Copán Ruinas,
Honduras. March 2019

# Project REDES: Qualitative Evaluation

## Use of social networks to improve maternal, neonatal and child outcomes in rural areas of Honduras

BID Banco Interamericano de Desarrollo

iniciativa salud mesoamérica

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## Credit

**Project:** Use of social networks to improve maternal / neonatal / child health outcomes in rural Honduras Executed by World Vision Honduras in the framework of the Salud Mesoamérica Initiative (SMI), Inter-American Development Bank (IDB)

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Preparation of this document has been possible thanks to financial and technical support provided by the Inter-American Development Bank (IDB), in the framework of the Salud Mesoamerica Initiative, through the project: Use of social networks to improve maternal / neonatal / child health outcomes in rural Honduras (Project REDES), under the terms of the contract signed with World Vision Honduras. The opinions expressed in this report are the authors' and do not necessarily reflect the perspective of the IDB or World Vision Honduras.

# Contents

# Abbreviations

| | |
|---|---|
| **ADD** | Acute diarrheal disease |
| **ARI** | Acute respiratory infection |
| **BCA** | Behavior change agent |
| **BL** | Baseline |
| **CMI** | Maternity / child clinic |
| **CU-SMI** | Coordinating unit of Salud Mesoamerica Initiative |
| **FP** | Family planning |
| **IDB** | Inter-American Development Bank |
| **M&E** | Monitoring and evaluation |
| **MANCOSARIC** | Commonwealth of Municipalities of the Maya Route (Copán Ruinas, Santa Rita, San Jerónimo and Cabaña) |
| **REDES** | Use of social networks to improve neonatal outcomes in rural Honduras |
| **SESAL** | Ministry of Health of Honduras |
| **SMI** | Salud Mesoamerica Initiative |
| **ttC** | Timed and targeted counseling |
| **WCA** | Woman of childbearing age |
| **WVH** | World Vision Honduras |
| **YINS** | Yale Institute for Network Science |


## Project REDES: Use of social networks to improve maternal / neonatal / child outcomes in rural Honduras

| | |
|---|---|
| **Project objective** | Help improve maternal / neonatal / child health outcomes, undertaking a community intervention aimed at bringing about changes in in risky behaviors and attitudes, through strengthening social networks. |
| **Implementation period** | Initial preparation:<br>• Design the project: November 2015–September 2016.<br>• Initial training, pilot, and diagnostic visit (zero): October–November 2016.<br>Community intervention ttC Visit:<br>• First phase: November 2016–April 2017<br>• Second phase: May 2017–September 2018<br>Stage of evaluation, systematization, and close: September 2018–March 2019. |
| **Budget** | USD 2,820,225 (1st phase: USD 1,046,666 and 2nd phase: USD 1,773,559) |
| **Funding and partners** | Bill and Melinda Gates Foundation<br>Salud Mesoamerica Initiative / IDB<br>Yale Institute for Network Science (YINS) / Yale University |
| **Partner in execution** | World Vision Honduras and ChildFund in first phase<br>World Vision in second phase |
| **Geographical coverage** | Department: Copán<br>Municipalities: 4 (Copán Ruinas, Santa Rita, San Jerónimo, Cabañas)<br>Villages: 154 |
| **Beneficiary group** | Project REDES launched the community intervention with a number of families selected by YINS in the framework of this study.<br>The intervention began with a diagnostic visit known as "Visit zero" to a total of 3634 families |
| **Visits completed** | Visit zero was completed in 3125 homes.<br>Visit 1 of timed and targeted counseling (ttC) was conducted in 3022 households.<br>2434 families participated in 15 ttC sessions<br>1034 families completed 21 ttC sessions<br>At close of project (August 2018), there were 2552 active families. |
| **Project staff** | 63 personnel: 52 behavior change agents (BCAs), 5 supervisors, 4 technical team and 2 financial administrators) |

# 1. EXECUTIVE SUMMARY

## 1.1 Description of Project REDES

The Salud Mesoamerica Initiative (SMI), backed by the Inter-American Development Bank (IDB) with funding from the Bill and Melinda Gates Foundation and Yale University, conducted an evaluation to assess the use of social networks and their influence at the group level on the adoption, dissemination and reinforcement of normative behaviors and basic attitudes with respect to newborn and child health in rural areas of Honduras. In this context, the IDB signed a contract with World Vision Honduras to implement Project REDES, a community intervention that forms part of a study by the Yale Institute for Network Science (YINS) of Yale University.

**Initial situation and contextual framework**

The project covered a total of 154 villages, in four municipalities: Copán Ruinas, Santa Rita, San Jerónimo and Cabañas, located in the department of Copán, with a total of 3634 selected families. By the end of the project, 2552 families remained active (70.2% of those on the original list). These families are representative of the area in terms of their social, environmental and legal-political attributes. In social terms, most of the families in the beneficiary area live in poverty or extreme poverty. In some cases families may subsist on a daily income of 120 lempiras.

The local population is affected by high levels of illiteracy and many basic needs are unmet, including health care services, since the nearest health center or health post may be more than two or three hours away. From an environmental perspective, these families have a good productive culture, but with deficient production systems, due to limited access to credit, which prevents them from being able to properly maintain their crops and results in harvests with low yields.

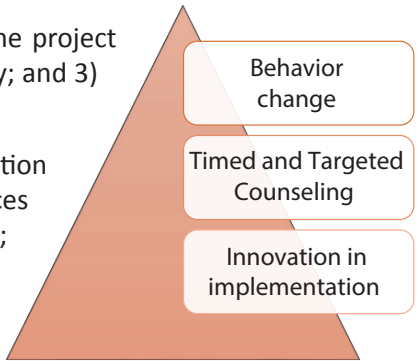
There is a marked tendency toward violence against women and children, either sexual, psychological, physical or sometimes economic. The latter is particularly true in the case of older women who assume responsibility for raising and caring for grandchildren and great-grandchildren, in the absence of adult sons and daughters (who leave the community mainly due to work or migration) and some elderly people who receive remittances, which are administered by other family members. In political terms, these populations are generally unaware of their basic rights, in all their dimensions, whether economic, social and cultural rights; there is also widespread ignorance of women's and children's rights. State organizations are present only in the cities or municipal and departmental capitals.

**Project objective**

To objective is to support improvements to maternal, newborn and child health outcomes, by means of a community intervention aimed at bringing about changes in high-risk behaviors and attitudes through the strengthening of social networks.

***Strategic approach and components of the Project:***

To achieve changes in maternal, newborn, child and reproductive health, the project coordinated three elements: 1) behavior change (BC); 2) the ttC methodology; and 3) innovation in implementation.




**The first element** was executed through a process that included the negotiation of agreements and commitments regarding knowledge, attitudes and practices related to maternal and newborn health, implicit in the project's objectives; information was provided to the participating families to facilitate informed decision-making. Communication links were developed and emotional support provided to the families by BCAs acting as facilitators of behavior change.

**The second element** was the strategy to promote and consolidate behavior change (BC), i.e. the timed and targeted counseling (ttC) methodology, created and validated by World Vision International in different countries. The ttC approach was adapted to the specific needs of the participating municipalities, villages and families. At the core of the methodology is the "counseling" visit, which uses dialogue as a communication tool to expand knowledge, promote reflection and negotiate behavior change. The essential features that define its name are: timed and targeted counseling. A total of 12,374 ttC visits were carried out between December 2016 and April 2017, with an average of 2475 ttC counseling sessions per month. Overall, including the second phase, a total of **51,786** ttC sessions were held with an average of **2466** per month.

**The third element was innovation in the project's intervention.** Innovation was implicit in this project, since its aim was to implement a communication strategy for an educational model based on network science to scale-up behavior change in order to improve the status of maternal, newborn and child health in the family. Another innovative aspect was the use of digital technology, specifically CommCare, a mobile application used on tablet computers and CommCare HQ, used for the information system, which generated reports for set periods. This technology was used in two ways: first, to implement the ttC counseling topics, as a visual tool for education (the tablet was the medium that enabled the family or individual receiving counseling to see the stories in video and listen to the songs, riddles, jokes, etc.). And second, CommCare was used to record the data gathered during each visit in order to feed the information system. The digital system was used by BCAs and supervisors in all visits.

## 1.2. Assessments based on evidence collected during the evaluation process

**Assessment**

**Operational model of Project REDES for implementation of the educational strategy**

**Counseling**

- Of the 63,462 visits programmed in the municipalities, 51,786 (82%) took place.
- 2390 families received 15 ttC visits; of these, 1027 continued with the ttC sessions until completing the 21 counseling visits and concluding the project's health education process.
- Work was done with vulnerable and non-vulnerable families on economic and social issues.
- The families' assessment of the project as a learning opportunity encouraged their participation, while some families were limited by the 'aid' focus.
- Among the reasons that prompted some families to refuse to participate in the project are gender violence in the family, a "culture of assistance," and the notion that projects are only for poor families.

**The quality of the counseling.**

- The ttC method has shown it can be adapted to the population's needs and its contents respond to national health policies, plans and strategies, thereby supporting improvement in maternal, newborn and child health in the beneficiary area.
- During each visit, the family's health status was checked and, based on their needs, 311 referrals were made, of which 226 (73%) were used to obtain health services at a health center or maternity clinic.

**Family participation**

- In general, three times more women participated in the ttC sessions than men. Bearing in mind the intervention year, the figure shows that the percentage of men gradually decreased: whereas in 2016, nearly 30% of men attended, by 2018 their attendance had decreased by four percentage points. The opposite occurred with women. Initially, 70% of the women participated and by close of project, attendance had increased five percentage points (Table 1 and Figure 1). One of the factors that limited men's participation in the ttC was their work outside the home, particularly during the coffee harvest. This required them to travel outside the community to carry out this work together with other family members.

Figure 1. Percentage of ttC participants by sex, number of participants and year of intervention of Project REDES

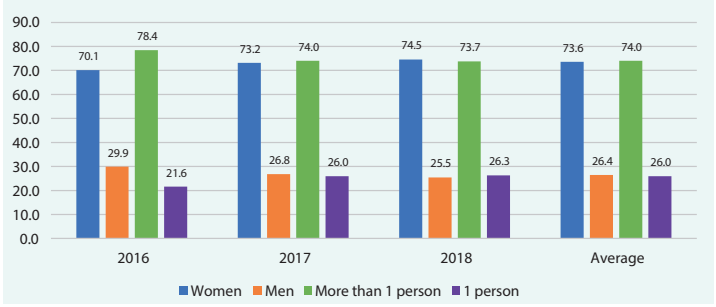



Table 1. Percentage of participants in ttC sessions, by year

| INDICATOR | Año 2016 | | Año 2017 | | Año 2018 | | Average | |
|---|---|---|---|---|---|---|---|---|
| | Number | % | Number | % | Number | % | Number | % |
| Number of men who participated in ttC | 871 | 29.9 | 16625 | 26.8 | 9238 | 25.5 | 8911 | 26.4 |
| Number of women who participated in ttC | 2043 | 70.1 | 45324 | 73.2 | 27060 | 74.5 | 24809 | 73.6 |
| Number of ttC sessions implemented with more than one person | 2285 | 78.4 | 45856 | 74.0 | 26761 | 73.7 | 24967 | 74.0 |
| Number of ttC sessions held with only one person | 629 | 21.6 | 16093 | 26.0 | 9537 | 26.3 | 8753 | 26.0 |
| Total participants in ttC | 2914 | | 61949 | | 36298 | | 33720 | |

## Assessment

### Operational model of Project REDES for implementation of the education strategy

- With respect to number of participants, on average, two or more household members participated in 74% of the counseling sessions; in the remaining 26%, there was only one person in attendance. Table 2 and Figure 2 show that the project met expectations regarding the family members' participation in ttC and the results were good, despite issues of poverty, coffee harvest and other agricultural activities, which involved nearly all family members. To increase the families' participation, the project team mentioned that it was necessary to adapt to the family's schedule. This meant organizing ttC sessions during weekends or at special times.

- San Jerónimo is the municipality with the lowest percentage of men in ttC, and therefore is the municipality with the highest percentage of women participating. It also had the highest percentage of ttC with just one person participating (39%); see Table 2 and Figure 2.

Figure 2. Percentage of participants in ttC by sex, number of participants and municipality

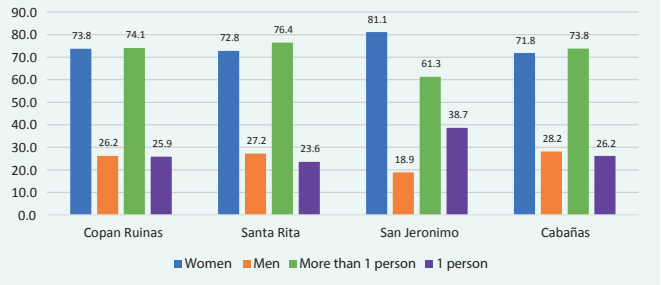



Table 2. Percentage of participants in Project REDES ttC intervention by municipality

| INDICATOR | Copán Ruinas | | Santa Rita | | San Jerónimo | | Cabañas | |
|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % |
| Number of men participating in ttC | 3684 | 26.2 | 3127 | 27.2 | 411 | 18.9 | 1689 | 28.2 |
| Number of women participating in ttC | 10366 | 73.8 | 8367 | 72.8 | 1768 | 81.1 | 4308 | 71.8 |
| Number of ttC sessions implemented with more than one person | 10415 | 74.1 | 8787 | 76.4 | 1337 | 61.3 | 4428 | 73.8 |
| Number of ttC sessions implemented with only one person | 3635 | 25.9 | 2707 | 23.6 | 843 | 38.7 | 1569 | 26.2 |
| Total participants in ttC | 14050 | | 11494 | | 2180 | | 5997 | |

During each visit:

- The KAP questionnaire was used as an indicator of knowledge assimilation and to guide the counseling process.
- Agreements were determined by each family, assessing their capacity for compliance. A total of 86,620 (87.4%) of the 99,051 agreements negotiated were met.
- Essential elements that promoted knowledge leading to behavior change included: dialogue and the presentation of topics with positive and negative stories, questions for analysis, songs, riddles, rhymes and illustrations for coloring, supported with the use of the CommCare App during counseling.

Technological innovation

Included the use of the CommCare App to facilitate the counseling and step-by-step use of the methodology.

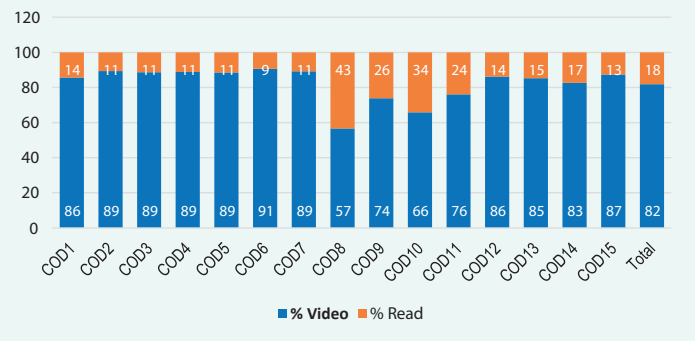
- The app was used in two ways: first, to explore the topics covered in the ttC counseling and support educational mediation. The computer tablet was the medium that enabled the family or individual receiving the counseling to see the stories on video, listen to songs, riddles and jokes, etc. Second, the app was used to record data collected during each visit, which was then fed into the information system. This digital platform was used by the BCAs and supervisors in all visits.

## Assessment

### REDES operational model for implementation of the educational strategy

- In general, 82% of the families preferred to see the ttC stories on video.
- This preference held true in 73% of the ttC sessions (11/15). However, in ttC 8, 9, 10 and 11, the percentage of families that preferred to read the stories was double or even higher (i.e., exceeded 20%).
- The CommCare HQ reporting and information system was designed specifically for the project, with technical assistance from Dimagi and the CU-SMI/IDB.
- Project REDES personnel found this system to be complex but useful and comprehensive; it is a database management system that recorded, modified, extracted and stored data related to each participating families. It provided the project with a robust database containing a full record of the intervention with all families.

**Figure 3. Percentage of families that prefer to learn about the story through video or reading**




**Results identified by participating families**

- The families generally considered that "learning" was the main benefit obtained from their participation in ttC, which they described as useful and valuable.
- The "timed" aspect of ttC counseling influenced their learning. Families found the topics attractive and pleasant, and appreciated the trust that developed between them and the BCA.

**Proposed changes**

Regarding the operational model, the REDES staff suggested the following:

- Conduct field reconnaissance before initiating the intervention in the communities, and do not rely solely on the map, in order to achieve a better distribution of BCAs in the territory, taking into account their dispersion and geographical features.
- Initially, BCAs had to cover 60 to 70 families, implying an average of three counseling sessions per day; the distribution of work should be improved to reflect the characteristics of the communities and families.
- Expand the technical team, including supervisors and financial administrators, so as not to overload the work schedule and to keep up with scheduled work load.

During counseling visits:

- Use of various KAP forms: only keep the essential forms or those related to each topic covered.
- At the end of each counseling session, in addition to the riddle, end with a joke about the topic discussed to reaffirm the key message.
- The videos should be more realistic, i.e., they should show women in labor, or the consequences of not taking folic acid.

At project level:

- Coordinate with leaders of local community organizations and health service providers. Coordinate support and unite efforts with other local stakeholders and seek complementarity with other projects.

**Behavior changes achieved and not achieved**

The records made during each ttC session described the progress achieved in complying with the "agreements negotiated on each ttC topic." For evaluation purposes, the option **>80%** was established as the limit for determining **"BC achieved,"** while levels **<80%** were termed **"BC not achieved."** Based on data collected in the four municipalities, the table below shows that for eight of the 15 topics, compliance with agreements was greater than 80%, while for the remaining seven topics the percentages recorded were below that parameter. This suggests that families faced difficulties that prevented them from complying with all the agreements negotiated and scored less than 80%.

**Table 3. Changes achieved and not achieved, by ttC and agreements**

| Topic | | Number of ttC agreements | >80% agreements met | <80% agreements met |
|---|---|---|---|---|
| ttC 1 | Care during pregnancy and prenatal checkups before third month of pregnancy | 8 | 88 | |
| ttC 2 | Birth plan and emergency plan | 8 | | 50 |
| ttC 3 | Importance of giving birth in a maternity clinic or hospital. Participation by men and family in caring for pregnant woman | 7 | | 14 |
| ttC 4 | Importance of family planning | 2 | 100 | |
| ttC 5 | Family preparations for the birth and newborn care | 8 | | 50 |
| ttC 6 | Care of mother after birth and newborn in first three days | 4 | | 50 |
| ttC 7 | Care of newborn and warning signs | 8 | | 75 |
| ttC 8 | Care of infants aged 1–6 months | 7 | 100 | |
| ttC 9 | Warning signs and seeking medical care for ARIs and ADDs | 5 | 100 | |
| ttC 10 | Reproductive life plan | 4 | 100 | |
| ttC 11 | Importance and benefits of taking folic acid | 3 | 100 | |
| ttC 12 | Importance of preventing pregnancy in girls <18 years | 5 | 80 | |
| ttC 13 | Self-esteem, values, and life project | 4 | | 21 |
| ttC 14 | Prevention of gender-based and domestic violence | 3 | 100 | |
| ttC 15 | Pregnancy and measures to prevent zika | 11 | | 73 |
| Total ttC agreements | | 87 | | |

**Important aspects of some topics:**

- **The birth plan:** The families were already familiar with the birth plan, since the health centers promote it. However, it was limited by the need for cash savings and, and given many families' socioeconomic conditions, while women often reported that they had saved money, in reality those savings did not exist. During ttC visits, families were encouraged to use different forms of saving and evidence shows that they saved in five ways: 1)

growing or harvesting basic grains or coffee; 2) raising and selling animals such as pigs and poultry; 3) money in cash; 4) remittance funds set aside for the birth and; 5) loans from cooperatives.

- **Institutional birth:** This challenges the traditional culture of home births. From the BCA´s perspective, institutional birth is a topic that involves expectations and sensibilities, first, because there have been maternal deaths in the area and children experienced the loss of their mothers; and second, the women are aware of the potential risks, particularly those who live in villages where travel to the maternal-child clinic implies major expense during the rainy season and in the summer.
- **Gender-based and domestic violence:** This topic was new to most of the families, given the context of the four municipalities and the way in which health issues have been addressed. Despite the high scores, the REDES staff considers that the least progress was achieved on this topic.
- **Family planning:** In the culture of these four municipalities, FP is largely a taboo subject. It was also the most critical topic for the REDES staff. "Initially, some families agreed to participate in the ttC, so long as FP was not discussed," explained the BC specialist. However, further along in the process, the topic was gradually introduced, even with Chortí leaders and heads of faith-based organizations.
- **Reproductive life plan:** This topic was unknown to most families, but helped to raise awareness about FP among the men.

