

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

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End of Phase 2 Assessment of the CBIO+Care Group Methodology

Report of Interviews with Community-level Project Staff, *Educadoras*, and Ministry of
Public Health and Social Welfare Municipality Staff

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Translation Support: Kristen Gardner

I. Executive Summary

Curamericas-Guatemala received a USAID Child Survival Grant to combine the Community-Based, Impact-Oriented (CBIO) and Care Group (CG) methodologies for community health care in Huehuetenango, Guatemala in order to cost-effectively reduce child and maternal mortality. Among the project's many operation, impact, and research goals, one of the formative research goals is to "Assess and document the challenges and advantages of implementing the CBIO+CG methodology and integrating it into the Ministry of Public Health and Social Work (MPHSW) framework for health care delivery" (Pfeiffer et al., 2012). To address this goal, a qualitative interview study was conducted with Curamericas-Guatemala Educadoras and Guatemalan MPHSW municipality personnel. The Educadoras and MPHSW staff were interviewed to understand how to improve the CBIO+CG methodology, how to better work with the MPHSW, and how to best to integrate CBIO+CG into their work.

Both staff types identified advantages and challenges of the CBIO+CG methodology, provided recommendations for overcoming challenges, and illustrated the prospect of the MPHSW adopting the methodology. In general, the interviewees supported the continuation of the methodology and reported that the methodologies complement each other in order to involve the communities and improve their health. Facing the end of the project, there is a strong demand among the Educadoras for the MPHSW to adopt the methodology, and faced with resource constraints, there is a strong demand among the MPHSW for Curamericas-Guatemala

to continue their work. In order to work successfully in the communities, the MPHSW will have to work with community leaders to earn their trust and support, and ensure the communities understand the methodology so that they will be motivated to participate. In a setting constrained by low government spending on health care and challenged by cultural elements, particularly machismo, CBIO+CG provides the communities and local MPHSW staff an opportunity to work together to empower the communities to improve their hygiene, nutrition, and health.

II. Background

Frameworks for primary health care: CBIO & CG

Two strategies that have been used independently for child survival projects are the Community-Based, Impact-Oriented (CBIO) and Care Group (CG) primary health care methodologies. Curamericas Global and Curamericas-Guatemala are combining the CBIO and CG frameworks to determine if combining the strategies (CBIO+CG) can cost-effectively reduce child and maternal mortality in isolated and rural settings (Pfeiffer et al., 2012).

The CBIO approach was first developed by Andean Rural Health Care (now Curamericas Global) under the direction of Dr. Henry Perry in a rural highland area of Bolivia in the 1980s (Perry et al., 1999). Similar to the rural highland area of Huehuetenango, modern health services were hardly existent and not trusted by the community. Refined in the 1990s, the approach was termed *Census*-Based, Impact-Oriented for the systematic collection of health data from households to inform health service delivery. Now, the approach is referred to as *Community*-Based, Impact-Oriented for its focus on community participation and community empowerment. The CBIO approach to primary health care is based on six concepts (Table 1) and divided into two four-step stages (Table 2).

Table 1: CBIO Concepts

1. Improvements in health arising as a result of health program activities in a community (or set of communities) depend upon the program staff knowing the epidemiologic priorities ([the] most frequent and serious preventable or treatable conditions in the community), identifying those persons who are at greatest risk of developing these conditions, and providing appropriate preventive or curative services to these 'targeted' community members.
2. The documentation of health improvement requires measuring rates of sickness, disability and death in these communities
3. These rates are based on a numerator (namely, the number of community members who have become sick or disabled, or who have died) and a denominator (namely, the number of persons in the community at risk according to age, sex and other potential risk factors).
4. Community epidemiologic priorities and the characteristics of those at greatest risk vary from one locale to another. Therefore, epidemiological diagnoses of the community's health problems and determinations of those at greatest risk are most accurately made using locally acquired information.
5. Incorporation of the community's own health priorities into program activities enhances the prospects for establishing trust between the community and the health care program, and for sustaining the program in the long-term.
6. Inclusion of the community as a partner in program development as well as in implementation and evaluation enhances the prospects for program effectiveness and for promotion of community ownership of the program activity.

Source: Perry et al., 1999

Table 2: CBIO Stages and Steps

Stage 1: Exploratory and pilot program stage	Steps: 1. Exploratory planning 2. Exploratory program implementation 3. Pilot program planning 4. Pilot program implementation
Stage 2: Definitive program stage	Steps: 5. Community diagnosis 6. Program planning 7. Program implementation 8. Program evaluation and community rediagnosis

Source: Perry et al., 1999

A major component of the CBIO approach is health workers providing home-based service delivery to all people in the program area. The greatest emphasis is placed on prevention and

early treatment of the community's major health problems, but acute curative needs are also attended to. Regular home visitation also enables enumeration of the households and periodic measurement of vital events. Through community diagnosis of epidemiologic priorities (i.e. the most serious, frequent and preventable diseases) and community-based program implementation and evaluation, communities are able to identify and serve community members at greatest risk, especially those who have no or limited access to formal health services or facilities. (Perry et al., 1999)

The CG approach was introduced by Dr. Pieter Ernst of World Relief in the 1990s (Laughlin, 2004). It is a cascading health promotion model based on volunteerism, peer to peer education, and equitable universal coverage to all households with U5 children (Edward et al., 2007). The model begins with a paid promoter who teaches a series of child health messages to 5 to 8 CGs (Edward et al., 2007; Laughlin, 2004). Each CG is made up of 10 to 15 community volunteers who serve as health educators and are independently responsible for delivering health messages to 10 to 15 households with children under 5 (Laughlin, 2004). The CG volunteers also record vital events during the home visits to be reported to the Ministry of Health. The CG model has proven to be a sustainable method that achieves community-wide health behavior change. (Laughlin, 2004)

There is a consensus among USAID-commissioned experts that the CBIO methodology is an effective tool for: an enumeration of vital events, achieving high coverage of service interventions, and implementing community-driven projects. However, there is a concern over the cost required to routinely visit every home for systematic data collection (Pfeiffer et al., 2012). In response, Curamericas devised a program that utilizes CG volunteers to collect data during their home visits rather than paid health workers. In addition to decreasing the costs of

the pure CBIO approach, CBIO+CB enables: using (CBIO-sought) epidemiologic and community priorities to inform the CG health messages, building a stronger community partnership through CG data collection, and providing a methodology for CG volunteers to both monitor the program progress and record vital events. (Pfeiffer et al., 2012)

Essentially the CG model is enhanced by the census priorities of the CBIO model, and the cost of the CBIO model is reduced by utilizing the volunteer-based CG model. Together, the two strategies create a tailored, low-cost strategy to increase child survival in remote populations with poor health status.

Research Objectives & Questions

Through the USAID FY2011-FY2015 Child Survival project, “Community-Based Impact-Oriented Child Survival in Huehuetenango, Guatemala,” there is an opportunity to investigate the implementation of the combined CBIO+CG approach. Accordingly, one of the projects formative research objectives is to “Assess and document the challenges and advantages of implementing the CBIO+CG methodology and integrating it into the Ministry of Public Health and Social Work (MPHSW) framework for health care delivery.” The accompany research questions are (1) “What are the lessons learned in implementing the CBIO+CG methodology,” and (2) “How can the CBIO+CG methodology be best and most feasibly introduced into the MPHSW framework for health care delivery?” (Pfeiffer et al., 2012)

III. Methods

To answer the above research questions, a qualitative interview study was conducted with community-level Curamericas-Guatemala staff, *Educadoras* (“Educators”), and MPHSW municipality personnel.

Participants

Interviewees were selected from all three of the project's municipalities: San Sebastián Coatán, San Miguel Acatán, and Santa Eulalia. There was equal representation of Educadoras from each of the three municipalities (n=7, 7, and 7, respectively), and near equal representation of MPHSW staff from each of the three municipalities (n=3, 5, and 3, respectively). MPHSW position types included Auxiliary nurses (n=5), Professional nurses (n=3, a Doctor, a Secretary, and a Counselor). On the dates of the interviews (6/1/15 - 6/10/15), 100% of the Educadoras employed by Curamericas-Global were interviewed. The Educadoras were interviewed in groups of 1-3 and in total, the interviews took approximately 7.5 hours. In contrast, the MPHSW staff were selected based on availability. Staff from San Sebastián Coatán and San Miguel Coatán were interviewed in groups of one to four and in total, the combined time for all interviews was approximately 2.9 hours. Staff from Santa Eulalia were not available to be interviewed in person, and instead completed questionnaires. For a detailed summary of the interview details, please see Appendix A.

Interview Questions

In addition to responding to the previously stated formative research objective and research questions, the results of a similar study conducted in 2013 by Jason Lambden—which revealed advantages and disadvantages of the methodology, suggested improvements to the methodology, and suggestions for integrating the methodology into the work of the MPHSW— informed the development of specific, highly relevant interview objectives and research question (listed in Table 3).

Table 3: Interview Objectives & Research Questions

<p><u>Objective 1. To improve the CBIO+CG methodology based on staff feedback</u></p> <p>Research Questions:</p> <ol style="list-style-type: none">1. What are the advantages and disadvantages of the methodology?2. How can the methodology be improved?3. How would the staff change the methodology?
<p><u>Objective 2. To understand how to better work with the MPHSW and integrate CBIO+CG</u></p> <p>Research Questions:</p> <ol style="list-style-type: none">1. What does the MPHSW know about the methodology?2. What are the perceptions and understandings?3. What are the advantages and disadvantages of the methodology?4. How would the MPHSW increase community participation?5. How would the MPHSW maintain/improve health outcomes?

From the interview objectives and research questions, separate interview questions were created for the Educadoras and MPHSW staff. The interview questions were developed in English, translated to Spanish, revised in Spanish to project language familiar to the Educadoras and MPHSW staff, back-translated to English for validity, and administered in Spanish. (See Appendix B for interview questionnaire.) Curamericas-Guatemala *Encargados* (“Managers”) facilitated the interviews and a Curamericas-Guatemala intern (bilingual, native English speaker) conducted the interviews. The Curamericas-Guatemala intern transcribed the interview responses in Spanish in real-time, and then translated the transcriptions from Spanish to English for analysis. Audio recordings were taken for reference and questions about technical terms and local phrases were referred to an Encargado. Prior to conducting the interviews, the intern was trained on the CBIO+CG methodology, the research objectives, and how to conduct interviews.

IRB approval was previously obtained from the IRB and from the Ethics Committee of the Guatemala Ministry of Health and Social Welfare. All interview participants were informed of the purpose of the interview, ensured their responses would be confidential and not affect their

work, and asked their permission to participate prior to proceeding. All written interview documents have been de-identified and de-identified audio recordings are available upon request.

Limitations

There are two main limitations. First, despite MPHSW staff representation from each of the three municipalities, only willing and available MPHSW staff were interviewed. Similarly, the questionnaire responses were significantly shorter than the in-person interview response. As a result, varying viewpoints may have been missed, particularly of those in higher positions with more decision-making power over the extent to which the MPHSW collaborates with Curamericas-Global. Second, the interviews were conducted by a native English speaker, and thus there is a risk that meanings were lost in translation from Spanish to English.

IV. Results

The results respond to the research questions in thorough detail. In addition, a primer section is included that encapsulates general support for the methodology that was expressed over the course of the interviews. Some high level summaries are provided in the introductions of the subsections, but the richest feedback is found in the tables that contain detailed summaries of the responses from the Educadoras and MPHSW personnel. Cross-cutting themes are presented in the Discussion section.

