. professional midwife)	46	299	15.4%	5.0%	18	300	6.0%	3.3%
Current Contraceptive Use Among Mothers of Young Children: Percentage of mothers of children age 0-23 months who are using a modern contraceptive method	107	299	35.8%	6.7%	81	300	27.0%	6.2%
Post-Partum Visit for the Mother and Newborn: Percentage of mothers of children age 0-23 and children age 0-23 months who received a post-partum visit from an appropriate trained health worker within two days after the birth of the youngest child.	67	299	22.4%	5.8%	48	300	16.0%	5.1%
Exclusive breastfeeding (0-5 months): Percent of infants aged 0-5 months who were given breast milk only in the 24 hours preceding survey	63	84	75.0%	11.3%	57	72	79.2%	11.5%

BASELINE INDICATORS	PHASE I AREA				PHASE II AREA			
	Num.	Denom.	Pctg	Margin of Error	Num.	Denom.	Pctg	Margin of Error
IYCF practice indicator (6-23 months): Percent of infants and young children aged 6-23 months fed according to a minimum of appropriate feeding practices	114	215	53.0%	8.2%	128	228	56.1%	7.9%
Vitamin A Supplementation for Child: Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall	170	215	79.1%	6.7%	168	228	73.7%	7.0%
Measles Immunization: Percentage of children aged 12-23 months who received Measles vaccination by the time of the survey (card verified).	96	121	79.3%	8.8%	116	147	78.9%	8.1%
Vaccination Coverage: Percentage of children aged 12-23 months who received PENTA1 (card verified).-Note: PENTA=DPT in Guatemala	101	121	83.5%	8.1%	130	147	88.4%	6.3%
Vaccination Coverage: Percentage of children aged 12-23 months who received PENTA3 (card verified). Note: PENTA=DPT in Guatemala	**96**	121	79.3%	8.8%	122	147	83.0%	7.4%
ORT Use During a Diarrheal Episode: Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution and/or recommended home fluids	34	120	28.3%	9.9%	36	118	30.5%	10.2%
Appropriate Care Seeking for Pneumonia: Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider	20	77	26.0%	12.0%	16	78	20.5%	11.0%

Regular Point of Use Water Treatment: Percentage of households of children age 0-23 months that treat water effectively and regularly	199	299	66.6%	6.5%	175	300	58.3%	6.8%
Hand washing at Critical Times: Percent of mothers who usually wash their hands with soap before food preparation. before feeding children. after defecation. and after attending to a child who has defecated	4	299	1.3%	1.6%	5	300	**1.7%**	1.8%
Underweight: Percentage of children age 0-23 months who are underweight (<2 SD for the median weight for age. according to WHO/NCHS reference population)	48	298	16.1%	5.1%	59	300	19.7%	5.5%

FINAL INDICATORS	PHASE I AREA				PHASE II AREA			
	Num.	Denom.	Pctg	Margin of Error	Num.	Denom.	Pctg	Margin of Error
Quality Antenatal Care: Percentage of mothers of children age 0-23 months who had four or more antenatal visits with a skilled provider (doctor. nurse. professional midwife)	195	300	65.0%	5.5%	160	300	53.3%	5.9%
Tetanus Toxoid: Percentage of mothers with children age 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child.	203	300	67.7%	4.9%	187	300	62.3%	5.4%
Skilled Birth Attendant: Percentage of children age 0-23 months whose births were attended by skilled personnel (doctor. nurse. professional midwife)	88	300	29.3%	5.2%	41	300	13.7%	3.9%

Indicator								
Current Contraceptive Use Among Mothers of Young Children: Percentage of mothers of children age 0-23 months who are using a modern contraceptive method	102	300	34.0%	5.4%	75	300	25.0%	4.9%
Post-Partum Visit for the Mother and Newborn: Percentage of mothers of children age 0-23 and children age 0-23 months who received a post-partum visit from an appropriate trained health worker within two days after the birth of the youngest child.	117	300	39.0%	5.8%	55	300	18.3%	4.3%
Exclusive breastfeeding (0-5 months): Percent of infants aged 0-5 months who were given breast milk only in the 24 hours preceding survey	73	89	82.0%	8.0%	58	81	71.6%	9.8%
IYCF practice indicator (6-23 months): Percent of infants and young children aged 6-23 months fed according to a minimum of appropriate feeding practices	156	210	74.3%	5.9%	143	219	65.3%	6.3%
Vitamin A Supplementation for Child: Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall	156	210	74.3%	5.9%	147	219	67.1%	6.2%
Measles Immunization: Percentage of children aged 12-23 months who received Measles vaccination by the time of the survey (card verified).	79	122	64.8%	8.4%	66	119	55.5%	8.9%