**Men and the ttC**

- Fifteen of the 87 agreements included in the ttC topics describe behavior changes that men should adopt in maternal, newborn and reproductive health. It is noteworthy that in only two of these agreements, the scores were below 80%. This observation is based on the comments of a BCA, who reported, "We did not get many men to participate in the ttC." However, some women interviewed said that they had talked with their husbands about the topics discussed during the counseling sessions.

**Health belief model theory**

Participating families faced a number of barriers, which are still present in the villages, and include the following:

- The barriers to prenatal checkups, institutional birth and postpartum care are associated with the quality of care provided by health workers, high transportation costs and money needed to spend on food.
- In newborn care, early attachment and skin-to-skin contact between mother and baby immediately after birth, depends on the physician who attends the birth; even if the mother requests this, it is the doctor's decision to hand the newborn over to its mother for early attachment and skin-to-skin contact. The latter practice is aligned with the beliefs of family members, who tend to continue this practice, including the father, grandparents and other relatives.
- With regard to family planning, the barrier is associated with people's views about a woman's marital fidelity, and the relationship with God and sin. For those who do not use FP methods, taking contraceptives or using other methods is a sin. For those who do use FP methods, it is a sin to bring children into the world when you are not able to adequately provide for them.
- Men are excluded from participating in childbirth, postpartum care and newborn care, due to the patriarchal system. Families believe that only women should be involved in these activities. This view is reinforced by the health system because, on the one hand, it does not create conditions that enable men to be present at their spouse's antenatal checkups, childbirth, postnatal checkups and the newborn's health appointments and, on the other hand, the maternity clinic's infrastructure does not provide the necessary privacy for women in labor.

- Sometimes, the lack of zinc, ORS, folic acid and antenatal multivitamins at the health centers is resolved if the families have sufficient funds to acquire them at their own expense, or can wait until the health center can provide them. The use of insect repellents or mosquito nets also depends on the family's ability to afford them.
- Adolescent pregnancy is a topic that challenges deep-rooted cultural mores and customs in some families, who justify this practice by citing their poverty, and who often encourage their daughters to marry, even before the age of 14, to avoid responsibility for supporting them. Project workers identified a number of families who engage in this practice, but after the ttC educational process and specifically, after addressing the topic of preventing adolescent pregnancy, many took the decision not to marry off their daughters aged 14 years or younger; other families in similar conditions even decided to send them to school. This was a major achievement for the project's educational model.

## 1.3. Recommendations based on evidence collected during the evaluation process

| Conclusion | Recommendation | Responsible |
|---|---|---|
| **Operational model of Project REDES for implementation of the educational strategy** | | |
| ▪ The project implemented 82% (51,786) of the visits scheduled (63,462) in the municipalities.<br>▪ 2,434 families participated in 15 ttC visits and 1,034 in 21 ttc visits, thereby completing the health education process.<br>▪ The families' perception of the project as a learning opportunity encouraged their participation in the project; other families felt constrained by the assistance-oriented approach.<br>▪ The ttC methodology can be adapted to the population's needs.<br>▪ The ttC contents are aligned with national health policies, plans and strategies and support improvements to maternal, newborn and child health outcomes in the implementation area. | Share the project results with health service providers, local government entities and the Maya-Chortí organization. | World Vision<br>IDB |
| Learning process, the ttC | | |
| ▪ The 15 topics covered responded to the families' need for knowledge in order to opt for behavior change.<br>▪ The project's monitoring system was precise, systematic and should be replicated in future initiatives. | Promote the institutionalization of the operational model and the ttC methodology through contacts with local government authorities and partnerships with other stakeholders. | World Vision<br>IDB |
| Sustainability of behavior change | | |
| ▪ The project's innovations were not limited to the use of technology for learning; its approach to counseling was also innovative and fulfilled the requirements of privacy, in an ideal setting for the family (the home). It also involved the family in decisions about the date and time of the ttc, and in the selection of the topic, based on its own needs. | Share the project results with health service providers, local government bodies and the Maya Chortí organization. | World Vision<br>IDB |

# 2. INTRODUCTION

This project was implemented in the context of the Inter-American Development Bank's Salud Mesoamerica Initiative (SMI), which aimed to test innovative and effective solutions that are easy to implement, improve and modify without major effort and cost, in order to deliver high-quality health interventions to poor populations. The community-based intervention of Project REDES formed part of the study promoted by SMI/IDB and carried out by Yale University, to evaluate the use of social networks and their influence on the adoption, dissemination and reinforcement of behavioral norms at group level, and on basic attitudes regarding newborn and child health in rural areas.

In this context, VMH signed a contract with the IDB to implement an educational strategy to promote behavior change in relation to maternal, newborn and child health, through Timed and Targeted Counseling (ttC) and Community Group Meetings (CGM). The objective was to support improvements in maternal, newborn and child health outcomes through a community intervention designed to bring about changes in high-risk behaviors and attitudes by strengthening the social networks.

***Project REDES: management and processes***

The life cycle of Project REDES consisted of two phases. The **first** phase was executed over an 18-month period between 1 November 2015 and 30 April 2017, and focused on the design of the project's methodology and the creation of appropriate operating conditions for its implementation. This phase also saw the launch of the community intervention, during which the participating families received an initial visit (Visit 0 or diagnostic visit) plus the first five ttC counseling visits. The **second phase** covered a period of 17 months and was implemented between May 2017 and August 2018. This phase gave continuity to the cycle of ttC visits covering the 15 topics and put into practice the project's theory of behavior change. To gain a comprehensive understanding of the Project REDES management model, three aspects should be considered:

1) The functions of coordination and quality assurance, i.e. the leadership of the program to ensure the relationship between the project's processes and objectives.

2) Strategic processes leading to the achievement of the objectives, in this case, those related to the implementation of the ttC methodology to achieve behavior change.

3) Actions to support key processes and develop potential.

Functions of coordination and quality assurance

| Processes executed | Functions of coordination and quality assurance | Objective |
|---|---|---|
| a) Project leadership<br>b) The work team<br>c) Coordination of field implementation<br>d) Coordination meetings | • Focused on identifying needs to ensure optimum implementation of the project.<br>• As part of its responsibilities, the technical team followed the standards established in the project's study protocol.<br>• Direct communication with MANCORSARIC in emergency cases involving families participating in the project. | Create operational conditions for the implementation of Project REDES. |

***Procesos estratégicos que conducen a la obtención de objetivos***

These processes were identified in the first and second phases of the project. The first phase focused on: a) understanding the context of the project's intervention area through a formative survey and a communications strategy; and b) adapting the ttC methodology and making it an integral part of the operational model, using inputs provided by the KAP survey and developing communication tools, thereby obtaining the methodological design of the intervention. The technical team prepared a series of stories, songs, riddles and ballads to accompany the 15 topics addressed in the ttC methodology.

The community intervention began with 3634 households included on the original list provided by the YINS. A total of 3125 families received Visit 0, during which project workers discussed with each family their willingness to participate in the intervention and scheduled the first ttC session. However, the first ttC visit began with 2916 families (209 fewer), and continued on to Visit 5. During the second phase, the project continued to work with these families and "rescued" a number of others; thus, a total of 3022 families received Visit 1, and continued with the sequence of 15 ttC visits to cover the 15 topics. In the end, 2434 families participated the cycle of 15 visits and of these, 1034 families completed all 21 ttC visits.

During the first phase, each BCA was assigned approximately 60 to 70 families, while in the second phase a redistribution was carried out, due to the withdrawal of families who did not wish to continue, with each BCA ending up with an average of 50 to 55 families. The work schedule was from Monday to Saturday, with the times adjusted to suit the needs of each family.

***Actions to support key processes and develop potential***

This project has four main support processes: 1) the monitoring and evaluation system; 2) supervision and technical assistance provided by the Salud Mesoamerica Initiative's Coordinating Unit (SMI-CU); 3) the project's supervision of the ttC visits by supervisors trained for that task; and 4) the corporate identity of WVH, its vision, mission and value system.

***1. Monitoring and evaluation system***

The M&E system was continuously updated from the start of the project and up until the last six months of execution, with data generated in an automated manner. The data for each family was recorded, along with the household ID, the date, the ttC topic covered and the family's health status, etc. The KAP survey was implemented, containing 19 questions that were repeated each month during the ttC visit to determine how the family's opinions changed over time, based on correct answers to questions, or expressions in favor or against the topics addressed, in addition to how the families gradually assimilated the knowledge.

***2. Supervision by the SMI-CU***

The WVH considers that this element enriched the project's implementation, given the commitment shown by the local and external staff that accompanied and participated in making strategic decisions.

***3. Supervision of BCA team by supervisors during the ttC visit***

Supervision was a key strategy throughout the project. From the outset, the supervision team encouraged families to participate in the project, especially those in the "flagged homes." This effort was reflected in the "rescuing" of families that had rejected or quit the project and their reincorporation into the project. Throughout the implementation period, the supervisors' main role involved accompaniment, oversight and monitoring the quality of family visits, identifying the methodological and technical needs of the BCAs and providing timely assistance and support.

***4. WVH's corporate identity***

The institution's vision, mission and Christian value system served to encourage the relationship between project workers and the families. For some families, having the freedom to discuss God during the counseling sessions helped to build trust, together with their recognition of the organization that already existed in several of the intervention communities.

***Project REDES and its strategic approach***

Behavior change (BC): In Project REDES, behavior change is conceived as a consultation process involving the negotiation of agreements or commitments related to an individual's knowledge, attitudes and practices associated with the issues of maternal, newborn and child health, implicit in the project's objectives. It implies providing information to the participating families, and efforts to motivate them on the part of those who provide the information. This process serves to build communication links and emotional support between the participating family and the behavior change facilitator, through the use of different educational and communicational resources. The important point to note is that in this process to promote personal and social changes, the individual or family is considered as the "subject of change."

The ttC methodology and the family visit: This is the strategy used by Project REDES to promote and consolidate behavior change. It has been created and validated by World Vision International in different countries. The methodology has certain features that allow its contents to be adapted to the specific needs of the participating municipalities, villages and families. The core of the methodology is the family visit during which "counseling" takes place. This involves dialogue as a communication tool for expanding knowledge and obtaining answers. This counseling system has two essential features that define its name - Timed and Targeted Counseling:

- Timed, because it is designed to deliver messages at the right time - neither too early, in case they are forgotten, nor too late for the behavior to be practiced.

- Targeted, because it focuses directly on the needs of the family, in order to promote increased awareness so that they modify their beliefs, attitudes and their intention, decision and practice of the proposed behaviors. For example, if there is a pregnant woman in the family, the counseling focuses on topics related to the pregnancy cycle.

Innovation in the project's intervention: This is reflected in the design of the methodology, which was based on computer technology and used a mobile application called CommCare, and CommCare HQ, making it an innovative tool given its educational and play components. This technology was used in two ways. The first was to present the topics during the counseling sessions, contributing to educational mediation; the tablet was the medium that enabled the individual or family that received counseling to see the stories in video format, and listen to the songs, riddles and ballads, etc. The other was to record the data gathered during each visit, which was fed to the information system. The computer system was used by BCAs and supervisors during all of the visits.

Information system and indicators: The system was considered complex, given that it recorded the data of all members of all the participating families. For example, this meant that if 2,916 families participated and each family had at least four members, the system recorded the monthly data of approximately 11,664 individuals. A description of the structure of the information system and the indicators can be found in the Annex.

# 3. EVALUATION: BACKGROUND AND RATIONALE

The intervention zone of Project REDES included the municipalities of Copán Ruinas, Santa Rita, San Jerónimo and Cabañas in the department of Copán, Honduras. These form part of the Commonwealth of Municipalities of the Maya Route ( MANCORSARIC), which was responsible for administering the health services in the aforementioned municipalities until February 2018. The majority of the population in the area is of Maya and Chortí origin, with a deep respect for traditional customs and a mistrust of interventions proposed by governmental and non-governmental organizations. The area covered by the project included 154 villages distributed in the four municipalities, with a total of 3,634 families selected from the department of Copán.

**Table 4. Geographical coverage (original YINS list)**
**Project REDES – Copán, Honduras. October 2018**

| Municipality | # of villages | # of households | Population |
|---|---|---|---|
| Cabañas | 25 | 671 | 3,985 |
| Copán Ruinas | 68 | 1,454 | 12,091 |
| San Jerónimo | 11 | 262 | 2,804 |
| Santa Rita | 50 | 1,247 | 9,383 |
| TOTAL | 154 | 3,634 | 28,263 |

Project REDES was an innovative response to a set of complex problems. On the one hand, it used a communication strategy to implement an educational model based on network science to scale up behavior change in order to improve the status of maternal, newborn and child health of families. On the other hand, it used technology to support a better assimilation of the messages.

This model was based on a methodology known as Timed and Targeted Counseling (ttC), which is used to develop an interpersonal and family educational process and promote knowledge, understanding, acceptance and reinforcement of new behaviors. This type of intervention and its educational model had no precedent in Honduras among institutions and organizations engaged in health initiatives.

Since it was a unique intervention, there was great interest in knowing what worked and what did not and how the project helped individuals and families to adopt new health behaviors. Furthermore, in light of the study conducted by Yale University on the use of social networks in community interventions, this evaluation could provide valuable inputs, or could be of interest, to other studies carried out by other national organizations or institutions.

A total of 2,958 households participated in the first phase, and these same families continued with the second phase, which concluded with 2,923 families.

**Table 5. Households participating in Project REDES – Copán, Honduras. October 2018**

| Municipality | No. of households participating | | | | |
|---|---|---|---|---|---|
| | YINS list | Phase I | % | Phase II | % |
| Cabañas | 671 | 539 | 80.3 | 528 | 78.7 |
| Copán Ruinas | 1,454 | 1,182 | 81.3 | 1,174 | 80.7 |
| San Jerónimo | 262 | 236 | 90.1 | 233 | 88.9 |
| Santa Rita | 1,247 | 1,001 | 80.3 | 988 | 79.2 |
| TOTAL | 3,634 | 2,958 | 81.4 | 2,923 | 80.4 |

During the evaluation activities, some contextual aspects of the project were analyzed. In social terms, most families in the intervention zone live in poverty or extreme poverty, in some cases subsisting on an income of only 120 Lempiras per day. The analysis found high levels of illiteracy and many unsatisfied basic needs, including health services. For the residents of many villages, the health centers or health posts are located at distances that imply a journey of two or three hours on foot; and those who can afford to take a bus have to leave their community in the morning and return in the afternoon, sometimes taking a whole day to attend a health center.

Neglect has affected these communities in such a way that they seem believe that their poverty should make them accept all types of humiliations or violations of their rights. According to one BCA, "They were more likely to see the negative, rather than the positive message." However, in the intimacy of their own homes, the BCAs found the people to be obliging, cooperative and hospitable, with strong family ties and good relations with neighbors. But there were also vulnerabilities: the fact that so many families work in the tobacco industry, where they are paid 60 Lempiras to roll 1000 cigars per day and that there are very few sources of employment, means that many are forced to migrate. Their homes do not have latrines or kitchens. The men assume the leadership roles, with major gaps in gender equality.

From an environmental perspective, although these families have a solid productive culture, their production systems are weak. They have little or no access to land (inequity), few opportunities to access credit, and are unable to properly maintain their crops, which results in low-yield harvests. There is also a marked tendency toward violence against women and children - sexual, psychological, physical and, in some cases, economic. Some family members–mainly older women – assume responsibility for the upbringing and care of their grandchildren and great grandchildren in the absence of their adult sons and daughters and, although these elderly relatives receive remittances, they are administered by other family members. In the villages there are many liquor stores and other types of drugs- some legal, others not- are also sold. The strongest local organizations are the Church, the Water Boards and the Maya-Chortí Association. In general, there is apathy toward community meetings. The houses are made of biodegradable materials, with families living in overcrowded conditions and therefore exposed to diseases.

In the political sphere, the local populations are generally ignorant of their rights- economic, social and cultural – and of the rights of women and children. Governmental organizations are only present in the cities.

The above descriptions summarize the situation of the Maya-Chortí people, who have specific customs related to health, especially maternal-child health. One important advantage is that they are not opposed to receiving treat-

ment for most diseases at health centers. However, in their culture, before visiting a health center, they have already taken some home remedy or have visited traditional healers, medicine men, masseurs or midwives for treatment.

## 3.1. Objectives and scope of the evaluation

The following table presents the evaluation's objectives:

| **Objective of evaluation** |
|---|
| Assess behavior changes in maternal, newborn and child health and reasons why these have / have not been adopted by families benefiting from Project REDES in the municipalities of Copán Ruinas, Santa Rita, San Jerónimo and Cabañas, in the department of Copán, during project period (December 2016–August 2018). |
| **Specific objectives** |
| 1. Identify knowledge, attitudes and behaviors related to maternal, newborn and child health in the participating families. |
| 2. Understand reasons why behavior changes have / have not been adopted in the family setting. |
| 3. Ask beneficiaries for their views about project's operational model for implementation of education strategy. |

The scope of the evaluation's objectives was determined by the behaviors promoted by Project REDES among its target population. It took into account implementation of the 15 topics included in the educational strategy; the reasons the behaviors have occurred, referring to motivating and facilitating factors, barriers and resistances, and the families' current experiences resulting from the behavior; and their perceptions of the operational model, focusing on the visit and the quality of service and technology as an innovative element in the project's experience.

## 3.2. Constraints of evaluation

Two main difficulties were encountered during the evaluation process. The first was the qualitative method used during the fieldwork phase. In the prearranged field activities, some of the families selected were unable to attend the visit due to external circumstances, such as having to work or travel outside the community. In this case, they were replaced by another family, using the same selection criteria. Also, some families that were invited to the focus groups did not attend the meetings. The second difficulty was that families that declined the ttC process did not agree to participate in the evaluation process.

## 3.3. Evaluation protocol

The protocol for evaluation was approved by the Scientific Research Directorate of the National Autonomous University of Honduras (UNAH), through a memorandum issued on 24 October 2018, stating that the protocol has scientific rigor, validity, reliability and credibility in its [qualitative and quantitative] research method. It also upholds solid ethical research practices, such as confidentiality, respect, autonomy and consideration of the identity and world view of the local Maya-Chortí culture, and sets standards for the return of research results and their dissemination. The evaluation process corresponds to an external assessment conducted by the consulting team of Federación Red NicaSalud.

## 3.4. Data collection method

Preparation of the sampling frame and exit routes: Simple Random Sampling was used to select the communities and informants, in order to determine their number by municipality. A sampling distribution of the sample proportion was made, keeping in mind the percentage weight of number of families by municipality[1].

Exit routes for data collection: Having defined the community and number of families that would participate in the various data-gathering activities, exit points were defined with the participation of the Project´s technical staff, organized daily. Three exercises were carried out, until the most efficient exit plan was devised, based on the time available and the number of activities to be carried out[2].

Establishing contacts and issuing invitations: Given their geographic knowledge of the intervention area and the stakeholders involved, the REDES technical team provided crucial support in the process of contacting and inviting community leaders, families, women, men, SESAL personnel, Chortí leaders, and other project workers to participate in interviews and focus groups.

**Work teams:** These consisted of two researchers supported by a team of assistants responsible for documenting each activity, by making recordings, taking notes and photographs and subsequently organizing the information presented in flipcharts. They also assisted with logistical aspects such as preparing attendance lists and organizing participants in the focus groups, interviews and workshops.

**Design and validation of data collection tools:** A guide was designed for focus groups, interviews and the workshop with project workers. Each guide was specific to the group or individual concerned. These tools were validated and adjusted prior to being used for the activities.

**Data collection:** Before beginning an interview or focus group, the evaluation team read out the informed consent form, which was subsequently signed by the participants. In total, 25 activities were implemented (one workshop with technical staff, five focus groups and 19 interviews), with 97 participants, including women, men, leaders, members of the project's technical team and key stakeholders. Participants came from 32 communities (17 in Copán Ruinas, 8 in Santa Rita, 4 in Cabañas, and 3 in San Jerónimo). All activities were recorded and transcribed for data analysis purposes.

**Data analysis:** As the data was gathered and processed, topics began to emerge and be defined, through dialogue among the evaluators, who gradually developed the concepts and propositions; these were then triangulated with data provided by the project monitoring system. Categories were also defined, based on transcripts of recorded interviews, workshops and focus groups, and the data gathered from interviews and focus groups was triangulated with data from the monitoring system, preserving the identification of the different sources. To organize the findings and develop conclusions, the evaluation team maintained constant dialogue for data interpretation, bearing in mind the context in which it was collected. In order to reaffirm and refine the analysis, the findings were presented to different groups involved in the evaluation, and work sessions and reviews were held with the evaluation's technical commission, made up of representatives from the project team, evaluation team, and IDB representatives.

1. This number of families was then assigned in municipal communities, calculating accumulated population based on the list of communities and number of participating families. Then, using the sampling interval and random number, the number of families by community was assigned. Informant families were selected from the database of families involved in the project since Visit 1.