1. Overall Support for the Methodology

Throughout the interviews, both the Educadoras and MPHSW staff provided positive feedback on the CBIO+CG methodology and expressed a strong desire to continue using it. Statements of support regarding advantages and important aspects of the methodology and the ability of methodology to overcome cultural and socioeconomic challenges are summarized in separate sections. A summary of comparisons to other health care models and support for

continuing the use of CBIO+CG is below.

Among the Educadoras, there is a high preference for the CBIO+CG methodology because it is community-oriented. It is based on generating the communities’ trust and working together with the women and leaders of the communities to improve their health status. The Educadoras also agreed that CBIO+CG is a 6 step process to improve the health and health system of the communities “little by little” in order to have a substantial impact overall. Similar to the Educadoras, the MPHSW staff prefer CBIO+CG to their method and wish for the project to continue.

Detailed summaries:

San Sebastián Coatlán	San Miguel Acatán	Santa Eulalia
Educadoras		
<i>Comparison to other methodologies:</i>		
<p>- Better than other methods because it: focuses on women empowerment; incorporates culture and traditions to change health beliefs and behaviors; functions well and efficiently; and is a comprehensive, step-by-step model that is based on living in the community in order to generate trust and understand the community needs in order to work together with the women and community leaders develop the health system</p> <p>- Not aware of other methodologies, but recognizes the model is good because it is community-based, generates trust, and has good results</p>	<p>Not aware of other methodologies but believe CBIO+CG is “incredible”, “the best”, and “the most important” because (a) the communities know and trust the Educadoras since they live in the communities, and (b) because it is well organized into a 6 step process</p>	<p>- Better than the MPHSW’s methodology because the Educadoras (a) make home visits, even to the most secluded homes (which are the most vulnerable) to see how families live, (b) collect data directly from the women in the communities in order to understand the “reality” of the health of the communities, and (c) involve the community leaders and community members in providing health education in order to have a “substantial” impact by reaching many people, even in the most isolated communities. The MPHSW staff only go to the health centers.</p>

<i>Support for using CBIO+CG in the future:</i>		
<ul style="list-style-type: none"> -There is no need to change to a different model, only need to continue developing/improving the CBIO+CG methodology -It is important to continue using the methodology as instructed in order to sustain health benefits to the communities. -It is important to implement the methodology in new communities in order to improve the health of women and communities that are not currently participating -Teach the CBIO+CG methodology to the MPHSW so they are able to understand and teach it themselves -Gaining the people's trust is difficult, but over time, the methodology has generated the people's trust in the methodology and confidence in Curamericas. As a result, many women wish to continue their role after the project is over. The project should be continued in order continue the momentum of the support for the methodology. 	<ul style="list-style-type: none"> -The communities should continuing to practice the steps of the methodology -Coordinate with the Health Center to adopt the methodology -Would like to implement the methodology because of the impact it has had on mortality and malnutrition 	<ul style="list-style-type: none"> - Good to continue the CGs; continue to improve the work that is being done
San Sebastián Coatán	San Miguel Acatán	Santa Eulalia
MPHSW Staff: Support for the Methodology		
<i>Comparison to MPHSW's model for health care delivery</i>		
<ul style="list-style-type: none"> -The MPHSW waits for people to go to the clinics, but Curamericas-Guatemala works in the field. The MPHSW have too few staff to visit the households. 	<ul style="list-style-type: none"> -Using CBIO+CG, Curamericas-Guatemala involves leaders to participate in order to find solutions to health problems in the community. The MPHSW wants to do many things but are unable to without the support of the leaders. -CBIO+CG is more sustainable than the MPHSW's current model -Curamericas-Guatemala spends money more efficiently that the MPHSW -The government is not investing in health; "it is good that the money was spent" for the Child Survival project 	<ul style="list-style-type: none"> -Cheaper than the MPHSW's method

<i>Support for the methodology</i>		
<ul style="list-style-type: none"> - The charlas address social factors that affect health, like stigmas and (lack of) women's empowerment - The methodology provides a lot of support to the communities by identifying and meeting their health needs - The methodology helps to prevent many infant and maternal deaths - It is important to continue Curamericas' work in order to meet the needs of the communities. 	<ul style="list-style-type: none"> - Malnutrition is decreasing significantly - Through the home visits and Care Groups, the Educadoras can evaluate how the communities are doing. The results have been very positive because of the direct contact between the mothers, Educadoras, and nurses* (*in San Miguel Acatán, the MPHSW employs two nurses to work in the Casa Materna) - The project has increased access to health care and improved health education in the communities - Important to continue so that younger generations do not have too many children 	<ul style="list-style-type: none"> - CBIO+CG improves the health and well-being of the population

2. *Advantages and Important Aspects*

CBIO+CG involves various steps. Both the Educadoras and the MPHSW staff were asked to name what they believe to be the advantages and most important aspects of the CBIO+CG methodology. There was great consensus between the two staff types and between the three municipalities, demonstrated by the summaries below:

Through CBIO+CG, women are put in charge of their own health. Women are informed of their ability to improve their health and the health of their children, empowered to make health-related decisions, and in a male-dominated society, are empowered to participate more broadly in their community.

Coordinating and “working as a team” with community leaders is principal to improving health outcomes in the communities because they are gatekeepers to their community. Community leaders facilitate community participation because their support generates trust from the community. This generation of trust was expressed as the foundation to implementing the

methodologies. Additionally, interviewees from Santa Eulalia and San Miguel Acatán exhibited that community leaders can be trained on the methodology and involved in their implementation, thus contributing to the sustainability of the methodologies. Interviewees from these municipalities also stated that coordinating with the MPHSW, Health Commission, Comadronas, and other local health organizations enables more effective delivery of the methodologies.

The Educadoras are from the communities and are thus more effective in delivering the methodologies. They speak the same language and work directly with the community members. As a result, they have earned the women’s and communities’ trust and have a greater understanding of the health needs and living conditions of the communities—expressed as the “reality” of the communities.

Finally, critical components to the methodologies include community diagnosis of health priorities, community program planning, and educating mothers on health promotion and preventive health care in order to reduce mortality and malnutrition.

Detailed summaries:

San Sebastián Coatán	San Miguel Acatán	Santa Eulalia
Educadoras		
<ul style="list-style-type: none"> - Coordinate with community leaders and work with community members of all ages and genders to identify and solve health problems through effective preventive health care - By living and working in the communities, the Educadoras have earned the women’s trust, generated the communities’ trust in the project (including the community leaders, which is critical for support of the project), and gained an understanding of the health priorities and cultural/ethnic influences on health behaviors in the communities - The important technical aspects of 	<ul style="list-style-type: none"> - Coordinate and work as a team with community leaders, <i>Comadronas</i> (traditional birthing attendants), nurses, the Health Commission, and the MPHSW. Support from these groups generates trust from the community, enabling the Educadoras to work with the mothers and have strong relationships with the people to achieve gains in health - The methodologies target health behaviors in order to reduce mortality and malnutrition; they are: self-care, facility births, exclusive breast-feeding, and four prenatal checkups 	<ul style="list-style-type: none"> - Coordinate with the MPHSW and other health organizations to implement the project - Work as a team with community leaders to facilitate community participation - Involve community leaders in project implementation so they can understand and help meet the health needs of their community. Training the community leaders on the project promotes sustainability - Increase access to health care because the Educadoras travel to isolated households, who are most often the most vulnerable and otherwise wouldn’t seek

<p>the methodologies are: a step-by-step implementation framework, a diagnostic evaluation system to identify health problems; a process for setting and achieving targets; vital events registration and monitoring health (most importantly: illnesses, malnutrition, and signs of danger during pregnancy); direct interaction with mothers (most importantly: working in groups/teams, teaching health themes practicing health behaviors, and teaching the women how to teach others what they have learned)</p> <ul style="list-style-type: none"> - Empowers people to take action to improve their health - Achieving improvements in health - Female participation encourages adolescent participation - The participation of both men and women fosters gender equality - CBIO+CG is: <ul style="list-style-type: none"> - an important health care delivery model to the community because the mothers can understand and participate - an effective and helpful methodology for community development - important for empowering women to have opinions and rights - The methodology increases health worker productivity and value for job 	<ul style="list-style-type: none"> - Gaining the people's trust is the building block for all other steps of the CBIO methodology - The CG methodology is based on education and training to understand effects on health - Community diagnosis of priorities and program planning - "Perfect the way it is" - CBIO+CG facilitates good support and supervision for the health care workers. The Educadoras feel well-trained and supported by the Encargado. They feel confident and prepared to use the methodology. 	<p>care</p> <ul style="list-style-type: none"> - By living with the people in the communities, the Educadoras are able to gain the trust of the people, which the first step of the methodologies. - Identify health priorities and help reduce them - Partnering with the MPHSW to arrange an ambulance in case of emergency - Empowering women to participate in the communities
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MPHSW Staff		
<ul style="list-style-type: none"> -Health education on improving self-care, child care (most importantly, children under 5), nutrition, handwashing, hygiene sanitation, chlorination of water, etc. -The Educadoras work as a team with the community leaders to support the community's needs -The Educadoras monitor the growth of the children and health status of the communities -There is good communication with the communities -The Educadoras go to the homes in the communities so they know what the communities' needs are. 	<ul style="list-style-type: none"> -The use of Educadoras: The Educadoras are from the communities so the women do not fear them. They speak the same language, so the women can better learn from them. -The participation of community leaders, Comadronas, and women -Female participation results in higher health education and higher female participation in the community 	<ul style="list-style-type: none"> -Health education on important themes, such as nutrition -Recording of data -Community-diagnosis of problems and working to solve the problems -The methodologies enable health workers to detect health problems and assess families' living conditions The methodologies are practical/applicable

3. *Disadvantages and Challenges*

Both the Educadoras and the MPHSW staff were asked to name what they believe to be the disadvantages and challenges of the CBIO+CG methodology. The consensus was strongest within the municipalities (between the Educadoras and MPHSW) rather than across them, and all groups reported more challenges to implementing the methodology in their community rather than disadvantages of the methodology. The Educadoras listed more disadvantages and challenges than the MPHSW staff, but in general, the MPHSW staff's responses generally echoed those of the Educadoras in each municipality. The exception is the MPHSW staff in San Miguel Acatán identified disadvantages and challenges not identified by the Educadoras.

All municipalities identified the challenge of increasing female participation, largely because of the machismo culture, and the reliance on community leadership and/or organization for successful implementation. Otherwise there was great variety in the disadvantages and challenges identified by the three municipalities.

Various health outcome challenges were reported. San Sebastián Coatán reported

resolving the “health needs” of the communities. There was near unanimous agreement in San Miguel Coatán that meeting targets set for the “4 indicators” is challenging. Both San Sebastián Coatán and San Miguel Acatán reported stimulating health behavior change, and both San Miguel Coatán and Santa Eulalia reported reducing malnutrition.

According to staff working in San Sebastián Coatán, it is challenging to implement the methodology correctly because of a lack of understanding of the methodology at the community level. It is also difficult to implement the methodology effectively without communities’ trust or without coordinating with the MPHSW and other health programs.

In San Miguel Acatán, there is a unanimous consensus among Educadoras that is a disadvantage to only target children under two years old. The MPHSW staff reported not having a treatment arm to the methodology is a disadvantage, and similar to the response from Educadoras in Santa Eulalia, it is difficult to travel to isolated communities.

The Santa Eulalia Educadoras further identified travel is difficult because of limited transportation and poor road conditions. The Santa Eulalia Educadoras also reported that working with women instead of both men and women is a disadvantage of the methodology.