FINAL INDICATORS	PHASE I AREA				PHASE II AREA			
	Num.	Denom.	Pctg	Margin of Error	Num.	Denom.	Pctg	Margin of Error
Vaccination Coverage: Percentage of children aged 12-23 months who received PENTA1 (card verified).-Note: PENTA=DPT in Guatemala	114	122	97.5%	5.2%	114	119	95.7%	4.0%
Vaccination Coverage: Percentage of children aged 12-23 months who received PENTA3 (card verified). Note: PENTA=DPT in Guatemala	106	122	86.9%	5.6%	91	119	75.6%	7.6%
ORT Use During a Diarrheal Episode: Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution and/or recommended home fluids	42	103	40.8%	9.5%	47	117	40.2%	8.9%
Appropriate Care Seeking for Pneumonia: Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider	32	62	51.6%	12.0%	27	58	46.6%	11.0%
Regular Point of Use Water Treatment: Percentage of households of children age 0-23 months that treat water effectively and regularly	293	300	97.7%	1.7%	293	300	97.7%	1.7%
Hand washing at Critical Times: Percent of mothers who usually wash their hands with soap before food preparation. before feeding children. after defecation. and after attending to a child who has defecated	102	300	34.0%	5.4%	86	300	28.7%	5.1%
Underweight: Percentage of children age 0-23 months who are underweight (<2 SD for the median weight for age. according to WHO/NCHS reference population)	59	294	20.1%	5.0%	59	294	20.1%	5.0%

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Rapid CATCH Indicators Baseline - Final KPC

Indicator	Baseline				Final KPC				P Value Fisher Exact
	Num.	Denom.	Result	Confidence Interval	Num.	Denom.	Result	Confidence interval	
Quality Antenatal Care: Percentage of mothers of children age 0-23 months who had four or more antenatal visits with a skilled provider (doctor. nurse. professional midwife)	59	599	9.8%	7.4, 12.2	355	600	59.2%	55.3, 63.1	0.000
Tetanus Toxoid: Percentage of mothers with children age 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child.	378	599	63.1%	59.2, 66.9	390	600	65.0%	61.1, 68.8	0.266
Skilled Birth Attendant: Percentage of children age 0-23 months whose births were attended by skilled personnel (doctor. nurse. professional midwife)	64	599	10.7%	8.2, 13.1	129	600	21.5%	18.2, 24.7	0.000
Post-Partum Visit for the Mother and Newborn: Percentage of mothers of children age 0-23 and children age 0-23 months who received a post-partum visit from an appropriate trained health worker within two days after the birth of the youngest child.	115	599	19.2%	16.0, 22.3	172	600	28.7%	25.0, 32.3	0.000

Indicator	Num.	Denom.	Result	Confidence Interval	Num.	Denom.	Result	Confidence interval	P Value Fisher Exact
Current Contraceptive Use Among Mothers of Young Children: Percentage of non-pregnant mothers of children age 0-23 months who are using a modern contraceptive method	188	599	31.4%	27.6, 35.1	177	600	29.5%	25.8, 33.1	0.49
Exclusive breastfeeding (0-5 months): Percent of infants aged 0-5 months who were given breast milk only in the 24 hours preceding survey	120	156	76.9%	70.2, 83.5	131	170	77.1%	70.7, 83.4	0.54
Vitamin A Supplementation for Child: Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall	338	443	76.3%	72.3, 80.2	303	429	70.6%	66.2, 74.9	0.065
IYCF practice indicator (6-23 months): Percent of infants and young children aged 6-23 months fed according to a minimum of appropriate feeding practices	242	443	54.6%	49.9, 59.2	299	429	69.7%	65.3, 74.0	0.000
Underweight: Percentage of children age 0-23 months who are underweight (-SD for the median weight for age. according to WHO/NCHS reference population)	107	598	17.9%	14.9, 21.2	118	588	20.1%	16.9, 23.5	0.374
Measles Immunization: Percentage of children aged 12-23 months who received Measles vaccination by the time of the survey (card verified).	212	268	79.1%	74.2, 83.9	145	241	60.2%	54.0, 66.3	0.000

Indicator	Num.	Denom.	Result	Confidence Interval	Num.	Denom.	Result	Confidence interval	P Value Fisher Exact
ORT Use During a Diarrheal Episode: Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution and/or recommended home fluids	70	238	29.4%	23.6, 35.1	89	220	40.5%	34.0, 46.9	0.008
Appropriate Care Seeking for Pneumonia: Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider	36	155	23.2%	16.5, 29.8	59	120	49.2%	40.2, 58.1	0.000
Regular Point of Use Water Treatment: Percentage of households of children age 0-23 months that treat water effectively and regularly	374	599	62.4%	58.5, 66.2	586	600	97.7%	96.5, 98.9	0.000