A workshop was organized with the technical staff to check the sample selection based on set criteria and using random methods to select new informants in case those previously selected could not participate for some reason.

2. The VMH staff helped to convene the families and facilitated contact between the research team and informant families at the time of each field activity.

# 4. ANALYSIS OF EVALUATION CRITERIA – FINDINGS

This chapter analyzes data on the behavior changes that families did or did not achieve, and the reasons identified from the perspective of the participating families, project team, and other stakeholders in the project.

## 4.1. REDES and the population's maternal / child health needs

REDES reports indicate that, according to the health services manager of the beneficiary area, before 2017 this area had high incidence of neonatal and child mortality. These high mortality levels – together with indicators for early pregnancy detection, prenatal, neonatal and puerperium monitoring and institutional childbirth – had not reached the target levels expected by SESAL. Diarrhea is the second cause of death in children under 5 and pneumonia ranks as fourth leading cause of death in the same age group.

Prior to the REDES intervention, the population's timely access to training and information processes on behavior changes in maternal, neonatal and child health were indicated as unmet needs.

According to REDES report for the first half of 2016, 30 children under 5 died, including nine newborns during the first seven days, four newborns 8–28-days old, 10 infants 1–12 months old and seven children 1–4 years old (MANCORSARIC services network). Statistics from 2015 show that total number of deaths was reduced by five, though there is evidence of an increase of three deaths of newborns aged 0–7 days. The indicator for enrollment in early prenatal care for the first half of 2016 was 65%, while the average for prenatal checkups was 4.7. The community birth rate was notably high, at 12%, and contributed to the increase in neonatal deaths.

In this context, the project's ttC intervention appears to be a timely and appropriate alternative that responds to families' needs. The families appreciated the project because of their health knowledge gained and good new behaviors that they have put into practice.

## 4.2. REDES operational model

The REDES Project's operational model is based on a systematic approach with three dimensions. The first identifies the project as research on the science of social networks for behavior change at scale; although this particular aspect is not included in this evaluation, in interviews and focus groups the families have acknowledged that this is manifested in their daily lives. The second dimension is how behavior change is accomplished through the ttC methodology, with face-to-face counseling in the family home. And the third dimension is the innovative use of technology through the CommCare application for counseling and CommCare HQ for recording information.

### 4.2.1. Behavior change through ttC and how it is implemented

The project's operational model began with Visit 0. But first, a project team was put together, comprising a project coordinator, a behavior change specialist, and monitoring expert, a technical supervisor, a financial manager, five field supervisors and 52 behavior change agents (BCA). The BCAs were responsible for providing behavior-change counseling in the 154 villages selected in the four municipalities. Field supervisors accompanied each BCA to provide support on technical issues and counseling methodologies for quality assurance of the visits. The BC specialist guided the team in the behavior-change process, while the technical supervisor provided technical assistance on health topics to the team of supervisors, BCAs, and families. The monitoring specialist was responsible for the CommCare HQ data system.

**Organization of the visits**

The main principle in determining BCA caseloads was to assign equitable distribution of families, taking into account the ruggedness of the terrain in each municipality, distance between homes, and time needed to move from one house to another. Accordingly, if a BCA was assigned to work in villages with dispersed houses, he/she was allocated fewer families to counsel. Conversely, if a BCA was assigned an area with denser concentration of houses, he/she was assigned more families to visit. At the start of implementation (November 2016), each BCA worked with 65 to 70 families in three or four communities, which meant that each BCA had to conduct three or four counseling sessions per day. However, assignments were redistributed in May 2018, which resulted in each BCA being responsible for 55 to 60 families and an average of three ttC sessions per day. One BCA explained, "The target [referring to the number of visits] was too much for one day. Some days I did four counseling sessions, other days three, and it was really tiring. Scheduling the time for each family would have worked better if more adjustable targets had been established."

The underlying issue for distribution of families per BCA was the capacity to conduct the counseling visits, since ttC sessions were the mechanism for establishing a relationship between the project and the families. It was used to explain the project to families, conduct Visit 0 (diagnostic visit) and provide health education for behavior change through the ttC:

- Visit 0 served to identify the families' willingness to participate in the project. A total of 3,125 homes received visit 0 and agreed to schedule the first ttC visit. However, 509 families did not agree to receive visit 0.
- Visit 1 – the first ttC session – was held in 3022 homes and the first topic of the methodology was discussed, keeping in mind the family's needs. This number of families was the starting point for the project to sequentially schedule the remaining ttC visits.

It was estimated that in the course of the intervention, each home would receive 21 visits to complete the cycle of 15 topics. This involved planning 63,462 visits throughout the implementation phase. Of these, Project REDES conducted 51,786 ttC visits, equivalent to 82%. The following table illustrates the number of visits planned and executed, using Visit 1 as the reference.

**Table 6. Homes visited for ttC per municipality**
**REDES Project – Copán, Honduras. October 2018**

| Variable | Municipality | | | | |
|---|---|---|---|---|---|
| | Cabañas | Copán Ruinas | San Jerónimo | Santa Rita | TOTAL |
| Number of homes Visit 1 | 550 | 1,215 | 238 | 1,019 | 3,022 |
| Visits planned | 11,550 | 25,515 | 4,998 | 21,399 | 63,462 |
| Visits executed | 9,375 | 20,926 | 4,113 | 17,372 | 51,786 |
| Percentage | 81.2 | 82.0 | 82.3 | 81.2 | 81.6 |

The table shows fewer visits implemented than vists planned. The reduction in number of participating families was due to what was termed "flagged houses," and occurred for various different reasons, both direct and indirect. Direct causes included families that expressed their refusal or unwillingness to continue receiving the visits: "Take me off the list because I don't want to continue. I can't." Several BCAs also reported that families sometimes expressed blunt disapproval. "At times it was violent; for example, they would slam the front door, or show signs of displeasure when we arrived. Other families would turn the music up loud during counseling and once they even hid to avoid us." The decline in number of visits due to indirect causes was related to external reasons, such as abandoned homes, migration away from the community, situations of violence, or work reasons.

The explanations many families gave for voluntarily leaving the project (rejection) was mostly due to these three reasons:

a) Gender-based violence in the family expressed through jealousy, mostly by men, upon learning that a male BCA would provide counselling to the wife. This situation happened much less when a female BCA was assigned.

   One BCA reported, "I noticed that a woman I visited hid the commitment book in a box because her husband was very jealous. Since this was face-to-face counseling, it made men was who are jealous of their spouses uncomfortable. Some have been jealous for more than 50 years."

   A woman in a focus group: "When they saw us together, face to face, some people said we were falling in love."

b) The "culture of dependency," expressed in a family's expectation of receiving material compensation for participating in the project. During visit 0, it was explained that the project was educational and not material-based, but many families did not value health education. One field supervisor reported, "some families found out how much pay the BCA received and then said that the BCA was being paid to take up the family's time."

c) One BCA lived in the same village as the families in his caseload, and this made some families reluctant to participate (to a limited extent, although it did happen). "In Pinabetón, for example, the BCA assigned was well known in the area and lost 16 families, which required his relocation. In the other village he was only rejected once." (REDES staff association)

d) In the belief that projects are for poor families in the communities, some families with better financial prospects refused to participate, arguing they had no use for health services. "The area where the project was most strongly rejected was a coffee-growing region with a higher economic level than other areas. From the outset, the project encountered more refusals. One thing they said was that they did not need to learn anything, they had the money to pay and could even go to Guatemala because they did not need services here in Honduras." (Interview with pregnant woman)

Project oversight was carried out through technical and field supervision. Technical supervision focused on checking the quality of the ttC sessions and monitoring the progress of the intervention, in line with the project's protocol. Supervision, related to ttC subject matter, served three functions: 1) it established a link between families and the health system, since in some cases referrals were made to health centers; 2) field supervisors guided and accompanied BCAs in the proper technical execution of health topics; and 3) the supervisory process verified implementation of the communications strategy as well as correct use of ttC methods. The technical supervisor and BC specialist undertook technical supervision. The specialist observed, "At first the BCA talked a lot and the family a little; but we managed to change that."

Field supervision was conducted by five supervisors who were responsible for planning visits and group sessions, verifying the quality and integrity of the counseling, and compliance with ttC protocol. Each supervisor was assigned 10 or 11 BCAs, together with their caseloads of families, since the supervisors also met directly with the families. In Visits 0–21, field supervisors also checked on families that refused to participate, visiting them and explaining the project's importance. Field supervisors also provided support to achieve the BCAs' optimum performance with the families, focusing mainly on developing their skills for dialogue during counseling. One BCA reported, "My supervisor would meet with me and tell me how I could improve on a given topic with this or that family."

Project monitoring ensured compliance with the monitoring and evaluation plan. It also provided supervisors and technical team with information on the progress

achieved and on the processing and analysis of data collected in the registration system.

**Counseling for behavior change: rationale for the visit**

> "The counseling they give you is about taking care of the children, about your pregnancy, not misusing those pacifiers, or putting anything on the newborn's navel, not using those bandages. And I complied with everything, because now I don't give the baby a bottle, only my own milk, look how chubby he is… and just from breastfeeding!" (Woman from Buena Vista)

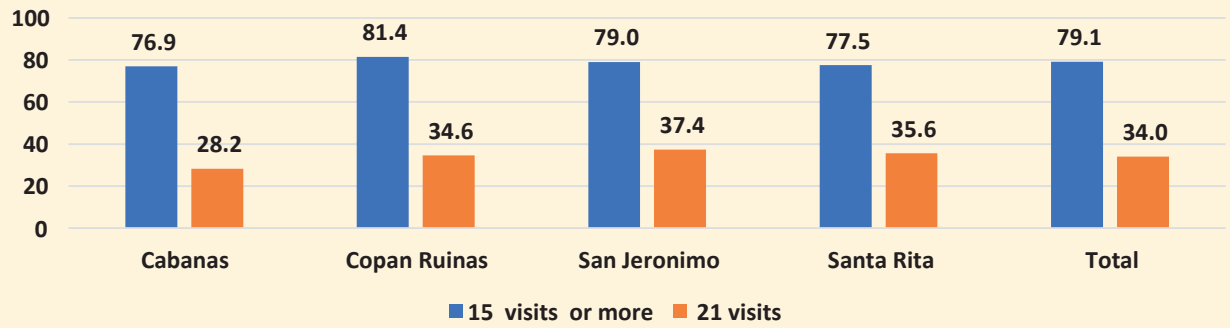
Based on the study protocol, it was established that all families should receive 21 ttC visits and that all families should complete the 15 topics of the intervention, either in 15 or 21 visits. Table 7 (below) shows the number of households that participated in the first ttC visit, those that received 15 counseling visits, and the number that completed 21 ttC visits.

**Table 7. Number of families that completed the 15 topics in 15 or 21 visits**
**Project REDES - Copán Honduras. October 2018**

| Variable | Municipality | | | | |
|---|---|---|---|---|---|
| | Cabañas | Copán Ruinas | San Jerónimo | Santa Rita | TOTAL |
| 15 ttC visits | 439 | 998 | 193 | 804 | 2,434 |
| 21 ttC visits | 158 | 413 | 92 | 371 | 1,034 |
| Visit 1 ttC (denominator) | 550 | 1,215 | 238 | 1,019 | 3,022 |

As shown above, 2434 families received the 15 topics during counseling visits and 1034 participated in 21 counseling visits, with these last sessions being used to reinforce the ttC topics. In some cases, it was necessary to repeat certain modules. For example, one family had already received Module 1, which addresses the topic of pregnancy, but when the BCA returned, she discovered that now there was a pregnant woman in the home, so this module had to be repeated. Other families did not manage to complete all 21 visits or cover the 15 topics, because they were away from their homes during certain months, involved in economic activities such as coffee harvesting, or had migrated to other areas. Figure 4 shows the percentages of families that completed ttC in each municipality; the two highest municipalities were Copán Ruinas and San Jerónimo.

**Figure 4. Percentage of families that completed the 15 topics in 15 or 21 visits.**



What were the factors that helped and what hindered the families' participation? A barrier is understood as something that does not contribute to people's participation, while a facilitator is something that does encourage them to participate. Based on the opinions gathered, these factors are related to: a) the community context, b) the family situation, and c) the ttC methodology. The table below shows the classification of the opinions of the different groups.

| Context | Barriers | Facilitators |
|---|---|---|
| **In the community** | | |
| | **Non-participating families were dismissive about participating families.**<br><br>▪ People would sometimes ask me, "Do they pay you? I see you're wasting time there [counseling], even though you have children you still have time?" (Woman in focus group)<br><br>▪ "Several families in the village shut the door in the BCA's face, saying that they were wasting their time and that [BCAs] earn a salary." (Woman in focus group)<br><br>▪ Someone from our village said, "It's pointless to be telling the BCA all about my experiences -- that's not going to help me." (Woman in focus group) | **Participating families valued the project because the counseling provided a learning opportunity.**<br><br>▪ People would ask me, "What do you gain from it?" And I would answer, "I'm learning about things, and what I don't know, they're teaching me." (Woman in focus group)<br><br>▪ When people asked me why I was participating, I'd say, "Anyone who does things for money, well, the money runs out; I prefer wisdom, learning." (Woman in focus group)<br><br>▪ "And I quoted a phrase that says, 'Whatever you did for the least of your brothers, you did it for me, and whatever you didn't do for the least of your brothers, you didn't do for me.' So I do it for the children and for you, because I work as a defender, I am defender of children. "(Woman in focus group) |
| **In the family** | | |
| | **Men did not approve of their wife participating in counseling** | **Women participated in counseling without the approval of their husbands.**<br><br>▪ "Women participating in the project would hide the commitment book in a box so that their husbands wouldn't see it, because they were very jealous." (BCA)<br><br>**Couples made agreements to participate: the woman would participate in counseling and then tell her partner about the contents and commitments made.**<br><br>▪ "At night I would tell my husband all about the counseling." |
| **The ttC session** | | |
| | | ▪ **Families participated in counseling on a voluntary basis and scheduled the date and time of their next session at their convenience.** |

The counseling process was well structured and could be summarized in four major steps or stages, each with specific content and tools, which are described in the following table.

| Step | Content |
|---|---|
| **Introduction and greetings** | **Check that the family is ready for the session and encourage everyone to participate.** |
| **Record primary data** | ▪ **Identify the home and the family.**<br>▪ **Check whether there are any warning signs or health issues.**<br>▪ **Record answers in the KAP form.**<br>▪ **After the second visit, check previous agreements.** |
| **Start counseling** | **Use dialogue between BCA and the family as a basic resource.**<br>▪ **Select new topic or continue with a previous topic.**<br>▪ **Explore the topic using the materials and CommCare App. Positive and negative stories in video and print format, songs, rhymes, ballads, riddles, coloring activities.**<br>▪ **Negotiate agreements.** |
| **Final agreements** | ▪ **Reinforce key messages.**<br>▪ **Establish agreements for practicing behavior change related to the topic covered and previous topics.**<br>▪ **Schedule date and time of next visit.** |

Quality of counseling

Perceptions about the quality of family counseling are analyzed in accordance with the following steps:

Step 1. Introduction and greetings: Consider the preparations for the ttC session, the participating individuals, and compliance with date and time scheduled. In terms of preparations by both parties, there is evidence that both the REDES staff and the families carried out previous activities.

- REDES provided ongoing training for BCAs and supervisors, in addition to weekly, monthly and quarterly visits planning. At the individual level, BCAs reported, "a desire to go to each visit and gain the family's trust;" "to strengthen our humanity in common," and "to be humble, since these families were extremely poor."

- Comments about preparations by families (mainly by women), "I would do the household chores early in order to be ready." The men, "When I had a visit, I set aside time, I knew the day they were going to arrive and waited for them, because it was useful for me to listen to them, that's why I set aside the time." "As soon as they told me about the visits, I would wait for them, I would spend the day waiting to listen to them."

As to the REDES personnel participating in counseling, the comments made by BCAs and supervisors were significant. "There was almost always someone else listening to the counseling, even if they were doing some other type of work, like making tortillas." Women in the focus groups and in interviews said, "I agreed to tell my husband all about the visit." One man: "Whenever I could, I participated."

In terms of scheduling next visit's date and time, all participating groups agreed, "Each visit was scheduled and if meanwhile an unforeseen circumstance arose, we could contact the project and reschedule the visit." One key element was that the day and time was determined by the family and not the BCA. For example, one family scheduled the counseling sessions on Sundays at six in the morning.

Family participation

- In general, three times more women participated in the ttC sessions conducted by the BCAs than men. As each year of the project progressed, Figure 5 (below) indicates that the percentage of men gradually decreased. Nearly 30% of men attended in 2016, but by 2018 their attendance had fallen by 4 percentage points. The opposite occurred with women: initially, 70% of women participated and by close of project, attendance had increased 5 percentage points (see Table 8 and Figure 5). One factor that limited men's participation in the ttC was their work outside the home, particularly during the coffee harvest. They often had to travel outside the community to work, along with other family members.

**Figure 5. Percentage of participants in ttC by gender, number of participants and year of REDES intervention**

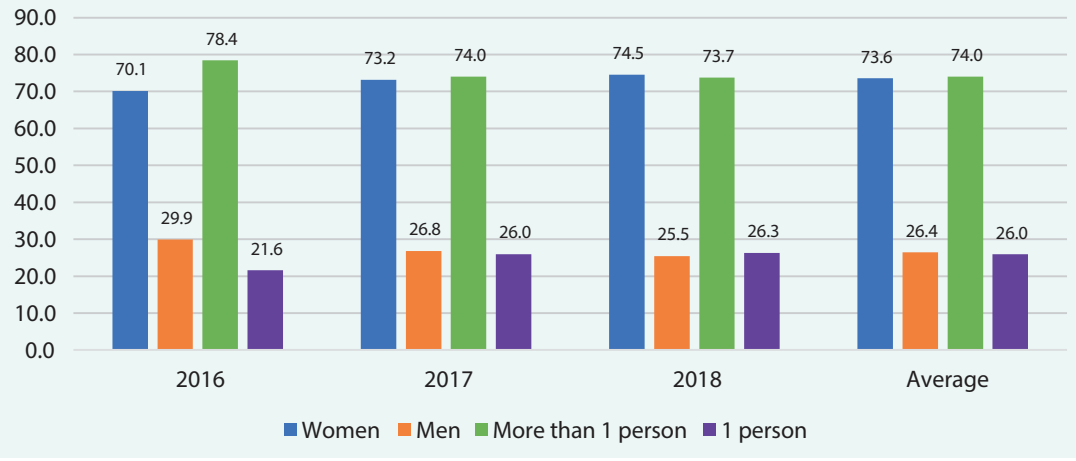



Table 8. Percentage of ttC participants in REDES intervention by year

| INDICATOR | Year 2016 | | Year 2017 | | Year 2018 | | Average | |
|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % |
| Number of men who participated in ttC | 871 | 29.9 | 16625 | 26.8 | 9238 | 25.5 | 8911 | 26.4 |
| Number of women who participated in ttC | 2043 | 70.1 | 45324 | 73.2 | 27060 | 74.5 | 24809 | 73.6 |
| Number of ttC with more than one participant | 2285 | 78.4 | 45856 | 74.0 | 26761 | 73.7 | 24967 | 74.0 |
| Number of ttC conducted with only 1 individual | 629 | 21.6 | 16093 | 26.0 | 9537 | 26.3 | 8753 | 26.0 |
| Total number of participants in ttC | 2914 | | 61949 | | 36298 | | 33720 | |

- On average, 74% of the counseling sessions were attended by two or more household members, while the remaining 26% were attended by just one person (see Table 9 and Figure 6). So in general the project met its expectations of family members' participation in the ttC and the results were good, despite setbacks due to issues of poverty, coffee harvest and other agricultural activities, which involved nearly all family members. To increase family participation, the project team saw it necessary to adapt to the family's schedule, which meant scheduling ttC sessions on weekends or at special times.

- San Jerónimo was the municipality with the lowest percentage of participation of men in the ttC, and therefore the one with the highest percentage of women participating. It is also the municipality with the highest percentage of ttC with only a single person participating (39%); see Table 9 and Figure 6.