Detailed Summaries:

San Sebastián Coatán	San Miguel Acatán	Santa Eulalia
Educadoras		
<p><i>Disadvantages</i></p> <ul style="list-style-type: none"> - Requires time for the community members to come to meetings and they do not always time - Lack of coordination with other programs because the methodologies are hard to integrate - Health behavior change relies on the mothers’ participation (a disadvantage because female participation is a challenge) <p><i>Challenges</i></p>	<p><i>Disadvantages</i></p> <ul style="list-style-type: none"> - Under the Child Survival Project, the methodology only targets children under 2 - The Care Group charlas do not involve men. <p><i>Challenges</i></p> <ul style="list-style-type: none"> - Female participation because: <ul style="list-style-type: none"> - Men prohibit women from participating, or - Women must be convinced to participate - Meeting the 4 indicators 	<p><i>Disadvantages</i></p> <ul style="list-style-type: none"> - The need to gain the trust of leaders: having the leaders’ support is critical for the success of the project and high turnover in leadership inhibits progress (each time leadership changes, the Educadoras must gain the trust of the new leaders) - Focus on working with women instead of both genders - There are no steps for providing medicine or treatment.

<ul style="list-style-type: none"> -Negative community leaders do not want to help or participate. It is difficult to coordinate and implement the methodology with their support. -Many community-level implementers do not use the methodology correctly because they do not understand it or its objectives -Not able to work as a team without the MPHSW's support -Gaining the people's trust, especially the males -Coordinating with other health programs in the area -Improving the community members' understanding of the methodology -Machismo: Men won't let women participate; the traditional mentality is for men to control or make decisions for women. -Not all communities participate, or not all women of participating communities participate -Resolving the health needs of the communities 	<p>(facility births, 4 prenatal check-ups, reduced maternal and infant mortality, and lower malnutrition)</p> <ul style="list-style-type: none"> -Reducing malnutrition -Uptake of family planning -Changing the behavior/mentality of the women and people of the communities 	<p>Referring people to the MPHSW is problematic because they are unable to fulfill all treatment needs. This causes the people to lose faith in both Curamericas-Guatemala and the MPHSW.</p> <p><i>Challenges</i></p> <ul style="list-style-type: none"> -Implementation in communities that are not well-organized -Traveling to the communities because of the poor road conditions and limited transport. The Educadoras do not have private vehicles and the minibuses only leave in the morning or do not go to the most isolated communities. -Women's empowerment because of machismo -Reducing malnutrition
MPHSW Staff		
<p><i>Disadvantages</i></p> <ul style="list-style-type: none"> - No coordination between the MPHSW and Curamericas-Guatemala <p><i>Challenges</i></p> <ul style="list-style-type: none"> - Effective messaging to create behavior change to combat strong cultural influences - Poverty and a lack of value for spending money to improve health impedes progress in nutrition and hygiene - Increasing female participation - Communicating/coordinating with community leaders 	<p><i>Disadvantages</i></p> <ul style="list-style-type: none"> - Infrequent visits to the communities - The Educadoras are not nurses so they cannot provide curative treatment - Low male participation; many men do not let their wives participate or oppose the project, so their wives are afraid to participate <p><i>Challenges</i></p> <ul style="list-style-type: none"> - Female participation - Health behavior change in the communities - Low financial resources and long distances to isolated communities makes reaching the communities challenging 	<p><i>No disadvantages or challenges about the methodology were reported, only the challenge for the mothers and families to continue practicing what they have learned after the project ends. The time required to achieve "maintenance of benefits" or (sustainable behavior change) could be investigated.</i></p>

4. *Addressing challenges and recommendations for improvement*

The Educadoras provided recommendations for addressing challenges of CBIO+CG and working in the communities of Huehuetenango. They also explained changes that have already been implemented and work well to address challenges. Conversely, the MPHSW staff were asked how the CBIO+CG worked in spite of known challenges. Responses are not divided by municipality because the recommendations and lessons learned are understood to be generalizable; however, strong differences between municipalities are noted.

(1) Educadoras: Recommendations for overcoming known and new challenges:

The Educadoras were asked how they would improve the CBIO+CG methodology (in general), as well as how they would change the methodology in order to overcome the challenges that were revealed during Lambden’ 2013 study. These are the challenges of generating trust in the methodology, increasing community participation and mobilization, increasing male participation specifically, improving communication between the project and communities, and improving data management. The recommendations are summarized in the table below according to the type of challenge, and the types of challenges are categorized as either “known/anticipated” (i.e. identified in 2013) or “new/revealed” (i.e. identified during the interviews for this study).

Detailed summaries:

Recommendations for known/anticipated challenges	
<i>Trust</i>	<ul style="list-style-type: none">- Demonstrate the use and benefits of the methodology so that the communities understand how it works and creates change. Provide evidence of improvements in the communities’ health so that the communities realize the legitimacy of the methodology and the importance of using it.- Coordinate with the MPHSW and other health organizations in the regions- Work as a team with the communities, and especially the leaders- Meet with the communities more frequently- Follow through on promises with results- Spend more time in the field to improve communication and relationships with the community members

Community mobilization and participation

- Collaborate with leaders and other organizations:
 - Teach the methodology (including the theory behind it) to the community leaders so that they will promote it to the community
 - Organize with the health commission, community leaders, community authorities (e.g. churches), and other respected organizations in the community to mobilize the community members and motivate them to participate. (Incentivize leaders to participate with a small gift.)
- Provide more information:
 - Clearly explain the problems that are in a community
 - Improve the teaching of methodologies to improve understanding of the project (see “Understanding” section for recommendations to achieve this)
 - Teach the project’s positive results
 - Have community members from communities who have experienced the methodology teach the methodology to communities who aren’t as open to participate in the project
- Provide “resources” (i.e. health commodities) and health care treatment services, including medications, treatment for illnesses, and medical consultations
- Hold community assemblies in order to meet with the entire community (i.e.: men, women, and children – not just the leaders)
- Plan health outreach visits and meetings with leaders around the community’s schedule. Plan and coordinate with the leaders early so that the Educadoras can adequately plan transportation and so the community members will be available when the Educadoras go to them.
- Develop creative strategies for garnering more interest in the health themes
 - Accommodate or incorporate culture in the health themes
 - Present the teachings using music
- Strategically choose Facilitadoras: choose women who are outgoing so that they will get to know and effectively teach the people of the communities
- Maintain a presence in the community

Female vs. male participation

- There should not be a division between genders. Both men and women should be trained together. There is need to involve both genders in order to get results.
- Men should be taught to “value” women:
 - Men should be taught that women have the same legal rights as men
 - Men should be taught women’s health (both physical and emotional)
- The methodology could be improved by focusing on increasing female participation. However, there is a need to combat machismo in order to more easily increase the participation of women:
 - Involve men (especially spouses) and adolescents in the methodology or teach the men about the methodology and health themes so that women will be allowed to participate.
 - Meet with the women to encourage them to participate. Explain the importance (benefits) of the project and the current health status of their community.
- The methodology could be improved by involving men so that they could also learn about and become responsible for health issues, particularly family planning. However, there is a need to combat machismo in order to more easily involve men:
 - Integrate male participation into the methodology: involve the men in the care groups and charlas so that they will understand the health topics as well as women and share health-related responsibilities with their spouses. It is most important for men to be taught family planning, the dangers of pregnancy, and how to care for children.
 - Expand the health topics to include men’s health so that men will be motivated to participate.

- To increase male participation:
 - Encourage men to attend the meetings that are currently held for the community leaders so that they are informed about the project and how the methodology works
 - Hold meetings, assemblies, and health awareness programs specifically for men so that the men understand the health concerns of their community
 - Meet with the men in the afternoon or on the weekends, when more men are not working
- To increase female participation (irrespective of men):
 - Recognize accomplishments: Formalize the charlas into a “women’s or mother’s school” and provide diplomas or acknowledgement of completion
 - Provide resources during the charlas, including vitamin-enriched cereal, vaccines, and medicines
 - Provide incentives to motivate participation, such as refreshments (e.g. the drink *atole*), small gifts as gratitude, or other benefits that interest the women

Communication between the project and the communities

- Increase communication by increasing the amount of time Educadoras spend in each community: Decrease the number of communities (e.g. from 8 to 4) that each Educadora is responsible for, especially if any of the communities are very isolated. This would allow Educadoras to see adults, adolescents, and children of all ages, not just pregnant women: “I think that we need more people to help with the work. For example, I am responsible for 8 different communities (2 different sectors) and both of them are very isolated. This is too many people/too much work for one person to do. We lose time walking to the communities because all of them are so far away. So, it is very important to have more people in order to divide the work better.” – San Miguel Acatán Educadora
- Continue the same work, but involve everyone in the community – men, women, adults, children, adolescents, elders, etc.
- Hold community-wide assemblies to explain the project, including the reasoning for it, why it is important, the objectives, and the health indicators. If people understand what their health problems are and what the project aims to achieve (including improving their wellbeing), they will be more trusting of the project and be more willing to participate.
- Improve communication with the community leaders in order to develop and promote the project in the communities
- The directors of the project should go to the communities, not just the Educadoras and Facilitadoras

Data collection and management

“Good the way it is” – San Miguel Acatán and San Sebastian Coatán consensus

- The data that are collected are necessary (not excessive). There is not too much paper work.
- The current data management system is sufficient. Having both paper and electronic copies of data ensures data does not get lost and provides a mechanism to identify and correct errors (via discrepancies between the paper and electronic records)
- The mode of data collection (i.e. during regular community and home visits) works well. Collecting the data in the field requires more effort than managing it, but collecting the data directly from the women is important because the Educadoras are able to learn the situation of the people and build relationships in order to earn their trust
- The Educadoras spend more time doing direct service so the amount of paper work and data management is manageable

“Definitely too much paperwork” – Santa Eulalia consensus; however, it was identified that the Child Survival Project is the reason for too much reporting, not the methodology

- There is too much paperwork and too many requests for data
- Too much time is needed to digitalize the data and complete reports

Recommendations for improvement (consensus among the three municipalities, unless noted)

- Transfer all paper records to digital form to improve coordination and data-sharing between Curamericas-Guatemala offices, the Casa Maternas, the MPHWS, and other health organizations (because storing data on paper makes data-sharing difficult)
- Greater access to computers or other data entry technology so that the Educadoras don't have to record data by hand and then later use a shared computer to enter the data
- Train the Educadoras to use technology in order to more efficiently manage data and create reports
- Hire a technology expert be in charge of digitalizing all of the data and creating reports (*distinct recommendation from the San Miguel Acatán Educadoras*)
- All digital data should be securely stored and backed up so that it does not get lost
- Data collection and reporting should be standardized so that data is comparable between communities and so that duplicating data into different formats (e.g. data sheets or reports) is not necessary
- Spend more time in the field collecting data directly from the people in order to collect more information and improve the accuracy of the data collected

Recommendations for new/revealed challenges

Understanding

Improving understanding of the methodology

- The Comunicadoras need a better understanding of the methodology to properly implement the required steps and inform the communities. This can be accomplished by improving the educational programs and promoting knowledge-sharing between communities.
- Both the leaders and the community members should understand the methodology. Provide trainings for the leaders and hold community-wide assemblies to inform the whole community about the methodology (not just the leaders)

Improving mothers' understanding of the health themes

- Develop simpler and more creative teaching methods to engage the women and translate lesson materials to the local language to make it easier to lead trainings
- Explain the relationship between the health themes and improvements in health. Teach the mothers about the different health indicators and reasons for achieving targets (e.g. teach why height and weight are significant).