Appendix I - Baseline and Final stated goals from DIP

Curamericas Global -- Curamericas Guatemala -- Child Survival Project

Final KPC Results - 07 2015

Indicators	Baseline Phase 1	Baseline Phase 2	EOP Goal	Final Phase 1	Final Phase 2	Pctg of goal achieved	Difference between final results and goal
Porcentaje de madres de niños 0-23 meses de edad que conocen al menos dos peligros que llevan los intervalos de partos menores a 24 meses	6%	12%	50.0%	46.70%	33.70%	40.2%	-9.8%
Porcentaje de madres de niños 0-23 meses de edad y que no están embarazadas que usan métodos modernos contraceptivos	36%	27%	45.0%	34%	25%	29.5%	-15.5%
Porcentaje de mujeres cuyo intervalo entre los nacimientos de sus dos hijos menores era igual o inferior a 24 meses	25%	26%	15.0%	18.70%	25.00%	21.8%	6.8%
Porcentaje de madres de niños 0-23 meses de edad que tuvieron al menos cuatro controles prenatales cuando estuvieron embarazadas con su último niño	13%	6%	50.0%	65.00%	53.30%	59.2%	9.2%
Porcentaje de madres de niños 0-23 meses de edad que conocen al menos dos señas de peligro durante el embarazo	22%	21%	50.0%	78.30%	66.30%	72.3%	22.3%
Porcentaje de madres de niños 0-23 meses de edad que recibieron al menos dos inyecciones toxoide tetánico (TT) antes de que naciera su último niño	63%	63%	75.0%	67.70%	62.30%	65.0%	-10.0%
Porcentaje de madres de niños 0-23 meses de edad que tomó tabletas o jarabe de hierro antes del parto de su último niño	22%	10%	60.0%	64.30%	26.30%	45.3%	-14.7%

Indicators	Baseline Phase 1	Baseline Phase 2	EOP Goal	Final Phase 1	Final Phase 2	Pctg of goal achieved	Difference between final results and goal
Porcentaje de niños 0-23 meses de edad cuyo parto fue atendido por un profesional de salud (médico. enfermera. auxiliar de enfermería)	15%	6%	35.0%	29.30%	13.70%	21.5%	-13.5%
Porcentaje de niños de 0-23 meses cuyos nacimientos fueron atendidos en un establecimiento de salud	16%	7%	35.0%	28.70%	13.00%	29.9%	-5.2%
Porcentaje de madres de niños 0-23 meses de edad que recibieron MATEP (Manejo Activo de la Tercera Etapa del Parto) después del parto de su último niño- inyección para prevenir la hemorragia; masaje del útero; y tracción controlada del cordón umbilical	9%	7%	25.0%	20.00%	11.00%	15.5%	-9.5%
Porcentaje de madres de niños 0-23 meses de edad que conocen al menos dos señas de peligro durante el parto	22%	21%	50.0%	66.30%	53.70%	60.0%	10.0%
Porcentaje de niños 0-23 que recibieron los tres elementos esenciales del cuidado del recién nacido: protección termal inmediatamente después del parto; cuidado higiénico del cordón; y alimentación del pecho inmediata)	6%	5%	25.0%	39.00%	31.00%	35.0%	10.0%
Porcentaje de madres de niños 0-23 meses de edad que recibieron un chequeo post-natal por un profesional de salud dentro de dos días después del parto de su último niño	22%	16%	50.0%	39.00%	18.30%	28.7%	-21.4%
Porcentaje de madres de niños de 0 a 23 meses que conocen al menos dos signos de peligro post-parto	17%	19%	50.0%	66.30%	54.30%	60.3%	10.3%
Porcentaje de madres de niños de 0 a 23 años que conocen al menos dos signos de peligro neonatales	27%	30%	50.0%	64.70%	58.70%	61.7%	11.7%
Porcentaje de niños 0-5 meses de edad que fueron alimentados exclusivamente con leche materna en las 24 horas previas	75%	79%	85.0%	82.00%	71.60%	76.8%	-8.2%