**Figure 6. Percentage of participants in ttC according to gender, number of participants and municipality**

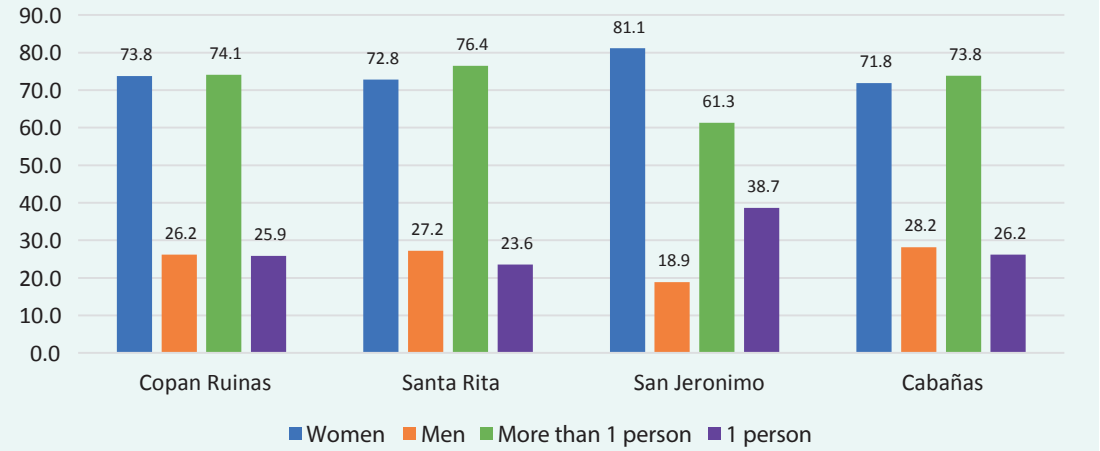



Table 9. Percentage of ttC participants by municipality in REDES intervention area

| INDICATOR | Copán Ruinas | | Santa Rita | | San Jerónimo | | Cabañas | |
|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % |
| Number of men who participated in ttC | 3684 | 26.2 | 3127 | 27.2 | 411 | 18.9 | 1689 | 28.2 |
| Number of women who participated in ttC | 10366 | 73.8 | 8367 | 72.8 | 1768 | 81.1 | 4308 | 71.8 |
| Number of ttC implemented with more than one person | 10415 | 74.1 | 8787 | 76.4 | 1337 | 61.3 | 4428 | 73.8 |
| Number of ttC sessions held with only one person | 3635 | 25.9 | 2707 | 23.6 | 843 | 38.7 | 1569 | 26.2 |
| Total participants in ttC | 14050 | | 11494 | | 2180 | | 5997 | |

Step 2. Record primary data: Confirmation of the family's identity to ensure that it is the family registered and no other, and to report any increase or decrease in number of household members for the purposes of the study. To assess quality, two factors were taken into account in this step: the family's health status and referral to a health center, and the KAP.

During each home visit, the family's health status since the previous visit is reviewed – emergencies, referrals to a health center, etc., in response to the family's basic health needs. From 2016–2018, the project collected data on 311 emergencies, of which 226 (or 73%) warranted the patient's transfer to a health unit, with 50% of the cases related to the areas covered by the project (see Table 10).

**Table 10. Health emergencies observed in home visits**
**Project REDES – Copán, Honduras. December 2018**

| Variable / percentage | Project year | | | Total |
|---|---|---|---|---|
| | 2016 | 2017 | 2018 | |
| Number of emergencies observed | 8 | 177 | 126 | 311 |
| Emergencies requiring referral | 4 | 111 | 111 | 226 |
| Percentage | 50 | 63 | 88 | 73 |

The most common disorders were acute respiratory infections (ARIs) in children, which accounted for 42% of the referrals, followed by pregnant women (27%), and children with diarrhea (19%), as shown in Table 11 (below).

**Table 11. Disorders referred by REDES personnel during counseling visits**
**Project REDES – Copán, Honduras. December 2018**

| Variable / percentage | Project year | | | Total | |
|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | | |
| Pregnant woman | 0 | 21 | 9 | 30 | 27% |
| Postpartum woman | 0 | 1 | 3 | 4 | 4% |
| Newborn | 0 | 6 | 3 | 9 | 8% |
| Child with diarrhea | 0 | 15 | 7 | 22 | 19% |
| Child with ARI | 1 | 23 | 23 | 47 | 42% |
| Woman of childbearing age without menstruation | 1 | 0 | 0 | 1 | 1% |
| **Total** | **2** | **66** | **45** | **113** | **100%** |
| **Percentage** | **50** | **59** | **41** | **50** | |

With respect to BCAs referring cases to health centers, the usefulness and acceptance of the referrals varied, according to each family's experience. Some families reported receiving good service, while others spoke of being ignored or turned away at the health center. Mothers of children under 2 years reported:

- "For example, when my child was sick, the promotor [BCA] would say: 'Take the child to the health center.' So I took him, but they ignored us, they said there was nothing seriously wrong with him. Then I went to El Jaral and they took no notice of him, so then I came from Copán to a clinic and there the doctor took care of him."

- Another beneficiary reported: "I received a referral during postpartum. I handed it over in the health center, they received it and they took care of me"

Completing the KAP survey in the home: The KAP form is a questionnaire containing 19 questions on the project's different topics, related to key ttC messages. All participants who received counseling during each visit were asked to fill in the KAP form. From the BCA's perspective, the form had three objectives: a) provide an indicator of the family's assimilation of knowledge; b) check the family's learning process and reinforce it, and; c) guide the presentation of the ttC topics. Although no opinions about use of the KAP form during home visits were recorded during the focus groups or interviews with families, the BCAs discussed this issue widely with families, and have emphasized the following aspects:

- Repetition as a basic element for learning. Based on their experience, BCAs mentioned that, "There came a time when [you asked the KAP questions] and they only answer: 'Yes, No, Yes, No, No,' because they already knew all the questions." "I imagine that the strategy was repetition, like elementary school children, repeating, repeating. In the end, they would assimilate; for me, [the KAP] was a tool for learning about behavior change."

- It prompted analysis, but at the same time the families found it tedious. According to one BCA, "The KAP was an adventure, it took a long time because the family began to analyze." "Initially, I noticed some annoyance in the families because they got bored."

Step 3. Implement ttC counseling:, In this step, the most important aspect of the home visit was the dialogue between the BCA and family, supported by education material, communication tools, and the CommCare App.

Dialogue between the BCAs and families: based on testimonies from the technical staff, supervisors and especially the BCAs and the families, the negotiation process for behavior change was beneficial for both the family and the community. The ttC topics involved a break with social traditions. Each BCA worked with people who had different attitudes, feelings and thoughts, different experiences, personal stories and motivations. The strategy was to gain and maintain the family's trust throughout the entire counseling process. This process of trust involved:

- Accepting and respecting the family's situation and also their interests and needs.

  One BCA recounted his experience: "The mother said: 'Look at me! Look how I am, I don't have anywhere to receive you!' So, what I did was to innovate, help the family feel that I'm the same as them."

- Identifying common ground in each ttC topic, based on personal experience.

  Another BCA explained, "I would ask: 'How many children did you have?' They would answer, 'So many.' Then I would ask: 'How many are still alive?' One woman answered, 'Only seven.' So I asked, 'What happened to the others?' She answered, 'So many miscarriages, so many stillborn.' With these answers, you can began to talk about reasons for miscarriages. All that made them think."

  Woman in focus group, "And then we'd start chatting, the way you do between two people, and we began to discuss the topic, and we would talk about our experiences and also about theirs."

For the families, dialogue provided a space for learning and sharing experiences:

- The BCAs encouraged participants to learn in order to foster an attitude of acceptance toward behavior change.

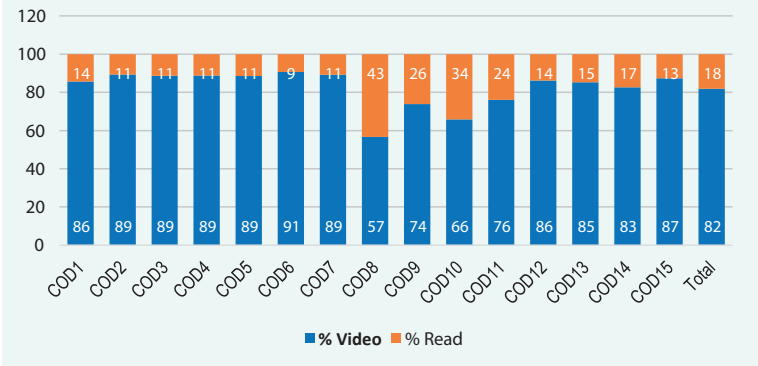
Male leader in focus group, "I think the counseling was composed of different things to encourage you; it gave you motivation to do things that you were wanting to give up."

Man in focus group, "My wife and the BCA and I would begin to talk and we would reach a conclusion."

- Dialogue encouraged families to reflect on their practices, recognize mistakes, and it was also useful for the BCA to understand their concerns and their beliefs.
- Woman in FG, "I would meditate to see what I could get out of it."
- Male leader in F, "They would ask what I thought [about the topic]".

It is clear that the counselling sessions on the 15 ttC topics, implemented with support from teaching materials and communication tools, have brought about a change in the way of delivering information and knowledge, and teaching the families - even though, "the counseling messages are no different from what the health centers teach," according to some participants. The design of methodology included educational materials in visual, audiovisual and audio format, for each topic.

**Figure 7. Percentages of families that preferred to watch videos of stories or to read them**




In general, 82% of the families preferred to watch videos of the ttC stories. This preference held for 73% of the ttC (11/15). However, in ttC 8, 9, 10 and 11, the percentage of families who preferred to read the stories was double or even higher, i.e. it exceeded 20%.

The table below shows family opinions about use of the counseling resources, which confirmed the following:

- The positive and negative stories were considered to be the most important resource, awakening the families' interest and capturing their attention, encouraging them to reflect, and introducing them to new information and knowledge, with realistic simulated experiences.
- The songs, riddles, ballads, rhymes and illustrations for coloring served to reinforce each topic, helping families to retain the messages.

| Participants' perceptions of educational resources and communication tools: visual, audiovisual and printed | |
|---|---|
| **Participating families** | **REDES staff** |
| **Positive and negative stories, in print and in video** | |
| ▪ I learned more by seeing and hearing the video. (Woman in focus group)<br>▪ I liked all the stories. In the negative ones, you could follow all the things that went wrong. Then we would have the positive story, which was the one we had to follow. (Pregnant woman)<br>▪ The stories were consistent with the topic. For example, in the topics on newborns, pregnancy and family planning, the stories were always linked to the topic. (Pregnant woman)<br>▪ When they [BCAs] showed me the videos, they would tell a story or share an experience. (Man in focus group)<br>▪ I liked all the videos [stories], I even asked [the BCA] to give one to me but he said 'No.' The videos were easy to understand, really good. (Pregnant woman) | ▪ The tablet was a very valuable audiovisual tool for presenting the positive and negative stories on video. (BCA)<br>▪ The positive and negative stories were based on experiences known locally. (REDES staff)<br>▪ People who cannot read or write can understand (the topics) by seeing the pictures and hearing the stories. (BCA) |
| **Songs** | |
| ▪ They helped me to think about things, singing the song "No Basta" ("It's not enough") -- it's not enough just to bring children into the world, we then have responsibilities. (Woman in focus group)<br>▪ I saw that some parents had tears in their eyes when they heard that music [referring to the song No Basta], because I told them to listen to the words of that song. (Woman in focus group)<br>▪ The songs were all lovely folk songs and fit well with the topic. (Pregnant woman)<br>▪ I liked the song about zika because it mentions people dancing with a broom, and I liked that it mentioned giving birth to your baby in a clinic. (Pregnant woman) | ▪ Some songs did not really fit in with the subject, they were a little 'off-topic' and it was hard to return to the issue. (BCA)<br>▪ We knew what the message expressed in the song (No Basta) was about, but when we did Topic 11, the families could not relate to it when we talked about folic acid; it was the same with family planning. You had to think and analyze carefully, because families would always ask why that song was chosen. (BCA) |
| **Riddles, ballads, rhymes** | |
| ▪ During each session, [the BCA] would give us a riddle, a refrain or a rhyme. I liked it very much when he visited and we did these activities, and he gave us all advice, I thought it was very nice. (Woman in focus group)<br>▪ [The riddle] helped me understand, I remember that it said: 'zinc, zinc,' it was about using zinc tablets for diarrhea. (From interview with postpartum woman)<br>▪ The riddles and songs were always about the topic being discussed. (From interview with postpartum woman) | ▪ The educational materials included posters, counseling books, calendars, illustrations, recipe books, and crayons. (BCA) |

| Illustrations for coloring | |
|---|---|
| ▪ I have an eight year-old daughter, and when Sandra gave me the pictures, my daughter would say, "You aren't going to color them in today, I'm going to do it, and you can color them another day and that way we can take turns." We put all the drawings we colored in up on the wall. (Woman in focus group)<br>▪ I always liked the pictures. Once they came to my house to supervise, and they saw that everyone in my house likes to color drawings, the whole family. I have three children and they are always coloring, and my husband and I like coloring pictures, so it was very enjoyable. (Woman in focus group)<br>▪ Coloring helped me to understand the ideas, to learn. I would let my granddaughter color the pictures. The ones about brushing your teeth helped my granddaughter learn how to brush her teeth. (Pregnant woman) | ▪ The pictures for coloring serve to reinforce the topic and help people retain the message. (BCA) |

On the use of technology and the CommCare application in counseling, the BCAs participating in the evaluation agreed:

- The easy-to-use app uploaded on the tablet to deliver counseling was "an excellent app because you could use it without the internet, and when you had internet access, it could be synchronized." (BCA)
- It allowed for simplification of work and mobility, since all materials were incorporated into the technology. "Imagine a counseling session without the tablet. We would have to carry an enormous package around, or be loaded down with video equipment, printed material, books, the agreements, everything;" the app, "meant you could store all the forms needed for each family;" "Without technology we would have needed to prepare a record and that would take a long time, but with the tablet we just marked the forms." (BCA)

***Step 4. Negotiating agreements:*** The aim was to solidify the family's knowledge and support the family members in their commitment to practice new behaviors.

To visualize the results, the information system showed that 87.4% of the beneficiary families committed to and met the agreements set during the counseling sessions. An analysis of data by municipality shows that Copán Ruinas had the highest percentage of families that adhered to the agreements, followed by Cabañas. The municipalities with the most broken agreements were San Jerónimo and Santa Rita.

**Tabla 12 Acuerdos cumplidos según municipio**
**Proyecto Redes, World Vision Honduras. Octubre 2018**

| Variable | Municipality | | | | |
|---|---|---|---|---|---|
| | Cabañas | Copán Ruinas | San Jerónimo | Santa Rita | TOTAL |
| Number of agreements negotiated | 17,056 | 45,872 | 5,755 | 30,368 | 99,051 |
| Number of agreements met | 14,976 | 40,917 | 4,930 | 25,797 | 86,620 |
| Percentage | 87.8 | 89.2 | 85.7 | 84.9 | 87.4 |

Keeping in mind the number of ttC sessions, the percentage of compliance with agreements varies from 92.9% in the case of ttC-14, to 76.7% for ttC-3. In other words, rates of fulfillment of agreements on prevention of gender-based and domestic violence and the importance of giving birth at a maternal clinic or hospital and participation of the husband and the family in the care of pregnant woman, respectively, differed considerably.

In one-fourth of the ttC (4/15), 90% or more of the agreements were met (in ttC 4, ttc 9, ttC 14 and ttc 15), which cover topics of family planning; warning signs and treatment of ADDs and ARIs; prevention of gender-based violence; and pregnancy and measures for the prevention of zika, as shown in Graph 8 below.

Given the context of violence, the high compliance with ttC-14 is significant; ttC 14 covers the topic of preventing gender-based violence. According to a 2017 report by the Regional Violence Observatory (prepared by the Regional University Center of Western Honduras, UNAH–CURCOC, with technical assistance from the University Institute for Democracy, Peace and Security), the municipality of Santa Rita's homicide rate (85.8) far exceeded the Copán department homicide rate of 46.6 (Cabañas reported 59.7, Copán Ruinas 41.5, and San Jerónimo 39.1) (UNAH–CUROC; IUDPAS, 2019).

**Figure 8. Percentage of agreements met, Project REDES WVH, October 2018**

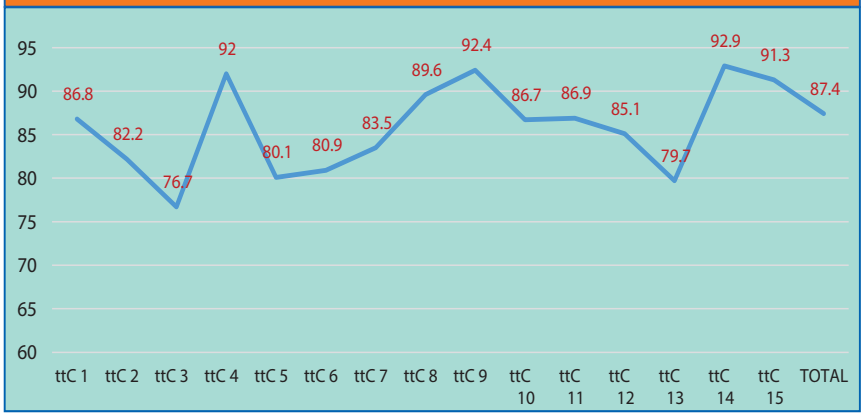
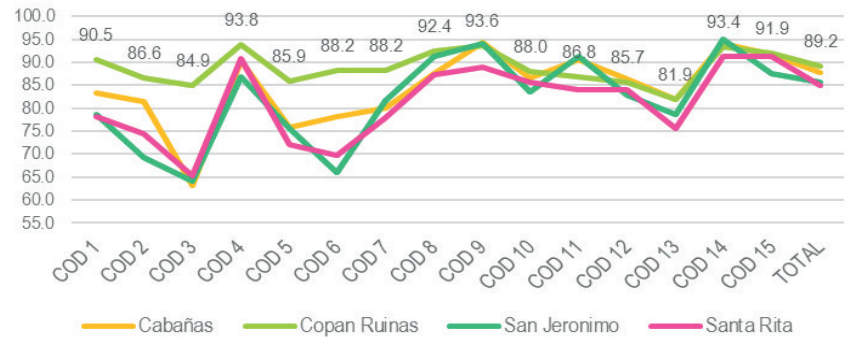



**Figure 9. Percentage of agreements met by municipality. Project REDES WVH. October 2018**




In the municipalities of San Jerónimo and Santa Rita, the rates of compliance with agreements are below average. Despite these differences, the figures show that municipalities share similarities in relation to ttC 3, ttC 6, ttC 10 and ttC 13. In these, compliance decreases in all four municipalities. Considering the coverage of the agreements fulfilled for each ttC, Santa Rita and San Jerónimo have the highest percentage of ttC that are below the project's coverage; followed by Cabañas, where 9 of the 15 ttC sessions are below the coverage; Copán Ruinas is the municipality with best results, only 1 of the 15 ttCs is below the coverage. When investigating the reason for those differences, it should be noted that each family received the same number of visits and percentage of compliance with those visits in each municipality does not show major differences. However, the context provides explanations since, in terms of violence, Santa Rita and Cabañas are the two municipalities with the highest homicide rates in the area and this situation can affect migration.

Other elements are information, health services and traditional practices.

An older woman from Santa Rita in the focus group explained, "If these youngsters [referring to BCAs] hadn't visited us, we wouldn´t know anything about what we're seeing here [refers to the video stories], because I never went to the hospital to have my children. In fact, all seven of my children were born at home. I did go for prenatal checkups when I was pregnant, but we didn't know what all that was about [refers to the stories in videos]; we wouldn't know! Now we are learning, because they [BCAs] teach you everything you need to know, the ones who visited us taught us and explained things to us."

This opinion reflects the lack health information provided to the population and also the culture of home births and traditional practices.

In the focus groups and interviews, most participants said they had "complied with the agreements set in the counseling sessions." However, some people admitted they had broken the agreements and explained the reasons why.

- Family planning: "Going to the health center to see about family planning, my wife tried, but it wasn't possible, so she decided not to continue because of her health." (Man in focus group)
- Hygiene at home: "The commitment was to keep the patio clean to prevent zika, and to keep any buckets or containers empty. But because of water shortages, sometimes this was not done." (Woman in focus group)
- Gender-based violence: "Sometimes we say that a man, because he's a man, can't do a task that a woman does, even though he is able to do it. And it's just because he is machista, the attitude that men have, and from there gender violence happens." (Man in focus group).