Internal validity

- Use the methodology completely by working with leaders to implement the methodology and by improving community participation
- Improve the peoples' understanding of the methodology in order to better implement the methodology
- Focus on improving and standardizing the Comunicadoras' performance

Other recommendations

- Extend project to children 0 to 5 years old
- Improve coordination with the MPHWS, Ministry of Agriculture, Ministry of Social Development, and the community health commission, and other health programs in the region in order to work more efficiently and maximize impact.
- Expand the topics covered in the charlas: (a) increase the number of health topics; (b) add charlas on right and laws; and (c) teach women handicrafts so they can make their own money in order to be more independent
- Work with the Comadronas—because they work closely with pregnant women and have a lot of influence—so that provide proper advice
- Create community plans of action in case of medical emergency: include steps for coordinating with emergency services and communicating with the community in order to arrange private transportation if no ambulance is available

(2) Educadoras: Learning Best Practices in Order to Overcome Challenges

When asked how to improve the methodology in order to generate more trust in the methodology, increase participation in the project, and improve communication between the communities and the project, many Educadoras responded with strategies to *continue* doing in order to earn and/or maintain trust, participation, and communication. Strategies learned to overcome the challenges are summarized in the table below:

Detailed Summaries

Best Practices for Overcoming Challenges
<p><i>Trust:</i></p> <p><i>Gaining the communities' trust in the methodology</i></p> <ul style="list-style-type: none"> - First, earn the trust and support of the leaders in order to gain the trust and support of the community leaders - Easiest when an Educadora is from the same community she is working in because the communities already trust her and they share the same language and culture <p><i>Maintaining the communities' trust</i></p> <ul style="list-style-type: none"> - Continue using the methodology - Maintain frequent communication with the mothers (particularly by phone) and the leaders, health center, and community members at large - Maintain relationships once they are built - Continue living in the communities, visiting the people of the communities, and working as a team with the communities
<p><i>Participation</i></p> <p><i>Increasing participation in the CG cascade:</i></p> <ul style="list-style-type: none"> - Motivate Facilitadoras with incentives <p><i>Community participation and mobilization:</i></p> <ul style="list-style-type: none"> - Continue using the methodology - Work directly with the people and speak their language
<p><i>Communication between the project and the communities</i></p> <ul style="list-style-type: none"> - Continue communicating directly with the mothers and leaders of the communities - Utilize leaders to facilitate communication - The Educadoras' regular charlas, coordination with leaders, and visits to the community make the women feel connected to and supported by the project - Promote the Casa Maternas and health centers in order to increase facility births

(3) MPHSW: Perception of Challenges

The MPHSW were asked how CBIO+CG addresses certain challenges that the methodology seeks to overcome, specifically: community engagement, communication with communities, and empowerment to improve one’s own health. The MPHSW responded positively, and elaborated to explain the methodology has achieved community participation and improved health outcomes.

The MPHSW staff were also asked their opinion on the cost of implementing the methodology. All of the MPHSW staff agree that the methodology is low cost and sustainable. The summary of responses are in the table below. Since the MPHSW’s involvement with Curamericas-Guatemala differs in each municipality, responses are separated by municipality.

Detailed summaries:

San Sebastián Coatán	San Miguel Acatán	Santa Eulalia
<i>Engaging the communities in the methodology</i>		
<ul style="list-style-type: none"> - Teach families about better health practices to prevent illness - Reach isolated families - Address lack of access to health care by bringing health care directly to the people - Prepare families for cases of emergency by linking them to the closest health center - The leaders of the project involve the community members and coordinate with them to facilitate work in the community 	<ul style="list-style-type: none"> - The communities didn’t want to participate in the beginning but the workshops increased participation - CBIO involves the leaders and the CGs involve the mothers - The charlas facilitate community contribution (e.g. if there is going to be a cooking class, the women bring an ingredient to contribute) - The methodology generates the communities’ trust, and this results in participation - Participation and education lead the families to improve their standard of living - Despite living in isolated communities, the families have expanded their knowledge and understanding of health themes 	<ul style="list-style-type: none"> - Involving the community enables determining the health of the mothers and children, how they are living, and what their problems are - The methodology is easy to apply and encourages people to participate - Reductions in maternal and infant illnesses and deaths have been achieved by involving the communities

<i>Facilitating communication between the communities and the project</i>		
All: CBIO+CG is practical methodology for facilitating communication between the communities and the Child Survival Project because the Educadoras go directly to the communities		
<ul style="list-style-type: none"> - CBIO+CG improves the quality of communication between the health centers and the communities - The organization with the communities (to identify and address their health needs) facilitates strong communication - The community health workers and the community leaders share information and plan ways to meet the needs of the communities 	<ul style="list-style-type: none"> - The Educadoras go directly to the houses to give advice directly to the women - The Educadoras speak the same language. The same level of comprehension cannot be achieved by community members interpreting for non-local health workers - The Educadoras share a culture so there is understanding and trust between the community members and health workers 	<ul style="list-style-type: none"> - The Facilitadoras and other health worker cadres also work directly with communities - The health workers speak the local language of the communities they work in - Solutions to the health problems are based on information collected from the communities
<i>Increasing responsibility over one's own health</i>		
<p><i>Current impact:</i></p> <ul style="list-style-type: none"> -The methodologies encourage mothers to take responsibility for their own care and the care of their children <p><i>Recommendations:</i></p> <ul style="list-style-type: none"> - Encourage community members to get involved in the MPHSW's activities - Work closely with the community leaders to spread the health messages - Train the community members on the methodology <p><i>Challenge to consider:</i></p> <ul style="list-style-type: none"> - Parents need lessons on family planning and how to properly care for their children, but the culture and customs of the communities will make behavior change difficult. The communities must take the initiative to take care of themselves in order to improve their health. 	<p><i>Current impact:</i></p> <ul style="list-style-type: none"> - Health lessons teach women how to care for themselves and their children, and how to reduce infant and maternal mortality - Agree that it's important to focus on educating the mothers because they are the children's first teachers <p><i>Recommendations:</i></p> <ul style="list-style-type: none"> - Educate women on their rights - Involve the men so they will allow their wives to participate - Include children and adolescents because they are more likely to change their behavior than adults. Hold charlas in schools to teach about family planning - Get the support of the churches to advocate for family planning - Enforce the anti-child marriage law, and work to increase the legal age of marriage (currently 15) - Continue the methodology to reinforce what has been taught so that community members will put into practice what they have learned 	<p><i>Current impact:</i></p> <ul style="list-style-type: none"> - Continue the activities of the project so that the communities learn the importance of good health and not having too many children <p><i>Recommendations:</i></p> <ul style="list-style-type: none"> - Focus on increasing community participation in all of the CBIO+CG activities so that the communities will have experiences that motivate them to improve their health - Ask families to pledge to participate - Teach the communities how to take on the work themselves so they understand how to improve their health and are able to do it independently

<i>Cost of implementing the methodology</i>		
<ul style="list-style-type: none"> - “It is cheap.” - Spending should increase in order to provide more education, health workers, and medical services in order to provide even better health services 	<ul style="list-style-type: none"> - The methodologies are low cost because the Educadoras use resources from the community when providing health education. The only costs are salaries and transportation. However, government spending on health care is too low to support the methodology and the current spending is inefficient. - The methodologies are sustainable because (1) community leaders are included and support the work, and (2) the “wisdom that the mothers get from the trainings will continue to other generations; they will share their knowledge with their children and one can take their knowledge away” 	<ul style="list-style-type: none"> - The methodology is economic because volunteers from the community do the work - The methodology promotes financial transparency - The methodology is cost-saving because teaching self-care prevents many illnesses

5. *Working with the MPHSW*

The Educadoras in the three municipalities all agreed on the importance of communication, coordination, and collaboration with the MPHSW, as well as fundamentally working as a team for the benefit of providing better and more efficient services to the communities. However, the dynamics between Curamericas-Guatemala and the MPHSW are very different in each of the municipalities. In San Sebastian Coatán, the MPHSW and Curamericas-Guatemala disagree over the best way to serve the community and seem to be in competition with each other. In Santa Eulalia, the MPHSW will not work with Curamericas-Guatemala because it does not believe it is capable of adopting the CBIO+CG due to a lack of human resources for health. Yet in San Miguel Acatán, Curamericas-Guatemala and the MPHSW have a synergistic relationship and work together to deliver health services, even despite their underpaid, low supply of health workers. Such differences are evident in the

following sample quotes:

There seems to be a competition between the Ministry and Curamericas, and this affects the community's health. Instead, it would be better if they could work together. So they need to meet and find a compromise instead of focusing on the competition. They need to drop the competition and work together. – San Sebastian Coatán Educadora

We try to coordinate but in reality, the MPHSW has told us that they do not want to adopt the methodologies. We are unable to coordinate with them. They have told us that they do not have enough time or people in order to adopt the methodologies. – Santa Eulalia Educadora

As the working relationships vary between the municipalities, the summaries for such are divided into the three municipalities. However, the recommendation sections combine the responses because it is assumed that the recommendations will be helpful (and generalizable) regardless of the relationship between the project and the MPHSW. This is supported by similarity of responses from the Educadoras in the three different municipalities, despite the wide range of success each municipality has had working with the MPHSW thus far.

Detailed Summaries:

San Sebastián Coatán	San Miguel Acatán	Santa Eulalia
Educadoras: Coordination and Communication between Curamericas-Guatemala (C/G) and the MPHSW		
<ul style="list-style-type: none"> - Both coordination and communication are “very difficult”; there is a need to improve in both. Suggestions for improvement: (a) agree on a vision and a plan of action for working together to deliver services, and (b) be transparent with scheduled activities. - The MPHSW is not interested in working with C/G because the C/G project is a low priority to the MPHSW. - The MPHSW sees C/G as competition. This is the result of disagreeing over how to achieve better health (because of cultural differences). There is a need for (a) C/G to earn the support of the 	<ul style="list-style-type: none"> - Communicating with the MPHSW is “easy” because C/G and the MPHSW (a) share information, (b) act professionally, (c) understand the problems of the communities, (d) trust each other, and (e) strive for strong communication. - There is already good coordination: (a) when a baby is born in the Casa Materna, someone from the MPHSW comes to vaccinate the baby; (b) the Educadoras come to the health center every Monday (when vaccines are given by the MPHSW) to teach women about exclusive breastfeeding; 	<ul style="list-style-type: none"> -The MPHSW doesn't want to coordinate because they say they are unable to adopt the methodology -The Educadoras try to coordinate with the MPHSW to provide an ambulance in cases of emergency, but the MPHSW doesn't always have the resources for gas or a driver to go to the communities -The Educadoras would like to align their calendar to the MPHSW's and visit the communities on the same day the MPHSW goes to city centers to provide health services. However, it is difficult to coordinate because