Indicators	Baseline Phase 1	Baseline Phase 2	EOP Goal	Final Phase 1	Final Phase 2	Pctg of goal achieved	Difference between final results and goal
Porcentaje de niños 6-23 meses de edad que recibieron Vitamina A durante los 6 meses previos a la entrevista	79%	74%	85.0%	74.30%	67.10%	70.7%	-14.3%
Porcentaje de niños 6-23 meses de edad que fueron alimentados de acuerdo con las prácticas mínimas de alimentación adecuada (dieta balanceada y suficiente)	53%	56%	70.0%	74.30%	65.30%	69.8%	-0.2%
Porcentaje de niños 0-23 meses de edad que pesan menos de 2 desviaciones estándar por debajo del promedio de peso-por-edad (de acuerdo con la población de referencia OMS)	16%	19%	12.0%	19.70%	20.00%	19.9%	7.9%
Porcentaje de niños de 0 a 23 meses que tienen talla <2 SD de la mediana de la talla para la edad. de acuerdo con la población de referencia de la OMS / NCHS)	NA	NA	NA	NA	NA	NA	NA
Porcentaje de niños 0-23 meses de edad con tos y respiración rápida durante las últimas dos semanas que fueron atendidos por un profesional de salud	26%	21%	50.0%	51.60%	46.60%	49.1%	-0.9%
Porcentaje de niños 0-23 meses de edad con diarrea durante las dos semanas previas a la entrevista que recibieron una solución rehidratación oral (SRO) o fluidos recomendados que están disponibles en la casa	28%	31%	50.0%	40.80%	40.20%	40.5%	-9.5%
Porcentaje de niños 0-23 meses de edad con diarrea durante las dos semanas previas que le ofrecieron líquidos más de lo acostumbrado	8%	8%	40.0%	18.40%	16.20%	17.3%	-22.7%
Porcentaje de niños 0-23 meses de edad con diarrea durante las dos semanas previas que le ofrecieron comida igual a o más de lo acostumbrado	0%	3%	40.0%	0.00%	5.10%	2.6%	-37.5%
Porcentaje de niños 0-23 meses de edad con diarrea durante las dos semanas previas que recibieron suplementos que contienen cinc	7%	2%	50.0%	10.70%	10.30%	10.5%	-39.5%

Indicators	Baseline Phase 1	Baseline Phase 2	EOP Goal	Final Phase 1	Final Phase 2	Pctg of goal achieved	Difference between final results and goal
Porcentaje de niños 12-23 meses de edad que recibieron todas las vacunas requeridas (BCG. PENTA 3. VPO/polio. SPR) de acuerdo con el carnet del niño	79%	79%	80.0%	56.60%	50.40%	53.5%	-26.5%
Porcentaje de hogares que tienen un lugar para lavarse las manos donde hay jabón (o otro agente limpiador), agua. y recipiente para el agua	2%	2%	50.0%	44.70%	44.00%	44.4%	-5.7%
Porcentaje de madres que se lavan las manos con jabón antes de preparar la comida, antes de alimentar a los niños, después de defecar. y después de limpiar la nalga del niño	1%	2%	50.0%	34.00%	28.70%	31.4%	-18.7%
Porcentaje de hogares que usan regularmente métodos efectivos de tratamiento del agua	67%	58%	75.0%	97.70%	97.70%	97.7%	22.7%
Porcentaje de hogares donde el agua potable se guarda correctamente (recipientes cubiertos y con boca estrecha)	12%	10%	40.0%	28.00%	26.00%	27.0%	-13.0%
Porcentaje de hogares que botaron en una manera adecuada los excrementos de su niño la última vez que defecó	43%	39%	80.0%	45.00%	52.00%	48.5%	-31.5%
Porcentaje de madres de niños 0-23 meses de edad con tos y respiración rápida que participaron en la decisión final de buscar ayuda y el tratamiento del niño	73%	77%	85.0%	74.20%	89.70%	82.0%	-3.1%
Porcentaje de madres de niños 0-23 meses de edad que controlan el dinero para comprar la comida para el niño	13%	11%	30.0%	11.70%	7.30%	9.5%	-20.5%
Porcentaje de madres de niños 0-23 meses de edad que participaron en la decisión final del lugar de su último parto	68%	71%	80.0%	78.30%	76.00%	77.2%	-2.9%
Porcentaje de madres de niños 0-23 meses de edad que participaron en la decisión final del uso de planificación familiar	57%	56%	70.0%	84.30%	83.00%	83.7%	13.7%

Indicators	Baseline Phase 1	Baseline Phase 2	EOP Goal	Final Phase 1	Final Phase 2	Pctg of goal achieved	Difference between final results and goal
Porcentaje de madres de niños 0-23 meses de edad que durante los 3 meses previos, asistieron a una reunión comunitaria y también expresaron su opinión	10%	11%	30.0%	24.30%	28.00%	26.2%	-3.9%
Porcentaje de madres de niños 0-23 meses de edad que dijeron que la comunidad tiene un plan para llevar la madre y/o el recién nacido al centro de salud más próximo si hay señales de peligro durante o poco después del parto, o si el recién nacido está enfermo	30%	37%	60.0%	44.70%	52.70%	48.7%	-11.3%
Porcentaje de madres de niños 0-23 meses de edad que dijeron que en el mes previo tuvieron contacto con un Grupo de Cuidado, y/o participó como voluntaria o líder del Grupo de Cuidado	8%	10%	70.0%	64.00%	52.30%	58.2%	-11.9%
Porcentaje de madres de niños 0-23 meses de edad que dijeron que durante los últimos 3 meses la comunidad logró algún éxito/proyecto trabajando juntos	13%	16%	40.0%	11.00%	22.70%	16.9%	-23.2%