**Factors contributing to or limiting quality of counseling:**

| Contribuyeron | Limited |
|---|---|
| **Social context associated with health system** | |
| **Recognition of the project's contribution to the health system.**<br>▪ I feel it's a way of supporting the health center in prevention. Because now the health system is mostly using preventive practices. Nowadays it's not so much about medicine, it's more about prevention. (Man in focus group)<br><br>**Consistency between topics discussed at health centers and ttC topics.**<br>▪ The messages from the BCAs and the health centers were almost the same: the importance of prenatal checkups and family planning. (Woman in focus group)<br>▪ The health center and the counseling do not contradict each other, they go together: ORS, zinc, taking children to the clinic, to the hospital, etc. So they go together, they don't contradict each other on anything. (Man in focus group). | **La deficiente atención del personal de los Centros de Salud en algunas comunidades hace que muchas personas no acudan**<br>▪ En el centro [de salud] mucho lo regañan a uno, no les gustaba el trato que le daba el personal de salud. (MLGE)<br><br>**Poco acceso a insumos en el CS para concretar el CC**<br>▪ Sometimes the medications are centralized in the health center, and we must consider that they work with targets. (BCA)<br>▪ To obtain family planning methods, zinc, ORS – all this is in the health center, that's where people go. (BCA)<br>▪ Some people who went to ask for zinc were told that it was not good for diarrhea, perhaps due to lack of training among the staff. (BCA). |

| In the family | |
|---|---|
| ▪ Families' willingness to participate.<br>▪ Families' assessment of the learning process.<br>▪ The families identify changes in their members - changes that improve their quality of life, including:<br>"I've changed my mind about pacifiers. I used them before, but now I know it's better not to."<br>"I used an umbilical bandage with my son, now I know that I shouldn't use them."<br>"I've been able to give proper advice to adolescents or young mothers."<br>"My husband learned a lot. Now he even helps me to sweep, it's changed his 'machista' attitude." | ▪ **Families that refused to participate in the project.**<br>▪ **Women participants in the project were very shy about discussing reproductive health issues, particularly with male BCAs.** |
| **In the context of the ttC** | |
| ▪ The focus on the family, the capacity of the ttC sessions to deliver messages at various times and the 21-month implementation period. (BCA)<br>▪ Dialogue as a key element adapted to the context of the municipalities (BCA)<br>▪ A range of materials for presenting the contents of counseling. (BCA)<br>▪ Building a relationship between the BCA and family based on trust, empathy, accompaniment and the development of friendship. (REDES personnel)<br>▪ Sensitivity and empathy shown by each BCA to the families. (REDES personnel)<br>▪ Team works with consistency and cohesion. | |

## 4.2.2. Technological innovation: database management

The project's technological innovation includes the use of the CommCare application and the CommCare HQ record system. Some opinions have been presented in the previous section about the CommCare App. With regard to the second, CommCare HQ, the REDES staff found this system to be complex; it is a database management system that records, modifies, extracts and stores data related to each of participating family. It was designed specifically for the project, and includes the following features: a) capacity to process a large quantity of data; b) capacity to generate a data set; c) efficient in terms of storage capacity and data comparison; d) updates data in real time by synchronizing with the computer tablet app and the recorded data is incorporated into the CommCare HQ system. An assessment of the system's utility and its contribution to the implementation of the ttC is shown in the following table, in parallel with the modules and their function.

### Structure, functions, and facilities of the record-keeping system

| | Module | Function | What did system facilitate? |
|---|---|---|---|
| 1 | Diagnostic or Visit 0 (Baseline) | Baseline | ▪ Recording data using the forms during Visit 0. |
| 2 | General forms filled in before initiating the ttC. | Records each family's data | ▪ Checking the household identification (ID).<br>▪ Recording the data of household members, their health status and the KAP survey during each family visit.<br>▪ The large number of variables for each family. |
| 3 | ttC visit | Records the ttC topic and agreements made | ▪ Recording visits and ttC topics in each family.<br>▪ Recording number of home visits to determine whether or not the ttC was implemented in the home visited.<br>▪ Recording behavior changes achieved / not achieved in each visit.<br>▪ Information provided to supervisors and technical team.<br>▪ BCAs' family caseloads redistributed. |
| 4 | Record of group meetings | Registers participating families | ▪ Registering number of people invited by participating families. |
| 5 | Supervision | Checks quality of counseling | ▪ Accompaniment provided to BCAs and quality assurance of counseling. |
| 6 | Flagged home | Monitors and checks variables in flagged households | ▪ Registering families that for some reason did not continue in the ttC program.<br>▪ Registering families that could not be visited in the corresponding month for any of the reasons flagged. |
| 7 | Flagged households MANCORSARIC | Referral to HS | ▪ Referring family members with health problems to the health system.<br>▪ Checking and follow-up on referrals made by BCA. |
| 8 | Monitoring quality of ttC visit | Project monitoring & evaluation | ▪ Ensuring implementation of monitoring plan and supporting quality of ttC implementation. |
| 9 | Rapid monitoring of adoption of practices | | ▪ Consolidating and analyzing information. |

The records system has contributed to data collection through a set of forms applied in each counseling session and by family, with approximately 320,000 records.

Limitations of information system

- Delayed decision-making: "Making modifications involved delays, because proposed changes had to be approved, given the nature of the project study." *(REDES personnel)*
- Time taken to obtain information: "As time passed, the database gradually became larger. For example, at the moment, when BCAs made a report on how many counseling sessions they have done, to make a calculation, a formula is used and it took about 25 minutes to provide the data. And if a change is made, the formula must be recalculated, so it is a fairly slow and laborious task." *(From interview with pregnant woman)*

### 4.2.3. Beneficios de la consejería

When questioned about the benefits obtained from ttC counseling, both the REDES staff and participating families had the same answer: the learning. The BCAs and focus groups organized with leaders showed that the benefits of counseling also reached the health centers. Project REDES implemented an educational intervention, described in the following diagram.

The women who participated in focus groups and interviews stated that the main benefit of ttC was the "learning," which was important because it was so useful and valuable.

- It is useful for teaching others, and one person said, "I'm happy to know about this and I can teach the boys." (Woman in focus group)

"Having savings for the delivery" (Pregnant woman), "and knowing how to give advice to young people so they don't have children too soon." (Pregnant woman)

"Taking folic acid starting at age 10 to build a strong body and only having children after age 18." (Pregnant woman)

- New lessons, new words: "The benefit was the knowledge, the commitment to teach other people. They [BCAs] visited me but there were other houses that did not benefit from visits. It is up to me to educate the others and explain to people that they need to understand this." (Woman of childbearing age in interview)

"We didn't know anything. They taught us so many things that made us think. Although some people thought it was waste of time, they weren't the ones who learned. But I learned how to care for children from these lessons. I learned from my mistakes. I learned that learning is more important than material things." (Woman leader in focus group)

- New lessons to put into practice: "They really help you [the lessons] because they wake you up and you can put into practice what they have told you." (Woman in interview)

"It was nice, it was really nice. You really learned there. You learned what you didn't know because they showed videos where the people were relaxed, where they prepared for the birth, and they showed how the doctors received the baby. They taught us a lot." (Woman of childbearing age in interview)

"I practiced giving advice to the young people." (Woman leader in focus group)

"I advised my granddaughters against using navel [umbilical] bandages." (Woman in focus group)

- Education is priceless: "We didn't have to pay anything for what they taught us." (Woman in focus group)

- Participating families came to understand that health is a right.

Male leaders:

- Help for the health center. "I think this is the way [through knowledge] that we can help the health center. We can avoid sending a child to the doctor for something simple. But when things get complicated, the one who knows the danger signs knows to go to the health center. If you wait, things can get complicated." (Male leader in focus group)

- Caring for the community: "I know the people and the community, how they live. And I know that most problems come from a lack of knowledge. I tell them: 'Look, this is what you do, this is what you don't do,' and I explain both." (Male leader in focus group)
- Personal commitment: "When I heard the talks, I felt it was an obligation to practice what I had learned. I can't tell you the name of the topic or everything I have learned, but I practiced what I heard in the talks."
- Influencing improvements in health centers: "There is greater demand [from participating families]; the project's aim was not to improve health services, but through the counseling, the health center did improve because there was more demand, more pressure."

What has influenced the learning of the families participating in the ttC?

- The timeliness of ttC: "People learn more when they need to, at the time when they need to know something. A child who is sick with diarrhea or something else … if people get the knowledge at the right time, assimilation is easy. I think this was important because of the timely and targeted way the topics were covered, based on family needs. It made assimilation easier for the participating families." (Interview with pregnant woman)
- The families enjoyed the ttC topics: "I liked the reproductive plan." (Postpartum woman in interview)

"I liked the fact that they came to give me the talk, that they visited me, because they have more knowledge than I do." (Woman of reproductive age in interview)

"The messages to attend prenatal checkups, take folic acid, give advice to young people. I liked the people who visited me." "I enjoyed making arrangements for the day and time of the next visit." (Woman in focus group)

- The trust between the BCA and family: "I liked the way they gave the talks and we had confidence in them. Sometimes when you can't talk to people or you feel shy, the communication is not good. But with [the BCAs] we felt trust from the beginning, as if we had known them for a long time. If it had not been like that, maybe I would not have accepted it, because I have so much work and so many things to do. You had to stop what you were doing to receive them, but they gave you confidence through their manner and friendliness." (Woman leader in focus group)
- Willingness to participate: "It's about taking time to receive a person who will be giving you a better future… even though it's for my children or someone else who needs advice." (Woman of childbearing age in interview)
- The topics were important to the participants: "The topic on violence, values and self-esteem helped me a lot. Sometimes you feel down, but you shouldn't feel less valuable than others. Value yourself as a woman in everything. Don't underestimate mistreated women." (Postpartum woman in interview)

"I liked the topics. There weren't any I didn't like because I liked them all." (Woman of childbearing age in interview)


**Changes in delivering counseling**

There was a strong tendency for participants to say that they "would not change anything" about the counseling. Many families said, "I liked everything. I wouldn't change anything at all." They considered that "the organization of the counseling was well defined." Nevertheless, the REDES team plans to make the following changes:

| In the operative model | In counseling | At project level (without the character study) |
|---|---|---|
| **REDES personnel** | | |
| ▪ *Identify the route by travelling there, not just using a map, for a better distribution of BCAs in the area.*<br>▪ *BCAs should visit 60 families, i.e., three ttC visits per day.*<br>▪ *A three-person team is needed for administration.*<br>▪ *The baseline should identify participants (the man, woman, and family) to decide whether a male or female BCA should visit the home.*<br>▪ *Printed counseling books should be laminated and bound.* | ▪ *There are several KAP forms. Use only the basic ones or those related to each topic.*<br>▪ *Some riddles, rhymes and jokes should be structured better.*<br>▪ *The videos should be more realistic, showing labor and delivery or the consequences of not taking folic acid.*<br>▪ *Replace the cardboard box. A canvas bag would be better for storing materials, since some families lose the materials we give them* | ▪ *Implement a logical route from the beginning.* |

### 4.2.4. Limitations arising from the nature of the REDES study

The following points were mentioned by REDES personnel:

1. The project could not be coordinated to work closely with health system suppliers. It was not possible to set up meetings with providers to discuss problems and they could not, for example, offer support with transportation. However, in cases of extreme emergency, they did take some women to the clinic, but they were unable to provide support for any other type of family need.

2. The project always had to be aligned with the protocol, without going beyond its specifications. There was no possibility of innovating beyond what was established.

## 4.3. Behavior changes achieved / not achieved by families through ttC

The project's theory of behavior change was based on the Health Belief Model proposed by Rosenstock in 1960. This model is founded on the theories of expected value (expectations) and the essential principle that conduct and behavior basically depend on two variables: the value a person gives to a specific objective, and one's assessment of the probability that carrying out a particular action will achieve the desired objective. This theory is linked to the field of education, specifically that health behavior is a function of knowledge and attitudes. It emphasizes that a person's perception of their vulnerability to an illness and the effectiveness of treatment can influence one's decisions related to health behaviors.

### 4.3.1. Los cambios de comportamientos logrados y no logrados por tema COD.

Table 13 (below) shows how the 15 ttC topics were structured and the number of agreements included for each topic. These agreements set the standard for behavior change in the course of their implementation. For each ttC topic, the BCA and family negotiated the agreements that the family thought it could fulfill. The family was not obligated to commit to all agreements. Compliance with these agreements – which families entered into voluntarily – indicated the behavior change achieved, and noncompliance with the agreements denoted changes not achieved. Each ttC topic included a minimum of two and a maximum of eleven agreements. The data presented is based on the agreements that families committed to and fulfilled, and those that they committed to but did not fulfill for some reason.

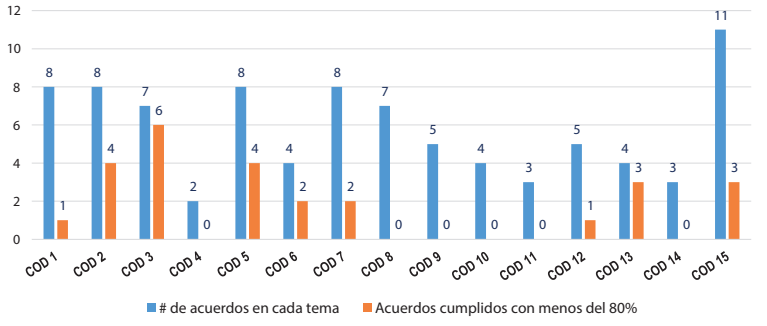
**Table 13. Agreements met and not met according to ttC and parameters Project REDES, World Vision. October 2018**

| Tema | | Number of ttC agreements | Agreements met > 80% | Agreements met < 80% |
|---|---|---|---|---|
| ttC 1 | Care during pregnancy and prenatal checkups before three months | 8 | 88 | |
| ttC 2 | Birth plan and emergencies | 8 | | 50 |
| ttC3 | Importance of delivery in maternity clinic or hospital<br>Participation by husband and family in caring for pregnant woman | 7 | | 14 |
| ttC 4 | Importance of family planning | 2 | 100 | |
| ttC 5 | Family preparations for childbirth and newborn care | 8 | | 50 |
| ttC 6 | Postpartum care for woman and newborn in first three days | 4 | | 50 |
| ttC 7 | Newborn care and danger signs | 8 | | 75 |
| ttC 8 | Care for infants aged 1–6 months | 7 | 100 | |
| ttC 9 | Warning signs and seeking medical care for ARIs and ADDs | 5 | 100 | |
| ttC 10 | Reproductive life plan | 4 | 100 | |
| ttC 11 | Importance and benefits of taking folic acid | 3 | 100 | |
| ttC 12 | Importance of preventing pregnancy before age 18 | 5 | 80 | |
| ttC 13 | Self-esteem, values, and life plan | 4 | | 21 |
| ttC 14 | Prevention of gender-based and domestic violence | 3 | 100 | |
| ttC 15 | Pregnancy and preventive measures to avoid zika | 11 | | 73 |
| | Total ttC agreements | 87 | | |

The records kept for each ttC session show progress in compliance with all "agreements established for each ttC topic;" nevertheless, the parameter for determining behavior-change achievement was set at 80% or higher; agreements with percentages below this compliance limit were considered to be "unmet." Based on data from the four municipalities, the figure shows that eight of the 15 topics scored above 80% and seven scored below. Many families encountered problems in achieving a compliance level above 80% with the agreements.

Of the 15 topics covered, ttC 3, which has seven agreements, stands out, since the scores on compliance with six of the agreements fell below 80%. So only one agreement achieved a percentage above the parameter. It is worth noting that in the global data, some agreements achieved less than 80% compliance in the municipalities of Santa Rita, San Jerónimo and Cabañas. Only in Copán Ruinas did all agreements attain a score of more than 80%. To explore the agreements met /not

**Gráfico 10. Número de acuerdos por COD y acuerdos cumplidos con menos del 80%**



met with a compliance rate under 80%, each ttC topic is presented below in detail with its agreements, compliance rates and opinions of participating families.

### 4.3.2. Meeting the agreements by ttC topic and families' opinions

**Table 14. ttC 1: Care during pregnancy and prenatal checkups before third month of pregnancy**

| | Agreements | >80% agreements met | <80% agreements met | Opinions of participating families |
|---|---|---|---|---|
| 1 | Visit health center for a pregnancy test if your period does not begin within eight days after expected date. | 90 | | ▪ Adolescents and single mothers only go to health center when they can no longer hide their pregnancy. |
| 2 | Have first prenatal checkup before the third month of pregnancy and have five checkups throughout the pregnancy. | 88 | | ▪ Women do not realize they are pregnant.<br>▪ As soon as a woman becomes pregnant, she should go for a checkup. (Man in focus group)<br>▪ Visit health center during the first month and attend five checkups. (Woman in focus group) |
| 3 | The spouse or a family member accompanies the woman and is present at the prenatal checkup with her. In the event of an emergency, the spouse will also accompany her. | | 75 | ▪ I went to eight checkup visits. My husband came with me twice. (Postpartum woman in interview) |
| 4 | Take daily folic acid pills and the vitamins provided at the health center. | 92 | | ▪ Once she is pregnant, the woman should take the prenatal medicine given to her. (Man in focus group)<br>▪ At the beginning, during the first three months of pregnancy, the woman attends checkups and takes folic acid and later prenatal medicine. We need to go to the health center to have healthy children. (Woman of childbearing age in interview)<br>▪ Pregnancy care: first of all, take folic acid because they give it to you and then later the prenatal medicines. (Woman of reproductive age in interview)<br>▪ Take folic acid from three months before. (Woman in focus group) |
| 5 | Prepare a plan that includes transportation and money, either for the birth or to deal with an emergency during pregnancy or after delivery. | 83 | | ▪ You should have a birth plan. (Woman of reproductive age in interview) |
| 6 | Go immediately to maternity/ child clinic (CMI) or hospital if the pregnant woman shows any of the danger signs | 86 | | ▪ Bleeding, headache, swollen feet or hands…. If you have these symptoms you should go straight to the health center. (Woman in focus group) |

| | | | | |
|---|---|---|---|---|
| 7 | Start to save money for childbirth and any emergency that could occur during the pregnancy. | 86 | | ▪ You must have money saved, know who will take you to the clinic, make arrangements for a car, and even have a person ready in case the woman needs blood, because you don't know if you will need a cesarean or have a complicated delivery. (Woman of reproductive age in interview) |
| 8 | The family and husband help at home so that the pregnant woman can rest at least one hour a day and improve her nutrition. | 93 | | ▪ You should eat all kinds of food and rest. (Woman in focus group).<br>▪ The pregnant woman should avoid doing strenuous work or lifting heavy objects. (Man in focus group)<br>▪ Help the woman with the household chores and don't allow her to lift heavy things. (Man in focus group). |

This ttC topic shows seven agreements were met with a percentage higher than 80% in the four municipalities. In Santa Rita and San Jerónimo, percentages were reported below this parameter. It is important to note that, in relation to Agreement 1, there are many pregnant adolescents and single mothers in the area who tend to hide their pregnancy until a family member – father or mother – discovers their condition. Another issue is that some women believe if they make their pregnancy known early, it can be "affected" by witchcraft. The health system reports that these women often attend a health center 20 or 30 weeks into their pregnancy. The score for Agreement 3 is also below 80% and this is due to traditional social mores, where women usually go to prenatal checkups alone and the health system does not encourage men to participate or does not allow them to be present at the checkup.

**Tabla 15. COD 2. Plan de parto y emergencias**

| | Agreements | >80% of agreements met | <80% of agreements met | Opinions of participating families |
|---|---|---|---|---|
| 1 | Decide if the birth will be at maternity clinic or hospital. | 82 | | ▪ The risk of losing the baby is what motivated me to leave beforehand. (Postpartum woman in interview)<br>▪ The birth plan is prepared by the couple so they know where to go – clinic or hospital – and how they will get there. If their community is far away, they can look for a family member who lives closer. (Woman of reproductive age in interview) |
| 2 | Save money for emergencies during pregnancy and for the birth and keep animals to sell, such as chickens, pigs and goats. | 85 | | ▪ We saved money for the birth and everything turned out fine. The money we saved came from the coffee harvest. (Postpartum woman in interview) |
| 3 | Buy the items needed for the newborn and the mother. | | 74 | ▪ You have to prepare clothing for the baby and mother and everything else they will need. (Woman of childbearing age in interview)<br>▪ Everything should be ready for the birth. I had everything ready. (Postpartum woman in interview) |

| | | | | |
|---|---|---|---|---|
| 4 | Arrange transportation in advance to go to the CMI. | | 79 | ▪ Sometimes you can't find transportation here, so I decided to leave early. Sometimes at night there is no transportation. (Postpartum woman in interview) |
| 5 | Find someone who will donate blood in case it is needed (husband, sibling, others.) | | 71 | ▪ You need a blood donor as well. Sometimes the woman may be anemic and that means she will need blood. (Woman of childbearing age) |
| 6 | Talk to a family member about caring for other children at home. | 86 | | ▪ … and also when people have children, you need to have someone ready to care for the other children. (Woman of childbearing age in interview)<br>▪ It is difficult for families to find someone to take care of the children and the house. |
| 7 | Prevent reproduction of the mosquito that transmits the zika virus by eliminating their breeding sites. | 91 | | ▪ The pregnant woman's family should remove all containers with dirty water, throw away lids and egg shells, and burn pots that have no lids…. to prevent mosquitos. (Woman in interview) |
| 8 | To prevent zika during pregnancy and avoid harm to her baby, a pregnant woman should sleep under a mosquito net. After the birth, mother and baby should continue to sleep under nets. | | 79 | |

Analysis of the agreements as a whole shows that families have control over their decisions and actions. However, four of these agreements did not achieve a score above 80%, which could indicate that the family's socioeconomic conditions influenced compliance with Agreements 3, 4 and 8, and Agreement 5 on social relations.