<p>MPHSW and (b) for C/G and the MPHSW to compromise over differences.</p> <ul style="list-style-type: none"> - The MPHSW “constantly” miss meetings with C/G. There is a need to agree on regular meeting times and for the MPHSW to not cancel. 	<p>and (c) the MPHSW staffs two nurses (from the health center) in the Casa Materna to give medications, supplements, etc.</p> <ul style="list-style-type: none"> - The Educadoras want to learn to coordinate even better 	<p>the MPHSW sets their calendar after the Educadoras set theirs.</p> <ul style="list-style-type: none"> - It is difficult for the Educadoras to communicate with the MPHSW unless they are in the office because there is no cellular service in many of the communities
<p>Educadoras: Recommendations for improving coordination between Curamericas-Guatemala (C/G) and the MPHSW</p>		
<ul style="list-style-type: none"> - Teach the MPHSW the objectives, mission, and vision of the project to improve the MPHSW’s understanding of the project and its importance of the project so that the MPHSW will become more engaged and want to collaborate. A better understanding of the project will also improve the MPHSW’s referrals to C/G (i.e. for education or training, not medicines); this is important because referrals for services that C/G cannot provide hurts both their credibility and results in people going to traditional healers or witches instead. - The MPHSW and C/G should coordinate schedules for health service delivery and community visits. It would be better to coordinate visits to communities on the same days so that community members only have to take one day off from work or household duties instead of two days. C/G currently plans their visits at the end of each month and the MPHSW plans their visits at the beginning of each month. It would be better if they planned their visits together or if one planned their visits around the other’s visits. - Since both the MPHSW and C/G are constrained by resources, there should be a referral system between the MPHSW health posts and C/G casa maternas so that they work more sustainably together - Improve communication in order to work as a team - Involve workers from the health district to collaborate on activities - Meet with the MPHSW to discuss the health problems in the communities and how to work as a team to solve them. Agree on objectives and a work plan (of coordinated activities) in order to better serve the community. San Sebastian Coatán Educadoras suggest compromising when there are disagreements over how to improve the health of the communities. - Support one another’s work. Santa Eulalia Educadoras suggest inviting the MPHSW to take responsibility for some of the communities in order to divide the challenge of visiting isolated communities. - Exchange data equally. Educadoras should also share their experiences with the MPHSW so the MPHSW becomes more knowledgeable of the communities. - Build trust between one another - Spend time together to achieve the above recommendations and maintain positive relationships 		

6. *Integrating CBIO+CG into the work of the MPHSW*

(1) MPHSW: Knowledge of CBIO+CG

In order to begin to understand the MPHSW’s perception and understanding of the CBIO+CG methodology, the MPHSW staff were asked to explain what they know about CBIO+CG. Responses included both objective descriptions of the methodology that

demonstrated understanding as well as statements of support. In addition, some differentiation was made between the CBIO and CG aspects of the combined framework. A summary of the objective responses are provided in the table below. (The MPHSW’s positive feedback is presented in the “Support for the Methodology” *Results* section.)

Detailed Summaries:

San Sebastián Coatlán	San Miguel Acatán	Santa Eulalia
<p><i>CBIO differentiation:</i></p> <ul style="list-style-type: none"> -Oriented to families, specifically to improve child care, home maintenance, hygiene, and nutrition -Focused on teaching, especially about health and nutrition issues affecting children under 5 -Very important for children in order to reduce their risk of illness and malnutrition <p><i>CG differentiation</i></p> <ul style="list-style-type: none"> - Important for women of reproductive age because of the high risk of death during pregnancy and because they teach women about planning, recognizing risks during pregnancy, and caring for neonates in order to reduce infant and maternal mortality - Important for isolated villages where there is a higher burden of illness and death and less access to health care <p><i>No differentiation:</i></p> <ul style="list-style-type: none"> - Work together with the community leaders to teach mothers and improve their health status 	<p><i>Some differentiation between CBIO and CG, but discuss them together as complementary methods</i></p> <ul style="list-style-type: none"> - “The two methodologies complement each other and function long term because the people contribute together” - There are many steps, beginning with the generation of trust (CG) - There is a diagnostic process to identify needs and communities that are in most need (CBIO) - Work with community leaders to find solutions to health problems in the community (CBIO) - Educate leaders and Comadronas on health issues (CBIO) - Educadoras and Facilitadoras work directly with mothers in the community to teach them about self-care and child care, and how to prepare food, which has “truly reduced malnutrition” (CG) - High impact (CBIO) - Home visits are good <p><i>No differentiation</i></p> <ul style="list-style-type: none"> - Using CBIO+CG, Curamericas-Guatemala involves leaders to participate in order to find solutions to 	<p><i>No differentiation:</i></p> <ul style="list-style-type: none"> - Based in: (1) education and (2) first determining the needs of the families and communities, and second seeking solutions for the problems - Enable health workers to see the “reality” of the way families are living - Focus on teaching mothers what they should do in order to improve the health of their families

	health problems in the community	
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(2) Introducing CBIO+CG into the MPHSW framework for health care delivery

The Educadoras and MPHSW staff provided justification for integrating the methodology into the work of the MPHSW and the majority opinion is that it is possible for the MPHSW to integrate the methodology. However, the shortage of health workers supported by the MPHSW is expected to be a major limitation. Even so, the San Miguel Acatán MPHSW have found ways to implement the methodology despite their limited (and underpaid) supply of nurses. To help the MPHSW effectively adopt the methodology, the Educadoras and MPHSW made recommendations for adjusting the methodology and for how C/G can assist the MPHSW in adopting the methodology.

The feedback on introducing CBIO+CG into the MPHSW framework for health care delivery is broken down into rationale, feasibility, challenges and barriers, recommendations, and support for the MPHSW. The Educadora and MPHSW responses are compared side-by-side in the table below.

Detailed Summaries:

	San Sebastian Coatán	San Miguel Acatán	Santa Eulalia
<i>Rationale for the MPHSW adopting the methodology</i>			
E d u c a d o r a s	<ul style="list-style-type: none"> - The methodology works well in the communities and are having a positive impact on the health of the communities - The methodology works to gain the trust of the communities, which would help the MPHSW's work - It is important to visit the communities and to continuing doing home visits. The MPHSW staff wait for community members to come to them for consultations, but this is not good because the people wait until they are in dire need to go to the MPHSW's health posts - The communities support the methodology (need to relay this to the MPHSW) - The MPHSW has the same objective as Curamericas-Guatemala – to better the health of the Guatemalan people 	<ul style="list-style-type: none"> - The methodology is practical. It involves the community and has proven successful. - The women are accustomed to it and understand it because they are engaged in interactive learning, not through written information. - The MPHSW recognizes the need to work with C/G for the benefit of the communities - Integrating the methodology into the work of the MPHSW will make data collection more accurate - Integrating the methodology into the work of the MPHSW will improve the MPHSW's communication with the community members, Comadronas, leaders, and other health entities - Critical to integrate the methodology into the work of the MPHSW in order to not lose the progress (in health and nutrition) that has been made 	<ul style="list-style-type: none"> - C/G and the MPHSW have similar health goals and do similar things so it is logical for the MPHSW to adopt the methodology - The MPHSW has limited resources to provide supplements and medicines. Educating on health prevention could reduce the need for supplements and medicines. - The Educadoras have begun the work, earned the trust of the communities, and wrote a guidebook that describes the steps of the methodology: “The foundation is already laid, so all [MPHSW staff] need to do is pick up where [the Educadoras] left off.”
M P H S W	<ul style="list-style-type: none"> - It should be the responsibility of the MPHSW to do what Curamericas is doing. The MPHSW health workers should continue the work of the Educadoras - The methodology is necessary for a (a) teaching the communities how to care for themselves because of the lack of access to health care, (b) understanding the needs of the communities, and (c) improving communication with the leaders - The communities are comfortable with the form of health care provided through CBIO+CG 	<ul style="list-style-type: none"> - “Experimenting” with the methodology in two territories and wish to scale up integration implementation of the methodology because of good results - Ability to involve community leaders in order to create change 	<ul style="list-style-type: none"> - CBIO+CG facilitates working with the families, which the MPHSW needs to do - C/G and the MPHSW would get the opportunity to work together to improve the well-being of the families (which is their shared interest) - The communities will learn that health is everyone's responsibility

	- The MPHSW could reach goals and better serve children, especially by decreasing malnutrition		
<i>Feasibility of adopting the methodology</i>			
E d u c a d o r a s	<ul style="list-style-type: none"> - It's possible if the MPHSW recognizes the value of the methodology to the communities. The MPHSW must become interested in the methodology. - The MPHSW staff would need to visit the communities; this makes it very difficult for the MPHSW to adopt the methodology. It's not possible if they continue to do only paperwork. The MPHSW already has one educator that could begin using the methodology 	<ul style="list-style-type: none"> - It is possible if the MPHSW goes out into the communities and follows the steps of the methodology - Implementing the methodology in the entire municipality is not feasible with the current budget. Only 2.5% of the government's spending is for health care and the amount of money spent is very low because of corruption: "How are we going to improve the health with such little resources? It is a disaster. Here in the highlands is where there is very high mortality and we need more resources, but less resources arrive here." - There are already many different health entities and MPHSW health posts in the region so they should be able to work together to adopt the methodology 	<ul style="list-style-type: none"> - It's possible if the MPHSW earns the trust of the people - The MPHSW promotes preventive care so it would be easy to make care groups and teach about self-care. - The MPHSW has a nutritionist so it would be easy for this person to teach the malnutrition charlas - It's not possible unless they give up their method of providing services in health posts and focusing on paperwork - The methodology would complement the prevention work that the MPHSW is already doing - The MPHSW says it does not enough time or people to adopt the methodology
M P H S W	<ul style="list-style-type: none"> - The MPHSW can easily learn the theory behind CBIO+CG but they must go into the communities to put it into practice. Otherwise, they won't know the situation in the communities or earn the communities' trust. The MPHSW must change their clinic-oriented model. - Sustainability is made possible with good communication with community leaders, participation of the mothers, and good community organization. Facilitadoras are important for creating self-sustaining communication and organization in the communities. 	<ul style="list-style-type: none"> - Fully integrating the methodology in two territories with only nurses who double as Educadoras to combat the limited supply of health workers - Sustainable because it's accepted by the communities - Sustainable because of community participation. If funding stops, the community should be able to absorb the work because they can share/pass down the education they have received and because they have been taught how to prepare nutritious meals using food already available in the communities. 	<ul style="list-style-type: none"> - Adopting the methodology is possible through using the Educadoras and working together as a team - Economically feasible, especially if health workers are driven to serve the community - CBIO+CG is sustainable because it is practical and can be realistically implemented. The people can understand it. - Feasible to adopt using nurses: Currently integrating part of the methodology using internal auxiliary nurses to stay in the clinics and external auxiliary nurses to do home visits

<i>Challenges and barriers to the MPHSW adopting the methodology</i>		
<p>E d u c a d o r a s</p>	<ul style="list-style-type: none"> - The MPHSW sees C/G as competition and has been close-minded to the methodology. C/G needs to spark the MPHSW's interest in adopting the methodology. - C/G needs to earn the MPHSW's trust. C/G needs to identify better strategies for earning the trust of the MPHSW (e.g. better communication or coordination) so that the MPHSW will become more accepting of the methodology 	<ul style="list-style-type: none"> -Budget is not sufficient for implementing the entire methodology in all of its communities (<i>see feasibility</i>) -There was a government job cut (in June 2014) and the MPHSW has much less money to pay health care worker salaries. There is a need for human resources for health. -The MPHSW already has limited resources to provide vaccines. The MPHSW is constrained by limited resources. -The MPHSW are not interested in adopting the methodology. Their interest in working with C/G waivers and they do not provide a fixed schedule so that the Educadoras can coordinate community visits with them. The Educadoras cannot trust/rely on them.
<p>M P H S W</p>	<ul style="list-style-type: none"> - Adopting the methodology would require hiring more health worker - It would be challenging to adopt the methodology with the current supply of health workers, but with good coordination, the MPHSW could do better work 	<ul style="list-style-type: none"> - The MPHSW needs to earn support of the community leaders - The MPHSW works on a smaller scale because of limited supply of health workers. They want to hire more Educadoras and continue adopting the methodology, but are limited by government spending cuts - The MPHSW staff are not from the communities and although they would like to visit the communities every day, there are only enough staff to visit the communities every 1 or 2 months. - Bad attitudes of the current health workers
<i>Recommendations for adopting the methodology</i>		
<p>E d u c a d o r a s</p>	<ul style="list-style-type: none"> - It is important for the MPHSW to go to the communities to understand their situation and to get to know the people in the communities. They must know the situation of each individual community so they know how to adapt the 	<ul style="list-style-type: none"> - The self-care groups and the MPHSW should work together to create emergency plans for when there are signs of danger during pregnancy - The MPHSW, District, Health Commission, community leaders, and the casa maternas should coordinate to ensure all - The MPHSW needs to understand that health care is more than just vaccines and nutrition supplements; it must include education about hygiene, nutrition, etc. As such, the MPHSW needs to provide the charlas. - The project should continue

s	<p>methodology.</p> <ul style="list-style-type: none"> - Implement a follow-on project to the Child Survival Project and include the MPHSW so that the work can be shared and the MPHSW can learn the methodology 	<p>babies are born safely</p> <ul style="list-style-type: none"> - The MPHSW will need to work with community leaders, especially those who think negatively about the project, to ensure all communities have a plan of action for when there are medical emergencies 	<p>with the coordination of the MPHSW for support</p> <ul style="list-style-type: none"> - The MPHSW needs to establish a plan of action for when there are medical emergencies
M P H S W	<ul style="list-style-type: none"> - The MPHSW needs to hire more people in order to be able to visit the homes in the communities - Curamericas and the MPHSW are operate as different organizations and work separately. They should work together to provide both treatment and education in order to meet more goals. 	<ul style="list-style-type: none"> - Critical to involve the Comadronas because they have so much influence on so many women - Maintain a databases of problems in the community; collect data from the field, and include where the problems are and if there are changes - Visit the communities more often - Work with community leaders so that trainings on sexuality and pregnancy are taught to adolescents in schools - Currently implementing the methodology, but with these changes: <ul style="list-style-type: none"> - Task-shifting the Educadora role to nurses so that they can do prenatal checks and vaccinations in addition to the care groups, charlas, and home visits. - Performance-based financing to improve health worker productivity 	<ul style="list-style-type: none"> - Support integrating the methodology
<i>Supporting the MPHSW to adopt the methodology</i>			
E d u c a d o r a s	<ul style="list-style-type: none"> - Need to improve the MPHSW's understanding of CBIO+CG (i.e. how the two methods function, the steps, and the goals) so that the MPHSW can decide whether to implement it - Educate the MPHSW on the impact of the methodology to encourage the MPHSW to adopt it. C/G can invite the MPHSW to see the work that is being done in the communities, ask community 	<ul style="list-style-type: none"> - Speak with the MPHSW to maintain a good relationship - Present the project's results to the MPHSW so that the MPHSW will want to adopt the methodology - C/G should train the MPHSW how to adopt the methodology and guide them how to use the care groups and self-care groups - Provide a guidebook so the MPHSW can read about CBIO and CG and understand how they work 	<ul style="list-style-type: none"> - Improve understanding of the methodology to motivate the MPHSW to adopt the methodology. The Educadoras held a workshop for the MPHSW and other health entities to explain how the methodology works and to present the good results of the project. The Educadoras have advised the MPHSW to adopt the methodology but can do "nothing more." The MPHSW must decide whether to adopt

	<p>members to share the positive changes they have experienced, and allow the MPHSW to analyze results.</p> <ul style="list-style-type: none"> - Speak with the communities to see if they will ask the MPHSW to adopt the methodology - Communicate what has been learned about the communities so that the MPHSW will understand the situation in the communities and the need to continue the methodology 		<p>the methodology.</p> <ul style="list-style-type: none"> - Show the results of the projects, particularly on decreasing malnutrition, to demonstrate the benefit of using the methodology - Hold workshops for the MPHSW staff to teach them the health topics that are necessary for improving health and nutrition (explain the different indicators) - Support the MPHSW as much as it has supported the communities to adopt the methodology - C/G should hire someone to work directly with the MPHSW (e.g. one of the Educadoras) and train them on the methodology
M P H S W	<ul style="list-style-type: none"> - Teach and train the MPHSW workers, including on the advantages and results of the methodology so that the MPHSW will realize the success that can be achieved by using it 	<ul style="list-style-type: none"> - Provide HRH so that MPHSW can give charlas and do home visits - Important for C/G and the MPHSW to work together, and for C/G to support the MPHSW: create a work plan for coordination and training (the MPHSW) 	<ul style="list-style-type: none"> - C/G should continue what they are doing and make an agreement with the MPHSW to adopt the methodology - C/G and the MPHSW should analyze data together so that the MPHSW will see the positive impact of the methodology - C/G should train the MPHSW personnel

V. Discussion

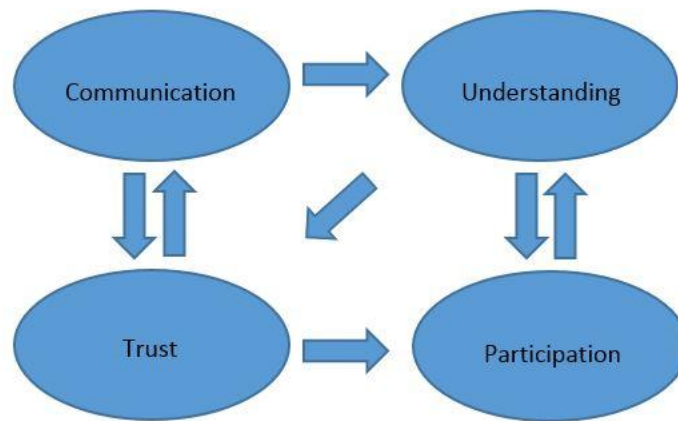
Lessons learned in implementing the CBIO+CG methodology

Understanding the interconnectedness of communication, understanding, trust, and participation

The Educadoras provided recommendations for achieving communication, understanding, trust, and participation, including ones based on successfully improving these elements over the course of the Child Survival Project. These recommendations are provided in *Results* section 4, “Addressing challenges and recommendation for improvement.” Noteworthy, though, these four elements were almost always discussed together, and described as necessary

to successfully implement CBIO+CG and achieve positive results by both the Educadoras and the MPHSW staff. By themselves, these elements are challenging to achieve, but excelling in one or more presents opportunities for overcoming deficits in the others. The Educadoras explained that communication helps understanding and trust, understanding helps trust and participation, trust helps communication and participation, and participation helps understanding, as demonstrated in Figure 1.

Figure 1- Relationship of Communication, Understanding, Trust, and Participation



Understanding, trust, and participation appear to be the most interconnected, with communication as a support mechanism to improve any of the three, whether directly or indirectly. In fact, holding community-wide assemblies to inform the whole community about the project was frequently recommended as a strategy for improving trust, understanding, and participation. However, the Educadoras actually identified the generation of trust as the foundation of the methodology—as it opens up channels for communication between the project and the communities, thus leading to opportunities to improve understanding and participation—and the community’s participation as the most critical element to implementing the methodology completely and correctly. However, trust and participation are not enough to achieve

improvements in health in the communities. Without understanding the methodology or the health themes, which can be improved through more effective communication, the community members are not likely to believe in the importance of health behavior change. In reality, there is no systematic process for achieving the four elements. Instead, it is important for the project to understand the relationships between the elements:

- Communication: Communication between the project implementers and the community leaders attributes to the project's understanding of the challenges faced by the communities and the leaders' understanding of the project. Effective communication also helps the project and the community leaders work as a team to identify problems and solutions. Improved communication between the project and the community members can build trust between the project and the community. Improving communication methods during the charlas can pique women's interest to participate and improve their understanding of the health themes.
- Understanding: Improving the community leaders' understanding of the project and its benefit to the community may motivate them to organize community members to participate in the implementation of CBIO+CG. Improving the community members' understanding of the methodology and health themes rationalizes participation and behavior change.
- Trust: Generating the community's trust in the project will improve overall community participation, and generating trust in the methodology will improve uptake of the health lessons. Without trusting the project and/or the health workers, the women will either not want to participate in the care groups or their husbands will not allow them to participate.

Building trust between one another also allows for more effective communication, leading to further improvements in understanding and participation.

- Participation: Participation is important on several levels. Participation in the implementation of the project leads to community ownership of CBIO+CG. The mothers of the community must participate in order to receive health education and benefit from the intended health effects of the health education. Highly recommended by the Educadoras, the participation of males enables greater female participation, could improve men's value for women and safe birthing, and could facilitate shared responsibility for family planning and taking care of children.

The Educadoras and MPHSW staff explained that by living in the communities, the Educadoras are able to gain the trust of the community members. However, when people do not understand the methodology, they do not trust it, and when they do not trust it, they do not want to participate. If the women do not want to participate or their spouses do not allow them to participate, the Educadoras and Facilitadoras cannot complete all the steps of method, thus impeding the impact that CBIO+CG can have on the communities. The Educadoras suggested that a solution to improving participation is improving the communities' understanding of the methodology so that they trust it. The Educadoras specifically recommended educating the community members on the theory of the methodology so that they understand the rationale behind it.

While communication, understanding, trust and participation are integrally linked, it will be important for the MPHSW to understand the connections if they are to achieve high rates of community participation and uptake of the health education. The MPHSW staff are at a disadvantage because they are not from the community; in particular, it will be harder for

MPHSW to earn the trust of the communities. Knowing other avenues for increasing trust (i.e. better communication and understanding) will ease the MPHSW's entry into the communities and lend to successful implementation of the CBIO+CG methodologies.

Major remaining challenge: Higher-level MPHSW and Government Support

While the strength of collaboration varies in the three municipalities, the MPHSW staff that were interviewed clearly support adopting CBIO+CG. Even in San Sebastián Coatán, where the MPHSW and Curamericas-Guatemala seem to be in competition with each other, the MPHSW acknowledges, “Someone must take on the work of the Educadoras. We must continue with where they left off. We have the responsibility to take care of these needs, and to follow this model which has done great work in the communities.” However, there is a lack of support from higher-level officials in the MPHSW and government spending is considered too low to employ Educadoras to do home visits—one of the most important aspect of the methodology identified by both the Educadoras and the MPHSW. The San Miguel Acatán and Santa Eulalia MPHSW are employing nurses to either support or mimic the work of the Educadoras, but only have a limited capacity to do so because budget constraints.

Regarding the lack of higher-level MPHSW support, an MPHSW auxiliary nurse for Santa Eulalia explained integrating CBIO+CG into their framework for health care delivery “would be possible if the head coordinators thought more about the people of our communities....[This project] is not an economic hardship. We can do very much with little money when there is drive/volition and desire to do humanitarian work among the health workers.” In terms of financial support from the Guatemalan government, MPHSW health workers in San Miguel Acatán asserted, “The government is not investing in health,” and “We

have very little money from the government, thanks to corruption.” The San Miguel Acatán MPHSW expounded upon these statements to illustrate the severity of the situation:

The government spends only 2.5% on health, so very little is invested in improving health. How are we going to improve the health with such little resources? It is a disaster. Here in the highlands is where there is very high mortality and we need more resources, but it is less resources that arrive here. It would be very helpful to be able to use these methodologies but it is very difficult for us to do so. Our workers already have a lot to do and many activities. They are unable to do any more. Instead, it would be good [for Curamericas] to continue with another project to continue with this work.

It is not that the MPHSW staff believe the methodology is expensive, but that employing health workers in the methodology is not financially feasible with the current budget in each municipality. Determining how to adjust for the need for trained and paid health workers, even if they are community health workers, will need to be addressed if the methodology is to be implemented by the MPHSW.