Observations on Agreements 1–6 show that three of these (1, 2, and 6) scored above 80%, whereas Agreements 3, 4, and 5 scored slightly below 80%. What does this mean? It reflects the importance of a birth plan. Traditionally, and especially among Chorti women, this plan involved "staying at home" and, as a BCA explained, "I realized that it was difficult for families to give up this idea. Over time they started to understand the importance of a birth plan. Families who went to the clinic returned with positive experiences and gave positive advice to other families." The BCA took advantage of this to encourage women to reflect on the risks of giving birth at home.

Many families were familiar with the birth plan because it is promoted by health centers, though these plans were mostly limited to completing a form and having cash savings. However, many women reported having money saved, even when these savings did not actually exist. Given the families' socioeconomic situation, the ttC promoted different forms of saving and the evidence shows that families accomplished this in five ways: 1) through production or harvesting basic grains or coffee; 2) raising and selling animals such as pigs and chickens; 3) cash; 4) remittances allocated for childbirth; and 5) loans from cooperatives.

**Table 16. ttC 3: Importance of giving birth in a maternity clinic or hospital, participation by the husband and family in caring for pregnant women**

| Acuerdos | | Acuerdos cumplidos > 80% | Acuerdos cumplidos < 80% | Opiniones de familias participantes |
|---|---|---|---|---|
| 1 | Women should give birth at maternity clinic. | | 78 | ▪ Why is it better for women to give birth in a clinic? Because if the delivery gets complicated they will be cared for. (Woman in focus group)<br>▪ There is mistreatment by nurses and doctors and yet they still believe that women should give birth there. (Woman in focus group)<br>▪ I gave birth at El Jaral clinic. (Postpartum woman in interview)<br>▪ My delivery was at the maternity clinic in El Jaral. During labor, the doctor told me that I wasn't doing very well. He said I wasn't making enough effort and my daughter would die. Then he went and sat down. When the baby started coming out she was choking. I regret going to El Jaral. |
| 2 | When the baby is born, ask to have it placed on your chest (skin-to-skin contact) and start breastfeeding immediately. | | 76 | ▪ Skin-to-skin contact keeps the baby warm and he can breastfeed. (Woman in focus group)<br>▪ Breastfeeding … the doctor says to put the baby directly on your chest after birth, so when the baby is born they drop it on the mother's stomach. (Postpartum woman in interview) |
| 3 | The husband will ask for permission to accompany his wife during the birth of his child. Health personnel should allow it. | | 74 | ▪ The custom is for the mother of the woman giving birth to accompany her. Generally, the men come to the clinic and then leave. However, many families the husband made the agreement to accompany the wife during delivery. (BCA)<br>▪ The context of the communities is one of poverty and extreme poverty. Men who work in agriculture are employed on coffee farms. Asking for time off means losing a day's work and not being paid for that day. It's the same if they work selling products. (REDES personnel)<br>▪ The husband has to work and/or take care of the home.<br>▪ The clinic does not allow fathers to attend the delivery. There is no rule in the country about this. |
| 4 | Prepare all items needed for the baby and mother (clothing, diapers, sanitary napkins, etc.). | 80 | | ▪ You have to prepare for childbirth. I had everything ready. (Postpartum woman in interview)<br>▪ My mother supported me and my husband always came with me. He helped me get everything ready and not leave it to the last minute. (Postpartum woman in interview) |

| | | | | |
|---|---|---|---|---|
| 5 | Arrange transportation in advance to immediately take the pregnant woman to the clinic if there are any warning signs. | | 79 | ▪ I had 1000 lempiras, but the car driver deceived me when I called him. He said he was on his way but he never came. That's why the child was born at home. Later when I saw him I complained, and he told me he was tired from picking coffee. (Man in focus group) |
| 6 | If you get a referral at the health center, go to the clinic for prompt evaluation. | | 75 | ▪ For many communities, access to a maternity clinic is difficult because of distance and condition of roads. (BCA)<br>▪ Many families that live far away do not have enough money. (BCA) |
| 7 | The mother will stay in the maternity care home if the delivery time has not arrived. | | 73 | ▪ The opinions of my mother and father - they agreed that I should go beforehand. They encouraged me to go. (Postpartum woman in interview)<br>▪ I went four days early because I didn't want to wait or stay at home. (Postpartum woman in interview)<br>▪ The cost of staying at the maternity care home is very high. The food service can cost 60 lempiras, which is what a man earns for a day's work. (REDES personnel)<br>▪ The custom is to wait until the pregnant woman is in labor before going to the clinic. They tend to leave it to the last minute.<br>▪ Many families do not have the money to travel.<br>▪ Clinics may have limited amount of food. |

This topic challenges the traditional culture of home births. In the municipalities of Cabañas, Santa Rita and San Jerónimo, all these agreements scored below 80%. In Cabañas, Agreement 3 reported 50% compliance. From the BCA's perspective, the topic of institutional delivery implies expectations and sensitivities; first, there are experiences of maternal death and motherless children in the area, and second, the women identify the risks, particularly those living in remote villages where transportation costs to get to the clinic are extremely high in the rainy season and in summer.

A field supervisor explained:

"Ruth's story is an example. She started with labor pains and, following tradition, her mother accompanied her to the clinic. But she also wanted her husband to go with her. Her husband wanted her to give birth in the clinic and explained that she wasn't alone because her mother was going too. But Ruth demanded that her husband come and refused to get into the taxi that had been hired. Ruth said, "We made an agreement," referring to the ttC agreement. Eventually the taxi driver told the husband to get in, because if he didn't, she wouldn't go to the clinic. So the husband got into the taxi and the three of them went to the clinic. When they got there, the doctor sent them to the hospital. The husband didn't want to go but she insisted he should come too. When they were preparing to leave for the hospital, the husband was gone and they found him hiding in the bathroom, scared. He finally did go in the ambulance and was present for the birth, but he fainted and said he would not have more children."

The topic of institutional births was directly addressed in two counseling sessions, ttC-2, in Agreement 1: "Decide that the delivery will take place at the clinic" scored 82%; however, in ttC-3, Agreement 1: "The delivery takes place at the clinie" scored 78%. This choice was probably influenced by cultural and economic issues determined by time and distance between the home and the clinic as well as the care provided by health personnel in the clinic, despite the project's achievement in raising awareness on this topic.

The following considerations on this topic were voiced during presentation of the findings:

- There will always be problems. In the clinic they have rice and beans, but the women should be told that other foods are available.
- A relationship of trust must be developed between the clinic staff and the women.
- The clinic staff have a heavy workload and sometimes the women do not want to play their part. They do not want to leave the comfort of their home. When a child becomes ill they do not want to go to the hospital in Santa Rosa because of all that it involves.

**Table 17. ttC 4: Importance of family planning**

| | Agreement | > 80% agreements met | < 80% agreements met | Opinions of participating families |
|---|---|---|---|---|
| 1 | Space your pregnancies (wait at least two years between children). | 94 | | ▪ We now understand that planning is fine with the injection or the pill. You have to ask yourself, what do you want for your child? What do you want for his future? All of this really helped me. (Woman in focus group)<br>▪ I have been planning for four months. (Woman of childbearing age in interview)<br>▪ The purpose of family planning is to avoid pregnancies. (Woman of reproductive age in interview) |
| 2 | Choose a family planning method together with your husband and with the support of health workers. | 90 | | ▪ It is important to know how many children you want, and your partner has to agree. (Woman in focus group)<br>▪ My husband accompanies me and agrees because he comes to the appointments with me. (Woman of childbearing age in interview)<br>▪ My husband agrees and we both decided what method to use. (Postpartum woman in interview)<br>▪ In the health center near where I live, the doctor is very demanding and rude. He is impatient and tells us that we must do (family) planning. He needs to be more pleasant to people.<br>▪ Some women have had adverse reactions to FP methods. (REDES Staff) |

Family planning is a taboo subject in the culture of these four municipalities. The REDES staff considered that this topic was the most critical. According to the behavior change specialist, "Some families agreed to participate in counseling as long as family planning was not discussed." The BCAs observed, "Many women believed that using contraceptives is a sin. But during ttC they became aware that they were harming both their partners and their children when they were unable to provide their children with clothing, food and everything else they needed." One of the changes that will influence people in the area is that a pastor and his wife, who also believed that family planning is a sin, are now using contraception. In the Chortí community, it is not culturally unacceptable to use family planning methods. However, after receiving counseling, some families were more willing to try them.

On this same topic, the BCA made the following observations:

- Some women are afraid to use certain methods such as implants, which they think are invasive. One reason is because they don't understand the procedure and are afraid it can be painful.
- There are many challenges in family planning related to information. In other words, how to address this topic with people and how to establish agreements between couples.
- It is necessary to give the population information on family planning methods; people have the right to make a choice and understand. We have to respect people's beliefs.
- Men think that family planning is a "women's issue" so that even if their partner uses contraception, men don't believe their participation is necessary.

**Table. 18. ttC 5: Family preparations for childbirth and newborn care**

| | Agreements | > 80% agreements met | < 80% agreements met | Opiniones de familias participantes |
|---|---|---|---|---|
| 1 | After childbirth, the family has an emergency plan known to all family members, to deal with any emergency affecting the mother or newborn. In addition, the entire family knows what to do in the event of any warning signs. | 81 | | ▪ The family knows what to do in case of any danger signs. (BCA)<br>▪ Following childbirth, the mother should not exert herself. For the first 42 days she should not have intimate relations because it is dangerous and she should not rush around too much either. If she bleeds heavily and has a fever, she should go to the health center. One has to be very careful with this. (Woman of childbearing age in interview) |
| 2 | Have money saved for care following childbirth and any emergency with the mother or newborn. (Have animals like hens, pigs or goats available that can be sold.) | 85 | | ▪ The husband or family should have money saved in case they have to take the mother or the baby to the clinic. (Woman of childbearing age in interview) |
| 3 | Arrange transportation in advance in case it is necessary to transfer the mother or baby to the clinic. | 81 | | ▪ You need to have a birth plan, money saved, know who will go with the mother to the clinic, have a car ready, and sometimes have a person ready if the mother needs a blood transfusion for a cesarean or for another complication. (Woman of childbearing age in interview) |

| | | | | |
|---|---|---|---|---|
| 4 | Take the mother and newborn to the health center in the first three days after delivery. | | 77 | ▪ I went to the health center five days after delivery and took my baby. They told me everything was fine. (Postpartum woman in interview)<br>▪ The visit to the health center is three days after the birth, when the women are home from the clinic. (Man in focus group)<br>▪ Sometimes several factors come together at the same time: the distance from the mother's home to the clinic, the cost of transportation and treatment with little empathy from the health personnel. (REDES personnel) |
| 5 | Seek immediate help at the health center or clinic if there are any danger signs. | | 79 | ▪ If there are warning signs you have to go to the health center. (Woman in focus group) |
| 6 | Maintain skin-to-skin contact with the baby to keep him warm and breastfeed on demand (as often as he wishes). | | 78 | ▪ I didn't know about skin-to-skin contact with the newborn. I learned about it and I like it because I hold my little grandson close and like to keep him warm next to me. I feel he likes it too. I tell his mother to hold him close and keep him warm. Keep him at your breast and give him your milk, like it says in the pamphlet. (Woman in focus group)<br>▪ It means holding the baby close to keep him warm and letting him feel your love and then he will start to breastfeed. (Woman in focus group) |
| 7 | In the first six months only breastfeed the baby. Do not offer a feeding bottle, pacifier, or any type of water mixture. | | 79 | ▪ I made the mistake of putting an umbilical bandage on the baby in the hospital and the nurse told me not to. The same with the pacifier. You shouldn't do that. (Postpartum woman in interview)<br>▪ You can give him a feeding bottle, but never a pacifier with a pregnant woman's saliva. (Woman in focus group)<br>▪ Sometimes the mother says she doesn't have enough milk to satisfy the child, and she gives him a bottle.<br>▪ The same happens when the mother has to work outside the home. |
| 8 | The father helps to take care of the baby by holding him to calm him down. | 81 | | ▪ He helped me to care for our two children. (Postpartum woman in interview) |

The differences between the percentages above or below 80% are minor. For those below, two are linked to behaviors that involve costs and two are related to the mother/child relationship and early feeding. BCAs believe these percentages reflect the "family's readiness for childbirth." With regard to Agreement 6, "Maintain skin-to-skin contact with the baby to keep him warm and breastfeed as often as he wishes," despite not reaching a score of 80%, the following comments were made:

- Regarding the newborn, I didn't know about skin-to-skin contact. I learned this and I like it because now I hold my little grandson close and like to keep him close to me. I think he likes my warmth. I tell his mother to hold him close and keep him warm. I tell her, 'Keep him at your breast and give him your milk, like it says in the pamphlet.' (Woman in focus group)

- This means holding the baby close to keep him warm and letting him feel your love and he will start to breastfeed. (Woman in focus group)

**Table 19. ttC 6: Care for postpartum women and newborns in the first three days**

| | Agreements | > 80% agreements met | < 80% agreements met | Opinions of participating families |
|---|---|---|---|---|
| 1 | The husband or family member takes the mother and the newborn to the health center in the first three days after birth. They accompany her during the consultation. | | 77 | ▪ You should go to the health center on the fourth day. (Postpartum woman in interview)<br>▪ There is a belief that you should not go out of your house for 40 days after childbirth. |
| 2 | The husband and family know the danger signs for postpartum women and newborns and seek immediate care at a health center if any signs are present. | 84 | | ▪ The treatment involves monitoring blood pressure, checking that the mother has no infection or endometriosis in the womb, or bleeding, temperature, or headache. It is important to watch out for these signs in women after childbirth. (Man in focus group)<br>▪ Sometimes the infections women contract after childbirth lead to anemia. This happens to women and since they are postpartum for 42 days, they should be checked because any kind of problem can happen at this time. (Man in focus group) |
| 3 | Do not use an umbilical bandage, talcum powder, coins, ground herbs, alcohol, merthiolate or anything else on the baby's navel. | | 79 | ▪ Babies should be cared for without pacifiers or umbilical bandages. (Postpartum woman in interview)<br>▪ Do not put anything on the navel. I didn't use an umbilical bandage. (Postpartum woman in interview)<br>▪ Now I tell the women: no pacifiers, no umbilical bandages. (Man in focus group)<br>▪ Nowadays many newborns don't use them. (Man in focus group) |
| 4 | During the first six months only breastfeed and do not offer the baby a pacifier, oil, herbal water or water. | 83 | | ▪ I don't give the baby a pacifier. (Postpartum woman in interview)<br>▪ Babies must be breastfed. (Woman in focus group)<br>▪ I only breastfeed, no water, nothing else. (Postpartum woman in interview) |

Regarding care for postpartum women, the BCA believe that, "Postpartum monitoring has improved," since these women are now going for checkups between the fourth and fifth day after birth and, "they know the puerperium danger signs." In newborn care, there is evidence of a considerable reduction in the use of umbilical bandages and pacifiers, symbols of local culture, and newborns are breastfed. For their part, the men have shown signs of concern for the care of the women and their newborn children. Transportation is probably the reason why some

women are not visiting the health center for postpartum checkups. In some remote villages, there is only one bus, which leaves very early in the morning and returns after midday and the families consider the cost of the fares to be high.

**Table 20. ttC 7: Newborn care and warning signs**

| | Agreements | > 80% agreements met | < 80% agreements met | Opinions of participating families |
|---|---|---|---|---|
| 1 | Do not use umbilical bandages or gauze dressings; do not heat the newborn's navel or put coins, herbs or mixtures on it. Only touch the navel if it is necessary. | | 79 | ▪ "Sometimes I use cotton swabs, iodine, hydrogen peroxide, purified water, and a purple liquid called "violet" to clean the navel." (Woman of childbearing age in interview) |
| 2 | Do not apply iodine, merthiolate, alcohol or other ointments to the baby's navel; keep it dry. | 85 | | ▪ "Navel bandages, pacifiers and flaxseed should not be used. Do not apply merthiolate." (Woman in focus group) |
| 3 | The husband and family members participate in newborn care, hold the baby close (skin-to-skin contact) to protect him and keep him warm. | 87 | | ▪ "He helps me and cuddles and takes care of the babies, our two children." (Postpartum woman in interview) |
| 4 | Provide the newborn with dry diapers, a cap and socks, and keep him warmly covered. | 91 | | ▪ "Babies should be kept clean, have their diapers changed and bathed." (Woman in focus group) |
| 5 | Register the newborn in the National Registry of Persons within the first three days after birth. | | 73 | ▪ "My daughter was just a few days old and I took her to the health center to register her." (Postpartum woman Santa Rita)<br>▪ This year they didn't want to treat him because I didn't have the birth certificate. I didn't like that and I told the doctor that treatment should not be denied for not having a birth certificate. She told me it was a regulation they have to follow. And I asked if they would turn away a dying person who arrived without a birth certificate. (Woman in focus group) |
| 6 | Newborns should be washed every day with warm water and soap and placed in an area where there are no drafts. Wrap them up and dry them quickly. | 85 | | ▪ "A daily bath inside the home so that (the baby) does not get a chill and make sure they get their injections." (Woman in focus group) |
| 7 | Have money saved up in case of any danger signs in the newborn. Also keep animals such as chickens, pigs or goats that can be sold. | 80 | | ▪ "The danger signs are known." (BCA)<br>▪ "There should be money saved…. many people keep animals like chickens and pigs so if they have no money, they can sell an animal for cash." |
| 8 | During the first six months the baby should be breastfed only. Do not offer the baby a bottle, oil, herbal water, or water. | 85 | | ▪ "Breastfeed exclusively for the first six months." (Woman in focus group) |

In relation to newborn care, Agreement 1 addresses how to care for the navel. Although the compliance rate is just under 80%, the BCA and the families participating in interviews and focus groups consider that this aspect has improved. In other words, "there is a trend toward behavior change" in that aspect. With reference to local family customs for newborn navel care, "there has been a reduction in the use of umbilical bandages, oils, pacifiers and coins."

**Table 21. ttC 8: Care for infants aged one to six months**

| | Agreements | > 80% agreements met | < 80% agreements met | Opinions of participating families |
|---|---|---|---|---|
| 1 | Exclusive breastfeeding for babies during the first six months. | **91** | | ▪ They are only given food after the first six months. (Woman in focus group) |
| 2 | Breastfeed on demand (as often as the baby wishes), 12 times during the day and night. | **94** | | ▪ In the talks they gave us we were told to breastfeed because it's best for the child. Mother's milk is most important. |
| 3 | Wash the baby every day with warm water and soap in a place where there are no drafts. Wrap them up and dry them quickly. | **87** | | ▪ Care, especially hygiene, is important (Woman of reproductive age in interview) |
| 4 | Recognize the danger signs for diarrhea and seek immediate treatment at the health center if any signs appear. Do not massage or give children home remedies. | **87** | | ▪ For vomiting, you must go quickly to the doctor because it is dangerous; this is what they taught us. (Woman in focus group)<br>▪ "… if a child is sick with diarrhea, vomiting, or has trouble breathing, go to the doctor quickly because this is dangerous." (Focus group, Santa Rita)<br>▪ "My daughter was very sick at home when she was very little…. She had diarrhea until it was bloody and I couldn't go by myself to the health center. I had to go with my husband but they never treated her or gave me any medicine. If it weren't for that doctor she would have died." (Postpartum woman, Santa Rita) |
| 5 | The father takes care of the baby, holding, hugging and singing to him. | **92** | | ▪ He helps me to care for the two children we have. (Woman in focus group)<br>▪ When they see a man carrying a baby in the village, they mock him. (Woman in focus group) |
| 6 | When the child has diarrhea prevent dehydration by treating him with litrosol and zinc provided at the health center. | **85** | | ▪ After the talks, they gave us zinc pills for the baby. We need to keep everything clean and wash our hands. |
| 7 | Take the child to the health center for vaccinations, and to receive vitamin A and growth checkups. | **93** | | ▪ We take them to the health center to be weighed so they will not be undernourished. (Woman of reproductive age in interview)<br>▪ I've taken him to the health center for vaccinations. (Woman in focus group)<br>▪ They need vaccinations, because they prevent a lot of illnesses and the children stay healthy. (Woman of reproductive age in interview) |

Percentages above 80% indicate a clear trend toward caring for children under six months. One woman told a focus group that, "I know a girl who has a four-month old baby with diarrhea. I told her it could be bacteria and she should take the child to the doctor, but she insists on giving the baby cuajo (rennet) and says she will take care of it with a massage." This shows that there are still families that follow the old customs.