Improving the methodology

The Educadoras provided many insightful recommendations for improving CBIO+CG, which are found in *Results* section 4, “Addressing challenges and recommendations for improvement.” By and large, however, the Educadoras’ recommendations revealed how critical collaborating with leaders and involving the men of the communities are to the success of the methodology. Regarding collaboration with leaders, the Educadoras found that working together with community leaders and authorities, such as the church and community health commission, is critical for the acceptance of the methodology, mobilization of the community to engage with Curamericas-Guatemala, and uptake of health behaviors by community members. Curamericas-Guatemala has had an easier time than the MPHSW entering the communities and creating change because the Educadoras are from the communities. They speak the same language and share the same culture as the community members so the communities trust them. If the

MPHSW is to successfully adopt the CBIO+CG methodology—or work in the communities in any regard at all—it is crucial that the MPHWSW “work as a team” with community leaders.

Without their support, having any impact at all will be nearly impossible.

Involving the men is similarly important because of the machismo culture. The following three quotes are just a sampling of the requests to involve men in order to both empower women to participate and to encourage women:

The mentality is that women do not have the right to say their opinion, nor the same rights to participate in the community as the men. – San Sebastian Coatán Educadora

Machismo impedes the men from being allowed to be interested. They think they can't be interested because taking care of children is thought to be the work of the women, but it necessary to involve both to ensure the health of the children. – San Sebastian Coatán Educadora

It is necessary to involve both genders.... We cannot only teach one gender if we want to have results. – Santa Eulalia Educadora

Key recommendations for involving men in order to facilitate female participation and improvements in the communities' health are: (1) educate men on the methodology so that they understand the importance of women participating, (2) teach men to value women so that women are allowed to participate and make health-related decisions, especially the decision to give birth in a facility, and (3) teach men about family planning and child care so that they can understand and share these responsibilities. In addition, to incentivize male participation, charlas could be held for men so they can learn about their own health.

Processes for improvement

Many of the Educadoras' recommendations pinpointed steps of the methodology to “continue” doing. This could indicate that the methodology works well to address common challenges of working in hard-to-reach communities like those of Huehuetenango, markedly trust-building, participation, and communication. For example, when asked how to improve

communication between the project and the communities, a San Sebastián Coatán Educadora responded, “Most importantly, we just need to keep going, keep going, keep going, keep repeating what we are doing.” Also noteworthy, many recommendations were based on best practices the Educadoras have developed to overcome known and new challenges. This indicates the methodology enables a process to adapt to challenges and test new solutions. For example, the need to improve the communities’ understanding of the methodology was revealed to be a ‘new’ challenge (i.e. not revealed during Lambden’s assessment) and a San Sebastián Coatán Educadora explained they have already made changes to address this challenge: “There were not assemblies at the beginning. We only talked with community leaders but we now have meetings with the people so that everyone can come.... In this way...all [community members] are able to understand.” Involving the current Educadoras as advisors in any future use of CBIO+CG in Huehuetenango in order to benefit from the lessons they have learned is highly recommended.

Improving implementation of the methodology

There was an overwhelming response in all three municipalities to not “change” the methodology, but rather to improve implementation of the methodology. As explained by a San Sebastian Coatán Educadora, “The methodology is good. It doesn’t need to be changed. It just needs to be done correctly. It is well structured, but the problem is with execution. There are negative leaders that inhibit our work and community members that not participate in the charlas.” Similarly, an Educadora from San Miguel Acatán stated, “We should not change the methodology, just implement it better, because many people do not understand the methodology fully. We must better explain the methods to increase the participation and trust of the people. We must continue and never stop this work for the people.”

Noteworthy recommendations for improving implementation include: (1) improving Comunicadoras' understanding of the methodology and the health themes so that they effectively fulfill their role in the CGs; (2) improving the communities' participation so that the Educadoras and Facilitadoras can complete all steps of the methodology; (3) working together with the leaders so that they support the implementation of CBIO+CG; and (4) teaching both the community leaders and the community members the theory behind CBIO+CG so that they understand how it leads to improvements in health. These recommendations reveal the need for quality control and justifying the methodology to the communities to ensure internal validity.

Introducing CBIO+CG into the MPHSW framework for health care delivery

Building shared community and MPHSW ownership of CBIO+CG

There is a heavy demand for the project to continue from both the Educadoras and the MPHSW, and as Curamericas-Guatemala discovered, working as a team with both the communities and the MPHSW enables more successful implementation of the CBIO+CG methodology. Therefore, it seems critical that the communities and MPHSW also work together to continue the use of the CBIO+CG methodology.

Building the community's trust and establishing CBIO+CG as a health care framework were processes that took time. Now that many communities are comfortable with the form of health care provided through CBIO+CG and are recognizing the impact, the communities and the MPHSW believe there is "a great need to continue this project." The Educadoras also realize they are in a position to continue serving the community, so either through volunteerism or brief MPHSW employment, the Educadoras could help transition their role and relationships to the MPHSW. An Educadora working in San Miguel Acatán demonstrates these points by saying:

The project is finishing, but we have worked hard to gain the trust of the people. If there is a problem and they need something, they are going to call us still. We are going to

maintain contact with them, continue helping, and do favors for the communities. It is important to maintain this contact with the people.

Stopping the methodology completely could be detrimental to the progress that has been made and to any future attempts to build the health care system in Huehuetenango. It is therefore preferable that the Educadoras are willing and able to maintain contact with the people who currently trust and rely on the project.

In addition, it is also an opportune time to introduce CBIO+CG into communities that have historically excluded themselves from participating in the project:

We have [earned] trust in about 80% of the communities, but there are still some that do not want to participate in the project. We need to implement the work by integrating people from the MPHSW, the community members, and other health entities, so that it is just not our project, but that it is a collaboration between all of us. We need the support of others in order for the [methodologies to work properly]. With the support of each institution, we gain more trust from the people. We must help the remaining 20% of the communities adopt the methodology through continuing the work of the Educadoras – going out into the communities, and teaching about the methodologies to those who have not yet supported the project. – Santa Eulalia Educadora

However, according to the MPHSW, they lack the human resources for health to fully integrate the methodology into their work. The San Miguel Acatán MPHSW explains, “We believe the methodologies are incredible but we are only able to use them in small communities because we do not have the resources to implement them. We have been unable to hire more Educadoras because we have no money to hire more personnel.” As a result, it is necessary to consider alternative strategies. Since the communities are comfortable with the form of health care provided through CBIO+CG and recognize the importance of participating, and since the MPHSW has expressed a desire to use the methodology, the communities and the MPHSW should consider taking shared ownership of the methodology. There is a consensus among the MPHSW that the methodology is sustainable, largely because it (a) relies on the community’s participation, leadership, learned knowledge, and resources, (b) because it is accepted by the

community, and (c) does not rely on the communities to financially contribute. The latter is particularly advantageous because as explained by the San Sebastián Coatán MPHSW, the communities' live in poverty and are unwilling to spend money to improve their health. Regarding the community enabling sustainability, the MPHSW in San Miguel Acatán explained, "This project is sustainable because the wisdom the mothers get from the trainings will continue to other generations. They will share their knowledge with their children and no one can take their knowledge away." Knowledge-sharing between community members and generations can make-up for shortages of paid workers in the CG model. The San Miguel Acatán MPHSW also elucidated that the charlas facilitate community contribution, using the example that if there is going to be a cooking class, the women are asked to bring an ingredient to contribute. Overall, it seems community ownership of the methodology can feasibly compensate for the lack of MPHSW resources.

VI. Recommendations

Strengthen linkages between CBIO+CG community care and formal health services

A common frustration in the communities about the work that Curamericas-Guatemala is doing is that there are no steps for providing medicine or treatment. This is understandable as the methodology is designed to be low cost and appropriate for resource-challenged areas (including human resources for health-challenged). The Educadoras do prepare families for cases of emergency by linking them to the closest health center, and they do refer community members to the MPHSW health centers for medicine and treatment, but this is problematic because the health centers are not always able to fulfill their needs due to limited resources. This causes the people to lose faith in both Curamericas-Guatemala and the MPHSW. It would be better if the CBIO+CG community health system was integrated into a formal health care system

that guaranteed formal primary health care services. Although Curamericas-Guatemala has no control over the MPHSW's resources, the staff and volunteers should not refer people to health centers if they are unable to fulfill people's needs. Ideally, the staff and volunteers would be able to refer people to alternative sources for health care services. Knowing what health centers are able to provide will require communication between the CBIO+CG project and other health entities, whether operated by the MPHSW or Civil Society. This is a demonstration of the need for collaboration between the CBIO+CG project, the MPHSW, the community health commissions, and any other health care organizations operating in the area. This collaboration was highly recommended

Similarly, having emergency plans is very important in the communities. The Educadoras try to coordinate with the MPHSW to provide an ambulance when there is an emergency, but the MPHSW does not always have the resources for gas or a driver to go to the communities. The Educadoras recommend that the communities create their own plans of actions in case of medical emergency that includes a step for communicating with the community in order to arrange private transportation if no ambulance is available. If the MPHSW is to adopt CBIO+CG, the Educadoras recommend that the self-care groups and the MPHSW work together to create emergency plans, particularly for when there are signs of danger during pregnancy. These two recommendations also illustrate the importance of collaboration, both with the communities and the MPHSW.

Ultimately, there is a need for better integration into the formal health sector. However, Curamericas has already attempted this in some regard, as demonstrated above. Therefore, to compensate for the MPHSW's varying ability to provide services and be able to determine alternative options, "integration" should be expanded to include better communication and

collaboration between the CBIO+CG staff/volunteers, MPHSW, and other health entities working in the area. If local health centers cannot provide the necessary treatment, then referrals should be expanded to larger, more reliable facilities that are further away.

Tangent to this discussion is the recommendation of task-shifting from Educadoras to nurses if the MPHSW is to implement CBIO+CG. This might not be immediately possible considering only 2.5% of government spending in Guatemala is allocated to health care (and even less reaches the highlands). However, if the government were to allocate more funding to the MPHSW, making the adoption of CBIO+CG possible, employing nurses to serve as Educadoras could fix the problem of Educadoras not being able to give medicines and provide basic treatment services. The MPHSW in San Miguel Acatán and Santa Eulalia have begun integrating the CBIO+CG methodology using nurses, and can be looked at case studies for task-shifting from Educadoras to nurses.

Improve understanding of the methodology

When CBIO+CG volunteers do not understand the methodology, they do not implement it correctly; when community leaders do not understand the methodology, they cannot support implementation; and when community members do not understand the methodology, they do not trust it. The end result of the consequences of not understanding the methodology is lower rates of participation. The overarching solution is to educate the community members on the theory behind the methodology so that they understand the reasoning behind participating in the methodology.

Include adolescents and men in CBIO+CG

Including adolescents serves three main purposes. First, because teenage pregnancy is such a problem, it is important to teach about family planning and child marriage laws while at a

time where prevention is possible. Explained by the San Miguel Acatán MPHSW, "...many 15 year olds are pregnant from men who are in their 60s. There is a big problem with legality in relationships. The law says that a woman must be 15 years old to marry, but this law is not enforced, and the law should also be older than 15." Despite the conservative culture, a MPHSW counselor recalled a time that sexual health was taught in schools, so it is not beyond reason to implement again. Second, adolescents are in a stage of learning and personality development, and therefore may more quickly and more easily adopt healthy behaviors than their parents. Third, adolescents can teach their families what they have learned. The current proportion of children attending school in the three municipalities is much higher than previous generations, so teaching adolescents in schools may be a way to reach women who are not yet participating in the charlas.

The Educadoras provided valuable recommendations regarding the involvement of men (found in detail in the *Results* section and briefly in the *Discussion* section). In a society dominated by machismo, it seems that involving men may be a key strategy to improving female participation and empowering women to make health-related decisions. Teaching men that women and men have equal rights under the law and about women's health could ultimately result in better treatment in women, which until now has impeded their health and health-related decision-making, both in regard to their health and their children's health. At the same time, women need to be taught their rights as well. The urgency of the need to change cultural perceptions is demonstrated by the following San Miguel Acatán MPHSW quotes:

Women need to know that they are to be valued and what their rights are so that they do not suffer exclusion or discrimination. They are not objects without value. There is always lots of suffering because they do not understand what their rights are and they do not know that they can participate. Ensuring that women know [this] is important and the way to do this is through education.

The problem is that many women do not know their rights. It is also the work of the Educadoras to involve the men because many women say that their spouse won't let them participate. It is important to combat the machismo so that the woman does not always do what the man says. We need to involve the men more so that they understand the importance of these activities and their impact on the health of the family.

However, the San Miguel Coatán MPHSW also offers hope for changing the current perceptions, explaining, “There is definitely community participation because they have convinced the communities of the importance of the project. These people...struggle with the machismo culture, but they are beginning to understand the importance of participating in the project.”

VII. Conclusion

Over the course of the Child Survival Project, the Educadoras learned many valuable lessons for improving the CBIO+CG methodology and its implementation. Implementation of the methodology and collaboration with the MPHSW has differed in each municipality, revealing lessons on integrating CBIO+CG into the work of the MPHSW amid a vast array of challenges, both structurally and culturally. Deficient government spending on health care in Huehuetenango may ultimately prohibit the implementation of CBIO+CG as it is designed. However, considering the interest and will that exists within the communities and local MPHSW staff, adjustments using community resources and task-shifting could make implementation of CBIO+CG feasible. Granted, the MPHSW will need to earn the support of community leaders and collaborate with community members in order to successfully adopt CBIO+CG.

APPENDIX A: Interview Details

San Sebastián Coatán Educadoras			San Sebastián Coatán MPHSW Staff		
- 7 Educadoras, 7 Interviews - Total time: 3 hours, 9 minutes - Average time per interviewee: 27 minutes			- 3 Auxiliary Nurses, 2 Interviews - Total time: 1 hour, 20 minutes - Average time per interviewee: 26.7 minutes		
# of Interviewees	Date of Interview	Approximate Length (min)	# of Interviewees & Staff Position ¹	Date of Interview	Approximate Length (min)
1	6/1/2015	28	1 Auxiliary Nurse	6/3/2015	48
1	6/1/2015	18	2 Auxiliary Nurses	6/3/2015	32
1	6/1/2015	29			
1	6/1 - 6/2/2015	32			
1	6/2/2015	31			
1	6/2/2015	28			
1	6/2/2015	23			
San Miguel Acatán Educadoras			San Miguel Acatán MPHSW Staff		
- 7 Educadoras, 3 Interviews - Total time: 2 Hours 20 Minutes - Average time per interviewee: 20 minutes			- 3 Professional Nurses, 1 Doctor, 1 Counselor - Total time: 1 hour, 33 minutes - Average time per interviewee: 18.6 minutes		
# of Interviewees	Date of Interview	Approximate Length (min)	# of Interviewees & Staff Position ^{1,2}	Date of Interview	Approximate Length (min)
2	6/5/2015	67	3 Professional Nurses, 1 Doctor	6/10/2015	66
2	6/5/2015	37	1 Counselor	6/10/2015	27
3	6/5/2015	36			
Santa Eulalia			Santa Eulalia MPHSW Staff		
- 7 Educadoras, 3 Interviews - Total time: 2 Hours 4 Minutes - Average time per interviewee: 18 minutes			- 3 Completed Questionnaires - 97.2% Completion Rate		
# of Interviewees	Date of Interview	Approximate Length (min)	Staff Position ¹	Date of Interview	Completed Questions ³
2	6/9/2015	40	Secretary	6/9/2015	12 of 12
3	6/9/2015	36	Auxiliary Nurse	6/9/2015	11 of 12
2	6/9/2015	48	Auxiliary Nurse	6/9/2015	12 of 12

1. Auxiliary nurses have at least a high school education plus 10 months nurse training

2. Professional nurses have at least a college education plus 3 years nursing school

3. 6 questions totaling 12 parts

APPENDIX B: Interview Questions

CURAMERICAS GUATEMALA

PROYECTO SUPERVIVENCIA INFANTIL DE BASE COMUNITARIA ORIENTADA AL IMPACTO USAID 2011-2015

Huehuetenango, Guatemala

EVALUACION DE LA METODOLOGIA DE BASE COMUNITARIA ORIENTADA AL IMPACTO Y METODOLOGIA DE GRUPOS DE CUIDADO Y AUTO-CUIDADO

Entrevista Dirigida a Educadoras

Municipio _____ Fecha _____

Entrevistadores/as _____

Secretaria _____

Educadora _____

Hora de inicio de la entrevista _____ Hora finalización de la entrevista _____

Los objetivos de la investigación es 1) para mejorar las metodologías BCOI + GC A-C (Base Comunitaria Orientada al Impacto + Grupos de Cuidado y Auto Cuidado; 2) para aprender cómo podríamos implementar las metodologías BCOI + GC A-C en el trabajo del ministerio de salud. Las respuestas serán confidenciales y van a contribuir al mejoramiento del sistema de salud.

Preguntas para discutir las ventajas y desventajas de la metodología de Base Comunitaria Orientada al Impacto + Grupos de Cuidado y Auto-Cuidado (MBCOI + GC A-C):

1. ¿Cuáles son las ventajas y los aspectos más importantes de la metodología, BCOI + GC A-C?
 - 1a. ¿Creen ustedes que la metodología de Base Comunitaria Orientada al Impacto y la de Grupos de Cuidado y Auto-Cuidado son mejores que otras metodologías de salud? ¿Si por qué? ¿No por qué?
2. ¿Cuáles son las desventajas y retos de la metodología, BCOI + GC A-C?

2a. ¿Creen ustedes hay demasiado trabajo de papel? ¿Demasiado manejo de datos? Si por qué?
¿No por qué?

3. ¿Hay algo más que quieren decir sobre la metodología?

Preguntas para mejorar la metodología, BCOI + GC A-C:

4. ¿Qué se podría hacer para mejorar la metodología, BCOI + GC A-C?

4a. ¿Por ejemplo, cómo podríamos generar más **confianza** de las comunidades en la metodología?

4b. ¿Cómo podríamos cambiar la metodología para aumentar **la participación y movilización de las comunidades**?

4c. ¿Cómo podríamos cambiar la metodología para mejorar **la comunicación** entre el proyecto y las comunidades?

4d. ¿Cómo podríamos cambiar la metodología para aumentar **la participación de hombres**?

4e. ¿Cómo podríamos cambiar la metodología para mejorar **la informática, el manejo de datos**?

4f. ¿Tienen otras sugerencias para mejorar la metodología, BCOI+GC A-C?

Preguntas para integrar con el Ministerio de Salud:

5. ¿Cómo podríamos mejorar la coordinación entre Curamericas-Guatemala y el Ministerio de Salud?

5a. ¿Que sobre comunicación? ¿Creen ustedes que es difícil comunicarse con el Ministerio? ¿Si, por qué? ¿No, por qué?

6. ¿Cómo podríamos integrar la metodología BCOI + GC A-C en el trabajo del Ministerio?

6a. ¿Creen ustedes que es posible que el Ministerio adopte la metodología, BCOI+GC A-C? ¿Si, por qué? ¿No, por qué?

6b. ¿Cómo podríamos ayudar al Ministerio a adoptar la metodología?

CURAMERICAS GUATEMALA

PROYECTO SUPERVIVENCIA INFANTIL DE BASE COMUNITARIA ORIENTADA AL IMPACTO USAID 2011-2015

Huehuetenango, Guatemala

EVALUACION DE LA METODOLOGIA DE BASE COMUNITARIA ORIENTADA AL IMPACTO Y METODOLOGIA DE GRUPOS DE CUIDADO Y AUTO-CUIDADO

Entrevista Dirigida al Personal del Ministerio de Salud

Municipio _____ Fecha _____

Entrevistadores/as _____

Secretaria _____

Educadora _____

Hora de inicio de la entrevista _____ Hora finalización de la entrevista _____

Los objetivos de la investigación son 1) para mejorar las metodologías BCOI + GC A-C (Base Comunitaria Orientada al Impacto + Grupos de Cuidado y Auto Cuidado); 2) para explorar cómo podríamos implementar las metodologías BCOI + GC A-C en el trabajo del Ministerio de Salud. Las respuestas serán confidenciales y van a contribuir al mejoramiento del sistema de salud.

Pregunta para evaluar sus conocimientos y su comprensión de la metodología de Base Comunitaria Orientada al Impacto + Grupos de Cuidado y Auto-Cuidado (MBCOI + GC A-C):

1. ¿Qué conocen ustedes sobre las metodologías de Base Comunitaria Orientada al Impacto + Grupos de Cuidado y Auto-Cuidado (MBCOI + GC A-C)?

Preguntas para discutir las ventajas y desventajas de la metodología, BCOI + GC A-C:

2. ¿Cuáles son las ventajas y los aspectos más importantes de las metodologías, BCOI + GC A-C?

2a. ¿Creen ustedes que las metodologías funciona bien para **involucrar las comunidades**?
¿Si, por qué? ¿No por qué?

2b. ¿Creen ustedes que las metodologías facilitan **la comunicación entre el Proyecto de Supervivencia Infantil* y las comunidades**? ¿Si, por qué? ¿No por qué?

*2c. ¿Cómo podríamos **aumentar la responsabilidad** de las comunidades a **mejorar su propia salud**?

3. ¿Cuáles son las desventajas y retos de las metodologías BCOI + GC A-C?
4. ¿Qué opina ustedes sobre los gastos de las metodologías? Es económico? ¿Es caro? *(Si consideramos que el gasto de personal es estimada a 142 Quetzales/beneficiario/año).*

Preguntas para integrar con el Ministerio de Salud

5. ¿Qué opina usted el integrar las metodologías de Base Comunitaria Orientada al Impacto y la Metodología de Grupos de Cuidado y Auto-Cuidado en el trabajo del Ministerio de Salud?
6. ¿Creen ustedes que es posible que el Ministerio adopte las metodologías en su trabajo de campo?
 - 6a ¿Cómo podría integrar las metodologías en el trabajo del Ministerio de Salud?
 - 6b. ¿Creen ustedes que las metodologías son sostenibles? ¿Si, por qué? ¿No, por qué?
 - 6c. ¿Cómo podría Curamericas-Guatemala ayudar al Ministerio a adoptar las metodologías en su trabajo de salud?

References

- Edward, A., Ernst, P., Taylor, C., Becker, S., Mazive, E., & Perry, H. (2007). Examining the evidence of under-five mortality reduction in a community-based programme in Gaza, Mozambique. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 101(8), 814-822.
- Laughlin, M. (2004). The Care Group difference: a guide to mobilizing community-based volunteer health educators.
- Perry, H., Robison, N., Chavez, D., Taja, O., Hilari, C., Shanklin, D., & Wyon, J. (1999). Attaining health for all through community partnerships: principles of the census-based, impact-oriented (CBIO) approach to primary health care developed in Bolivia, South America. *Social Science & Medicine*, 48(8), 1053-1067.
- Pfeiffer, E., Perry, H., Valdez, M. (2012). Operations Research Concept Paper, "Community-Based Impact-Oriented Child Survival in Huehuetenango, Guatemala" USAID FY-2011 Child Survival and Health Grants Program, Curamericas Global.
- Stollak, I., Perry, H., Valdez, M. (2014). PY3 Annual Report submitted to USAID, "Community-Based Impact-Oriented Child Survival in Huehuetenango, Guatemala" USAID 2011 – 2015 Child Survival and Health Grants Program, Curamericas Global.