**Table 22. ttC 9: Danger signs and seeking care for ARIs and ADDs**

| | Agreements | > 80% agreements met | < 80% agreements met | Opinions of participating families |
|---|---|---|---|---|
| 1 | Attend health center appointments as scheduled for vaccinations and growth checkups. | **94** | | ▪ "I've taken him to the health center for vaccinations…" (Postpartum woman in Santa Rita).<br>▪ Mothers have understood the importance of going to meetings to learn about child growth and development and improving their children's health. (BCA)<br>▪ The mothers are aware of the dates for taking children to health centers for vaccinations, and keeping the vaccination record safe. They understand the importance of applying vaccinations on the exact date. (BCA) |
| 2 | Exclusive breastfeeding for the first six months of life | **91** | | ▪ "Six months of breastfeeding- that's how I fed my children and after six months I gave them food." (Focus group, Santa Rita) |
| 3 | Recognize the warning signs of diarrhea and respiratory infections and seek immediate care at the health center if the child has even only one of these signs. | **90** | | ▪ "The skin fold – if the skin stays stuck, after two seconds – and dehydration- when he wants more and more water and his eyes appear sunken, these are signs of diarrhea." (Woman of reproductive age in interview)<br>▪ Convulsions, rapid breathing, difficulty breathing, inability to drink or eat, temperature or fever, difficulty waking up, ribcage retraction. When children have pneumonia, they breathe very rapidly and the stomach sinks. Stridor is when you hear wheezing in the chest or in the lungs during respiratory illness like pneumonia or bronchitis. Fever or temperature can be related to several types of sickness, such as diarrhea, flu or pharynx-tonsillitis. (Woman of reproductive age in interview) |
| 4 | The father cares for his children: he cuddles, hugs and talks to them. | **95** | | ▪ "Husbands are more concerned with prenatal care…. but if we would have a child today, I would change his diapers." (Man in focus group) |
| 5 | When giving treatment to the child, follow the instructions given in the health center. | **92** | | |

All the commitments achieved compliance above 80% and the BCA explained, "Families don't know about zinc. They are familiar with litrosol, but during counseling it was pointed out that zinc is a micronutrient that not only helps to stop diarrhea but also improves child development."

A male community leader commented, "I told the mother to give him serum, a little litrosol, and to take him to the health center. I explained it could be a bacteria or it could be a virus. And the mother said, 'I don't believe in bacteria or viruses. The child just has a soft spot [when the fontanel sinks] and I will take her for a massage [to relieve her stomach] and to fix the soft spot [hold the child by the feet, giving light blows to the feet to put the fontanel back in its place]'. The community leader continued, "What am I trying to say? That I was telling this person about the new behavior – about giving her baby serum, going to the hospital - because this is the new behavior - but she was clinging to the old ways from the past."

A BCA also commented, "Demand for zinc has grown in the health centers, and families have stopped using commercial pills."

**Tabla 23. COD 10. Plan de Vida Reproductivo**

| | Agreements | > 80% agreements met | < 80% agreements met | Opinions of participating families |
|---|---|---|---|---|
| 1 | Prepare your reproductive life plan. | **83** | | ▪ I did not make a reproductive life plan, only a delivery plan, but I only plan to have two children. (From an interview with postpartum woman)<br>▪ I am pleased that this reproductive plan is very good, that is nice to hear. (From an interview with postpartum woman)<br>▪ One makes plans for the future and if we have many children, we will not be able to give them studies and many things. We might have made mistakes with our children, because we didn't know, but now that we do know, we should not follow those practices. (From an interview with postpartum woman) |
| 2 | Decide that the appropriate time to have a partner is after age 18. | **89** | | ▪ We have to help prevent adolescent girls from getting pregnant because their wombs are not prepared. (Woman in focus group) |
| 3 | Use a family planning method. | **88** | | ▪ Family planning is the right choice for me because I do not want to have more children right now and I am taking care of myself to define a plan. |
| 4 | Take folic acid three months before becoming pregnant, as indicated by the health staff, to prevent malformations in babies developing in the womb. | **88** | | ▪ Take FA for three months prior. FA is good for the face, bones, hair, and nails, so that the baby is not poorly formed. (Woman in focus group) |

On this topic, the BCA observed, "The reproductive life plan was unknown among the families;" but currently, "Now families know how to prepare a reproductive life plan in a well-structured way."

BCAs reported that the reproductive life plan has helped make men aware of family planning and argue that, "At the beginning, the men refused to let their partners plan, but with the counselling, they began to be aware, changing to the extent that they expected the woman to go to the health center when the expiration date of the

planning method was approaching." BCAs reported: "Assessing the importance of communication in the couple and knowing how many children they want in the family." For this, "There has been greater acceptance on the part of the spouses to use family planning methods."

**Table 24. ttC 11: Importance of consumption of folic acid**

| | Agreements | > 80% agreements met | < 80% agreements met | Opinions of participating families |
|---|---|---|---|---|
| 1 | Every woman aged 10–49 years should take folic acid according to health center indicators, because they know about the benefits for women's health and well being different stages of life. | **87** | | ▪ Folic acid helps ensure that the child is not born with deformities. (Woman in focus group)<br>▪ According to medical science, girls should start taking folic acid at age 10.<br>▪ so the baby is not born with any deformities. (Woman in focus group) |
| 2 | Go to the health center to have your vaccination card checked and the Td vaccine administered if necessary. | **84** | | ▪ The tetanus vaccine is given. (Woman in focus group) |
| 3 | The mother and father know the importance of girls consuming folic acid starting at age 10 and take their daughters to the health center to obtain folic acid pills. | **88** | | ▪ The girl has been taking folic acid since age 11, so that when she has a child, it will not be born with deformities. (Woman in focus group)<br>▪ We must take 12-year-old girls to the health center, so that they can develop into women and have healthy children in their youth. (From interview with woman or childbearing age) |

The agreements indicate that FA consumption has increased. The BCA affirm, "The change is that FA consumption has increased in the first three months of pregnancy in women of childbearing age, adolescents and young women." The benefits of taking FA are known and its use is accepted by girls starting at age 10; this is a major breakthrough.

**Table 25. ttC 12: Importance of preventing pregnancy before age 18**

| | Agreements | > 80% agreements met | < 80% agreements met | Opinions of participating families |
|---|---|---|---|---|
| 1 | Adolescents and their families discuss the risks of pregnancy before age 18. | 86 | | ▪ One achievement in my life resulting from the project is that I know how to advise young people to prevent early pregnancy (under age 18). (Woman in focus group) |
| 2 | Adolescents and their families know the importance of delaying living as a couple until after 18 years of age. | 88 | | ▪ I liked knowing that I can share what I have learned with the boys, so they do not have children at such a young age. (Woman in focus group) |
| 3 | Adolescents make the decision to have children after age 18, knowing the risks of pregnancy before this age. | 84 | | ▪ We should not have children at an early age. (From interview with woman of childbearing age)<br>▪ A 15-year-old girl left home. The mother was receiving the counseling and I advised her to find her daughter and talk with her about preventing pregnancy. The woman did so. The teenager has been living in couple for more than a year and is not pregnant. (BCA) |
| 4 | Adolescent girls should take folic acid starting at age 10 to grow up healthy. | 89 | | ▪ The girl has been taking folic acid since age 11, so that when she has a child, the child will not have malformations. (Woman in focus group) |

An adult woman reported the following on preventing adolescent pregnancy, "Actually I have talked with young people, because sometimes we more mature women have more experiences and I have told them: 'You young people have already had one or two children, so now, plan, see to it that the children do not suffer; yes we are flesh and we desire intimacy, but there are things to help you prevent pregnancies, go to the health center, or take pills that will cost you nothing and prevent another pregnancy... there are many children who do not have a father, they take no responsibility as a father.' " (Woman of childbearing age in interview)

In the focus group, a woman mentioned, "Here we have other issues that come with the counseling. For example, you have to prevent adolescent pregnancies, we must realize that 14- and 15-year-old girls are too young to have children. Pregnancy must be prevented at that age."

BCA: "This topic has empowered the participants and offered knowledge about the obstacles created by an early age pregnancy. The pregnancy will make life difficult for them, some leave their studies. These teenagers are single mothers."

In the ttC sessions on preventing teenage pregnancy, it was observed that families emphasized adolescent girls, and did not refer to the young men.

**Table 26. ttC 13: Self esteem, values and life project**

| | Acuerdos | Acuerdos cumplidos > 80% | Acuerdos cumplidos < 80% | Opiniones de familias participantes |
|---|---|---|---|---|
| 1 | Teens seek additional information about self-esteem, values and life goals. | | 76 | The children often feel discouraged, they feel alone, because their self-esteem is low ... (Focus group) |
| 2 | Parents of teenagers strengthen communication with their children, talk to them, listen to them and take interest in their projects. | 93 | | ▪ I do this with my son, I listen to him, and tell him, when you need something, tell me since I am your mom, I am your best friend, you have to value what I am, because I value what you are. And then he tells me it is true, and he is going to tell me what is going on with him. We learned that children's self-esteem must be valued by the parents and friends. You need to have friends, but tell me what kinds of friends they are. (Focus group) |
| 3 | Adolescents and young people seek to belong to organized groups in their communities, or promote the formation of these groups (dance, youth networks, rural youth savings accounts, theater, singing, etc.). | | 72 | ▪ Community organizations are mostly made up of men, and women are not taken into account. (BCA) |
| 4 | All adolescents should have their reproductive life plans. | | 76 | ▪ I liked hearing that the reproductive plan is good, it's nice to hear that.<br>▪ She has a two-child plan. (Woman in focus group) |

This subject is one of the topics identified as "new" in the ttC and the municipalities' health work culture. It is greatly appreciated because of the teachings about valuing oneself and family members, especially to improve family communication and trust with adolescents.

A participant in a focus group said, "Their visits with us were successful because they taught us how to recognize that we sometimes have low self-esteem. We have to value ourselves, because sometimes we women in the community are more timid, and socially we value all men and women. We must value ourselves as women, raise our self-esteem and share not only the lessons, but we also must share in general with our women companions, young people, possibly the girls. We must introduce them to what is being taught, to start appreciating each one of us."

**Table 27. ttC 14: Prevention of gender and intra-family violence**

| | Agreements | > 80% agreements met | < 80% agreements met | Opinions of participating families |
|---|---|---|---|---|
| 1 | The couple and the family respect each other and decide to live together without violence. | **96** | | ▪ Many men have lowered their tone of voice when talking with their partners and children. (BCA) |
| 2 | The couple and the family agree on the decisions they make and do not impose on or violate each other's rights, maintaining a harmonious relationship of love and affection. | **94** | | ▪ My husband has changed through participation in REDES, he has asked me for forgiveness. He was angry that I got pregnant. Now he talks to his children and tells them not to mistreat their mother. (Woman in focus group)<br>▪ "The distribution of household tasks has improved." (BCA) |
| 3 | Family members support the prevention of violence and talk to their family and friends about this issue. | **88** | | ▪ When there is violence at home, when the father or mother is violent at home, the children sometimes leave home at an early age. Because of the violence, the father does not understand the son, nor the mother the daughter, nor the father the daughter, nor the mother the son. This should not happen, because our children are the fruits of a marriage and we must take care of them. (Focus group) |

The topic of gender and family violence is a new issue, taking into account the context of the four municipalities and the way in which health work has been carried out. Although the scores are high, REDES personnel believe this is the topic with the fewest achievements. An analysis of the context described the prevailing types of violence in the municipalities. These include:

- Women in general are subjected to the will of men, who make the decisions because they have economic control; women suffer from economic and sexual violence. Many women cannot decide whether or not to go to the health center.

- Elderly people who care for and assume the support of grandchildren and great-grandchildren suffer violence in the family, since their own children have forgotten them.
- Violence towards boys and girls is visible, it can be seen in how the father physically and verbally assaults his children, making them shy and violent as well. Children suffer cases of assisted violence.
- It is common for people, especially women and children, to be unaware of their rights.
- Communities express insecurity due to assaults and murders.

**Table 28. ttC 15: Pregnancy and zika prevention measures**

| | Agreements | > 80% agreements met | < 80% agreements met | Opinions of participating families |
|---|---|---|---|---|
| 1 | Remove standing water from pots, bottles, containers, tires or other vessels that may retain water. | **97** | | ▪ Avoid mosquito-breeding areas because mosquitoes transmit diseases. If a person infected with dengue or zika is bitten by a mosquito and it bites another person, the disease can spread. Preventing these diseases involves preventing mosquito-breeding sites. (Woman of childbearing age)<br>▪ In places where the water is off, one must leave water in the sink until it comes back on. We would like for you would give us something to put in the water. (Woman of childbearing age) |
| 2 | Scrub the walls of the sinks or water tanks and replace the water at least once a week. | **98** | | ▪ Clean the sinks, do not have puddles around the houses, and throw away caps and bottles that can hold water to avoid creating mosquito-breeding sites. (Woman of childbearing age) |
| 3 | Change the water in animal troughs at least once a week. | **97** | | ▪ We learned that we must keep the house clean and make sure that no water is retained; all this has worked because there are no mosquitoes. (Woman in focus group)<br>▪ We should not have, for example, open pans of water, and the sinks must be kept very clean.<br>In addition, if the water is recycled in drums, we keep the drums well covered and change the water every day to eliminate mosquito-breeding areas.<br>All garbage, even gum wrappers and bottles, should be burned. We must keep the yard clean to prevent zika and chikungunya. (Woman in focus group)<br>▪ To clean, throw out caps and bottles that may retain water and become mosquito-breeding sites.<br>(Focus group in Santa Rita) (Woman in focus group) |
| 4 | Cover the tanks tightly with nylon, fine mesh or other devices. | **93** | | |
| 5 | Remove garbage from the home's yard. | **95** | | |
| 6 | Keep the grass short in the yard around the home. | **94** | | |
| 7 | Pregnant women get prenatal checkups as recommended by their health service. | **90** | | |

| | | | | |
|---|---|---|---|---|
| 8 | Ideally, all family members should protect themselves by wearing long-sleeved clothing and long pants on their legs. | | **74** | ▪ It was not possible to wear long-sleeved clothing because it was too hot. |
| 9 | If someone in the family, especially a pregnant woman, has symptoms of zika, dengue or chikungunya, she should be taken immediately to the nearest health center for treatment. | **82** | | ▪ You must go to the nearest health center if you have a fever. Chikungunya can cause headaches, and if this happens, you must leave immediately and have savings to pay for your transport. |
| 10 | Pregnant women use mosquito repellent daily, the same kind used for babies. | | **70** | ▪ Only urban areas have repellent supplies, but they are expensive. |
| 11 | All family members sleep in places protected by mosquito nets, especially pregnant women. | | **65** | ▪ Remove stored water, maintain cleanliness, use mosquito netting, throw out the water so it does not produce mosquitos. |

Only three of the eleven agreements have compliance below 80%. These scores are justified because compliance requires investing money in clothing, netted canopies and mosquito repellent.

In 15 of the 87 agreements that include the ttC topics, there are descriptions of behavior changes that men should undertake in aspects of maternal, neonatal and reproductive health. It is striking that only two of these agreements have scores lower than 80%. This observation was made because the BCA reported that, "Not many men participated in the ttC." However, many women interviewed said that they talked with their husbands and shared the knowledge from the counseling topics.

The BCAs observed the following changes in men:

- "The husband did not get involved in pregnancy care, but a change has been observed as a result of the counseling. The men are more focused on the care of the pregnant woman, they worry about a better diet and care or treatment. This change helped promote in-kind savings."

## 4.4. Theories of the operative model and factors that have contributed to or limited behavior change.

"We know that this is an achievement, that we in the community have benefited from these topics. As I say, learning is not a race, and everything is learned little by little, like when a child starts to walk going step by step. We are getting there. When the BCA arrived, for my part I gave the whole afternoon to her. I liked to talk with her, we did little in the afternoon in order to talk. I would say that we learned a lot in our community, it was an achievement. There were women who had not raised their heads and already today they say they achieved a lot with Project REDES." (Woman in focus group)

It has already been mentioned that the **Health Beliefs Model** is the theoretical basis implicit in the REDES methodology for behavior change. The model has two variables. The first takes into account the value that the person gives to a certain objective or goal, and the second deals with the estimate made of the probability of carrying out a certain action to achieve the objective or goal. These variables guide the analysis for identifying elements that have contributed or not to families opting for a change in behavior.

**The value attributed to Project REDES**

It has become clear that the project directly involved 3022 families from Visit 1, and that the participation of the 2552 active families that completed the ttC in 15 and 21 counseling sessions was voluntarily. This means the families gave value to the project by viewing it as "important." Why did families attribute importance to the project when it was introduced in Visit 0? To answer this, we must first consider the context in which families live and how well the health services performed in response to the needs of the population. In the visit made to a health center in the municipality of Copán Ruinas, it was found that:

a) The health center has organized its patient care by assigning different days to receive certain populations: Monday for pregnant women, Tuesday for chronic patients, and Wednesday for general consultations. Patients must arrive on the day the care is scheduled and if not, they have to return on the next appropriate day. Although it is only this one health center that follows this rigid schedule (other health centers generally do not have assigned days), but the individuals must be there at a specific time to receive care. If they arrive late, they are not attended, even if they have travelled from a remote village.

b) Patient care is limited and if two members of the same family arrive, the one with the more serious condition is the only one who will receive care. The other member will not receive care and must return another day. With these observations, the health services manager's capacity for population care during implementation was revealed, but by the time of the evaluation there was already a new manager. When asked whether it was their suggestion to establish the exclusive days for different types of care, SESAL responded negatively, because it recognizes the universal right to health care, indicating it was the health center staff that had made these decisions. These stipulations, types of care based on the demands of the population, and community experiences with maternal and infant deaths, have led the population to consider it "important" to receive information on maternal, neonatal and infant health.

**Assessment of the possibility of change: how susceptible are we?**

During Visit 0, families received information on the project's educational nature. They learned that their participation would not include any kind of material benefit. Instead they were made aware of the consequences and benefits to the family of learning about the issues of motherhood, family planning, and newborn care. The families visualized two aspects: they identified possibilities for better care of pregnant woman and children and recognized that there could be a risk of a maternal or child death in their family; and they also identified the possibility to learn.

Among the barriers faced by participating families that are still present in the area of the villages, we can mention:

1. Prenatal checkups, institutional delivery and postpartum checkups show barriers having to do with dissatisfaction with health personnel, high cost of transportation, and lack of resources to spend on food.

2. In newborn care, early attachment depends on the attending physician. Even if the mother requests it, it is the physician's decision whether to hand the mother her child in that moment after birth or not.

3. In family planning methods, the obstacle is the meaning that people attribute to the marital fidelity of women and their relationship with God and sin. Those who consider FP methods and contraceptives to be a sin refuse to use them; while for those who use FP methods, the sin is bringing children into the world when you are not able to provide what they need.

4. Men's participation in childbirth, postpartum and newborn care is excluded due to gender stereotypes, because families believe that these activities are for women only. This issue is indirectly reinforced by the health system, on the one hand, by not allowing the man to be present during prenatal checkups, delivery, postpartum and newborn checkups, and on the other, by the CMI infrastructure, which does not provide privacy to the delivering woman.

5. The lack of zinc, litrosol, folic acid, prenatal multivitamins, and mosquito repellents (sprays) in the health center means the families can only use them if they have the resources to acquire them on their own or wait until the health center provides them.

6. Adolescent pregnancy is a topic that upsets the customs of some families who, citing their poverty, tend to marry off their daughters even before the age of 14, to avoid the responsibility of supporting them. Through the educational process of the ttC, some families made the decision to not commit or marry off their 14-year-old daughter and others in the same condition even decided to send them to school.

**The benefit of the behavior changes proposed in the ttC**

The participating families did not incur costs in the process of project execution; that is, in the ttC sessions, to fulfill the agreements that they felt they could meet, they had to invest resources of time and money; in cases where the new behavior involved transportation, such as seeking a health center. None of the families said their participation in the project cost them money. In the reflections shared in interviews and focus groups, participants observed that the modifications they have made as a result of the counseling have brought benefits, for example, saving for a birth plan. In turn, they have been able to identify that families that did not participate in the project continue to do what participating families no longer do, exemplifying situations in which mothers of children with diarrhea, blaming it on so-called "empacho," or indigestion, go to a person who "massages them" (home remedy). So they do not seek treatment in a health center nor do they administer zinc or litrosol. As a family, they have witnessed that the newborn's navel did not become infected and that it was good to avoid using umbilical bandages. This is an experience that produced new attitudes in family members, which they then shared with other families.

The design of the ttC methodology, with 15 topics, 87 agreements and their key messages, was tailored to the needs of the population and supported by a communication strategy that did not involve mass media. Instead, a direct relationship built a channel of trust between the BCA and the family that for some families reached 15 to 21 months. Continuous training based on the needs of the BCA to develop a better counseling experience reflects an intention of planned behavior, as another underlying theory in project implementation. Elements include:

- Counseling on each topic provided information through positive and negative stories that motivated families to assume the commitments they believed they could meet.
- The information and assistance from the BCAs helped people acquire the skills necessary to carry out the agreements.
- Families have been able to experience the benefits of change; for example, on topic 15, people have said, "There are no more mosquitoes," and on FP, they express "satisfaction" with the methods used.
- Families have expressed satisfaction with their progress in the agreements. "I did everything," said a post-partum woman, referring to the "birth plan, institutional delivery, and post-partum care." "With your head held high," one adult woman noted when referring to the topic of self-esteem.

These aspects demonstrate that the families have managed to successfully fulfill most of the agreements in their efforts to practice new behaviors.

**The theory of motivations**

This theory proposes three concepts: a) apathy: the absence of motivation, complete disinterest in examining behavior; b) extrinsic motivation: when people behave in a certain manner due to external factors such as prizes, rewards, or recognition, affirming that the behavior will be maintained as long as these factors are present; and c) intrinsic motivation: when people behave in a certain manner because of internal factors. No matter what happens with externally, people will maintain this behavior.

In searching for references about apathy or lack of motivation, no texts were found from participants expressing a lack of motivation to comply with the agreements that they selected in the counseling. An analysis of the percentages of agreements with 65% compliance or less showed that most occurred in the municipalities of Cabañas, San Jerónimo and Santa Rita. The tables below show the ttC number, topic and percentage of unmet agreements.

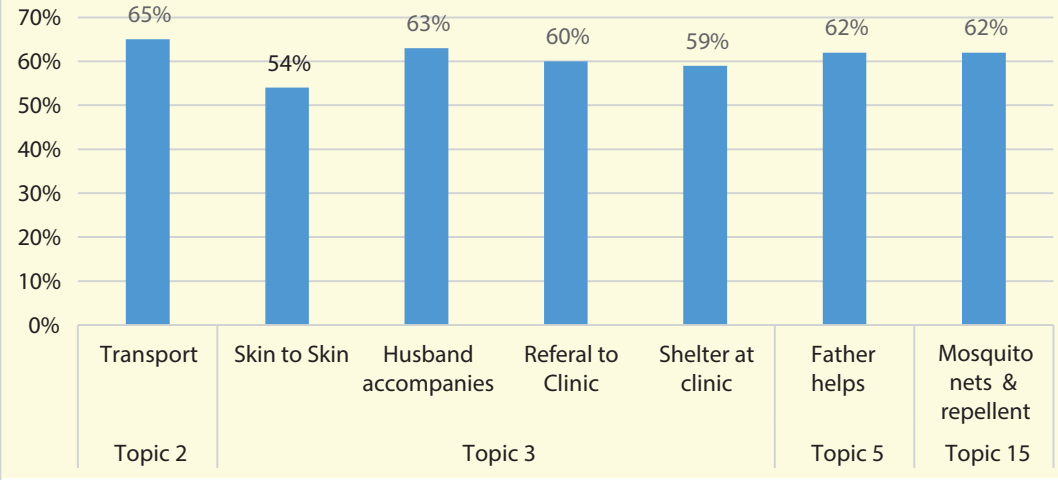
Underlined agreements mean they were repeated at least once in another municipality.

For Cabañas, we see that compliance did not exceed 65% for seven agreements (for ttC-3, the average was 63%).

**Table 29. Agreements with 65% compliance or less, according to ttC topic Cabañas municipality, Project REDES WVH, October 2018**

| ttC | Topic | ≤65% of agreements met |
|---|---|---|
| 2 | Birth plan and emergencies | 65% transport and money for the delivery. |
| 3 | Importance of delivery in the maternity clinic or hospital. Participation of the man and the family in caring for the pregnant woman. | 54% asked to hold the newborn skin-to-skin and breastfeed immediately.<br>63% husband requests permission to accompany the delivery.<br>60% health centers make referral to the CMI.<br>59% shelter at the CMI. |
| 5 | Family preparations for the delivery and newborn care. | 62% father helps with newborn care. |
| 15 | Pregnancy and measures to prevent zika. | 61% family members sleep with mosquito netting and pregnant women use repellent. |

FIgure 11. Agreements with 65% or lower compliance by topic Cabañas Project REDES WVH, October 2018




**San Jerónimo** municipality had 17 agreements with percentages lower than 65% on seven topics. It attained the three lowest percentages in agreement compliance. For ttC-3, the average was 64.

**Table 30. Agreements with 65% or lower compliance, according to ttC topic, San Jerónimo municipality, Project REDES, WVH. October 2018**

| ttC | Topic | Acuerdos con 65% o menos de cumplimiento |
|---|---|---|
| 1 | Cares during pregnancy and prenatal | 58% go to the health center |
| 2 | checkups in the first three months.<br>for pregnancy tests. | 57% decide to deliver in the CMI.<br>56% buy things for the baby.<br>63% arrange transport in advance.<br>53% know who will donate blood.<br>47% pregnant woman sleep under mosquito netting and with the baby after delivery. |
| 3 | Importance of delivery in the maternity clinic or hospital. Participation of the man and the family in care of the pregnant woman. | 50% husband asks permission to accompany during the delivery.<br>65% arrange transportation in advance.<br>59% stay at the CMI. |
| 5 | Family preparations for the delivery and newborn care. | 64% breastfeeding in the first six months, no pacifiers or watered juices.<br>62% of fathers help care for the newborn. |
| 6 | Care of the woman after delivery and the newborn in the first three days. | **40%** do not use umbilical bandages, talc, coins, ground herbs or other substances on the navel.<br>58% breastfeeding in the first six months, no pacifiers, no oil, no watered juices. |
| 13 | Self-esteem, values and life project. | 62% adolescents and young people seek to join organized groups. |
| 15 | Pregnancy and zika prevention measures. | 63% family use long-sleeve clothing and cover their legs.<br>42% pregnant woman apply mosquito repellent to self and the baby.<br>55% family members sleep with mosquito netting and pregnant woman use repellent. |

**Figure 12. Agreements with 65% or lower compliance, by topic Municipality San Jerónimo (1) Project REDES WVH. October 2018**

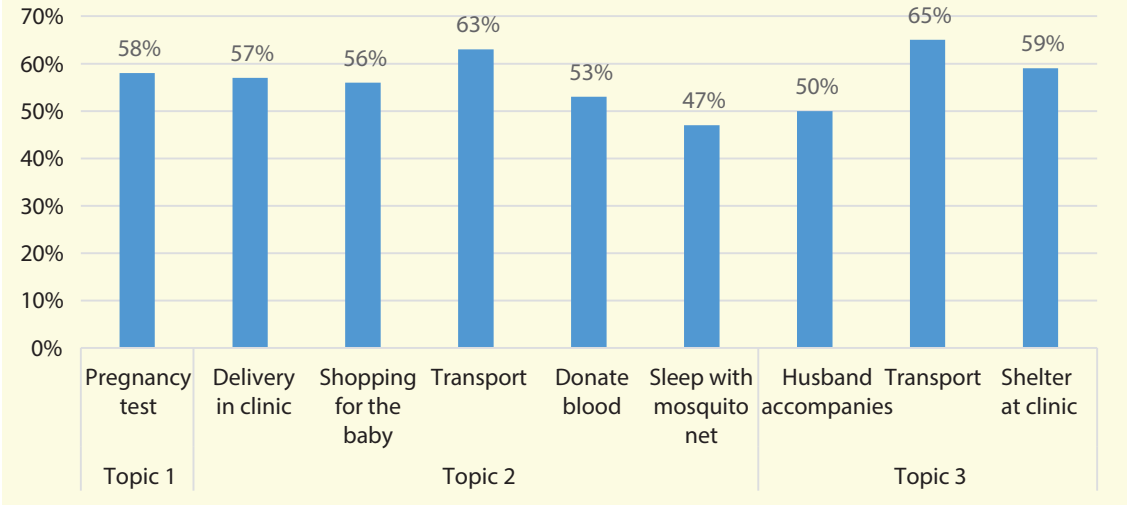
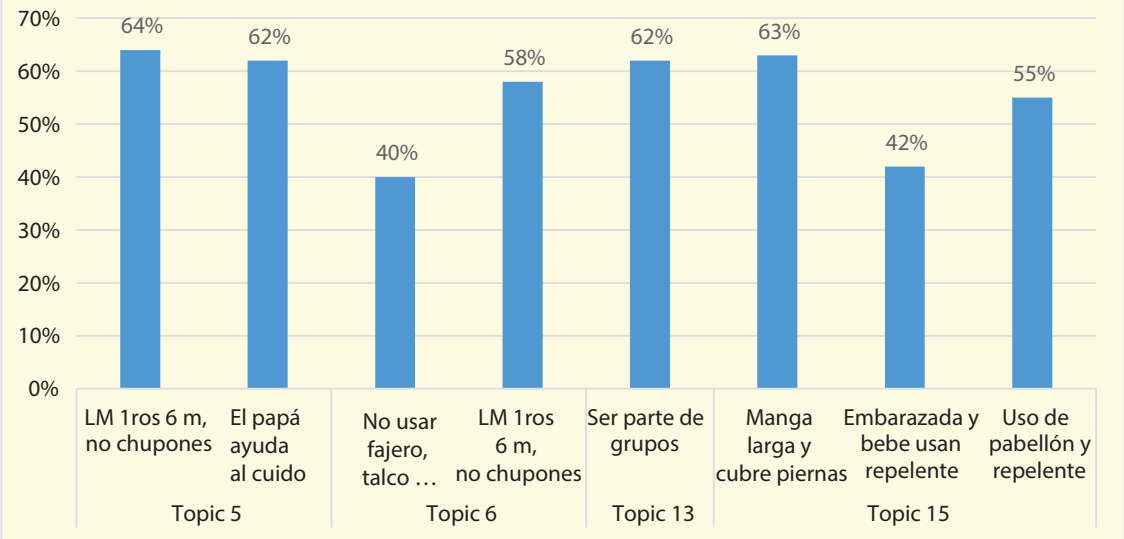


Figure 13. Agreements with 65% or lower compliance, by topic
Municipalty San Jéronimo (2) Project REDES WVH, October 2018




**Santa Rita** recorded 12 agreements on seven ttC topics with percentages lower than 65%. The average for ttC 3 was 65%.

Table 31. Agreements with 65% or lower compliance, according to ttC topic
Municipality Santa Rita, Project REDES WVH. October 2018

| ttC | Topic | ≤65% of agreements met |
|---|---|---|
| 1 | Care during pregnancy and prenatal check-kup in the first 3 months. | 59% husband or relative accompanies the woman and they go to the health center consultation together. |
| 2 | Delivery and emergencies plan. | 59% they know who will donate blood if necessary.<br>63% pregnant woman sleeps with the baby under mosquito netting after delivery. |
| 3 | Importance of delivery in the maternity clinic or hospital. Participation of the man and the family in care of the pregnant woman. | 59% ask to hold the baby on their chests and breastfeed immediately.<br>63% husband asks permission to accompany the delivery.<br>64% of the health centers give referrals to the CMI.<br>58% stay at the CMI. |
| 6 | Care of the woman after delivery and the newborn in the first three days. | 61% husbands or relatives take the newborn to the health center in the first 3 days. |
| 7 | Newborn care and warning signs. | 57% register the newborn in the National Registry of Persons. |
| 13 | Self-esteem, values and life project. | 64% adolescents and young people seek to join organized groups. |
| 15 | Pregnancy and zika prevention measures. | 61% of pregnant woman apply mosquito repellent to self and the baby.<br>53% family members sleep with mosquito netting and pregnant woman uses repellent. |

Figure 14. Agreements with 65% or lower compliance, by topic
Santa Rita (1) Project REDES WVH. October 2018

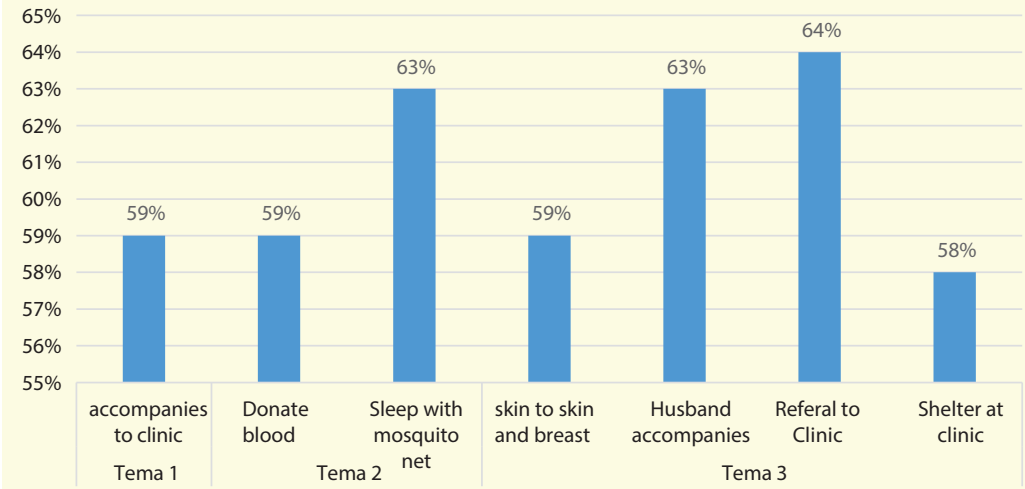
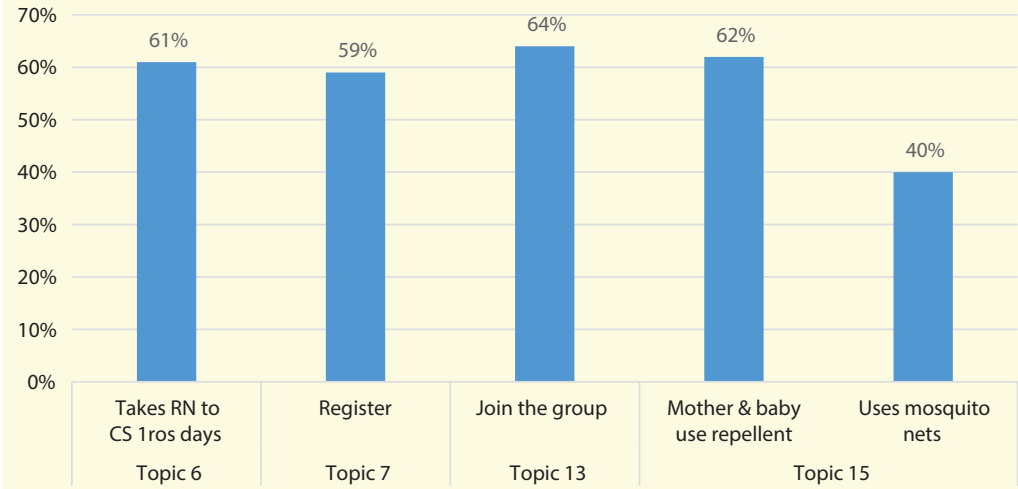



Figure 15. Agreements with 65% or lower compliance,by topic
Municipality Santa Rita (2) Project REDES WVH. October 2018




For ttC-3, less than 65% of four agreements were fulfilled, and the three municipalities reached averages of 64, 63 and 65%. The rest of the ttC topics did not show averages below 65%, although non-compliance occurred in two or three municipalities. In the agreements not met and with a percentage of 65% or less, it was observed that some are related to: a) the culture or customs of the population and their beliefs, with an emphasis on having a prenatal checkup in the first weeks, the participation of the father in the pregnancy, delivery, postpartum period and newborn care; b) the economic cost of institutional delivery, anticipated stays at the CMI, the use of repellents, long sleeves and mosquito netting when sleeping; and c) the family did not make the decision to comply with early attachment since this depended on the doctor at the CMI

The intrinsic motivations were indicated from when the families observed changes in consuming folic acid: babies are not born with malformations, their nails and hair look better; they were satisfied with the use of FP methods; the delivery was safe in the clinic, among others. External motivations were not manifested since the families did not receive any compensation for participation in the project. Other than rare exceptions in order to avoid a maternal or infant death, they received transport support to the maternity clinic from the project or management, called the ambulance or found another means of emergency transfer. Specifically, families felt motivated to participate when the project was presented to them and they accepted their participation. They did not receive compensation for participating and their own changes and experiences motivated them to continue in counseling through visits 15 or 21. They subsequently shared what they learned with other families.

## 4.5. Service providers - health system – their influence on behavioral changes

From the perspective of BCA and the families participating in the evaluation, the health service was influenced by the behavior changes experienced by families participating in REDES. For some, the influence contributed to the change, for others, it was a limitation.

For REDES personnel:

- "This relationship that BC achieved with health centers is substantial, because to the extent that health service providers came to know what was going on in the community and accepted it as such, people believed in it more. People told us that the health center providers agreed with what had been explained [in the counseling]. Conversely, if the health unit received a referral with a possible warning sign but the doctor took the paper and threw it in the trash saying that it was not correct, the family was discouraged and doubted what had been explained in counseling."

For the participating families:

- "The messages of the BCA and the health center were almost the same: the importance of prenatal check-ups and family planning." (Woman in focus group)
- "They don't contradict each other [referring to the messages of the BCA and the health center] and they go together. Litrosol, that's fine; they tell us about zinc, that's fine; the children who go to the clinic, that's fine; regarding the hospital, it's fine. Well, it all goes together, there are no contradictions at all." (Man in focus group)
- One always receives information [at the health center] with regard to children, such as when they have chest pain, symptoms of pneumonia and all that, you should go to the health center, like when the child's chest makes noise, they feel tired, have a cough that does not seem like a normal cough, like a tired cough." (Woman in focus group)

Perspective of health personnel

- "Honestly we have not observed changes in the population; their cultural customs make it difficult to address them."
- "We have seen changes in children; pneumonia has decreased this year compared with last year, as has diarrhea."
- "There are more women who are planning, they also have a little more knowledge. We continue to see indicators close to the target, but not quite there yet. There are months when more [pregnant women] come in, it fluctuates."

- Zinc, oral serum and consultation after three days is a standard of the service provider; in private practice, diarrhea is managed with antibiotics."
- "Not all women of women of childbearing age taking folic acid yet. There are women who actually throw it away, maybe because it is given to them for free. We hope they're really taking it."
- "The pregnant woman is consuming folic acid if she has been enrolled in time. They usually take it when they are already pregnant."
- "One of the problems with women of childbearing age, especially in indigenous families, is when they saw that folic acid was given to pregnant women, then ... ahhhh! What if my daughter gets pregnant or they are going to say she is pregnant! I do not give it to her! I sensed that in certain populations that myth has been diminished, because today they accept it more. This was the problem before the project - that if I give it to her, she will get pregnant. A man with anemia came to my office and I prescribed iron and folic acid; he said, "Why would I take that? This is what they give pregnant women!" So, there is a myth that these pills are only for pregnant women, although it has been decreasing somewhat since both we and the project have given them folic acid and counseling."
- "We were at 50% institutional delivery before, now it is 75%. Right now the CMI has a well organized hotel-style maternity home, with two large cubicles with 14 beds on each side, 28 in each cubicle. There is space to cook. There are women who are afraid to cook on an electric stove, but there is a stove outside to encourage them to cook. There is an area where they can do handicrafts. The maternity home functions much better than before."

## 4.6. The Maya Chortí community and its vision of behavioral changes

A Maya Chortí leader explained:

- "Here in Copán we have fifty-nine communities, a national council, a regional council of men and a regional council of women. The women formulate proposals on their own and execute projects like the men. Yes, we have seen changes. Years ago there were many deaths of children, pregnant women or women during delivery. We have seen that now there are not as many deaths as before. It happened that you often saw child death, sometimes they died inside the womb because of neglect by the family; but now we see that World Vision with this project prepared the people, educated them...."

Changes achieved: There have been changes and many people have noticed this. Within this project, it is very clear that there were changes ... the health advisors are the ones who did all the follow-up for this project ... We have our own culture, but we cannot take risks, because times have changed. Before my wife had already had it [he is referring to her having delivered], when I arrived, but now we see that deliveries are complicated. The pregnant woman requires care. People were made aware because now, once people know that their day of delivery is coming, they then head to a clinic or most go to the public hospital. These changes occur whenever the person is aware, because at some point, we opposed this because some institutions were trying to do it in a forced way [he is referring to obligating the woman to deliver in the CMI].

Changes not achieved: "Something that the project has not yet accomplished and that still continues is the large number of early age pregnancies; in the communities there are always some thirteen or fourteen-year-old girls who still live with the parents and are pregnant. I think that they did not achieve what was wanted, because a pregnancy at a young age is risky. As for family planning, perhaps all the methods for this were not made clear, because there are still people who need them. In addition, how having a large family can limit some rights is an issue parents must address. At the organization level we already know that this challenge remains. This is a cultural issue that I also think that this can be changed and improved.

Influencing factors: The economic issue of course has influence, because in this area, only coffee farms produce employment and only once a year. Right now we are in the harvesting season from early October, November, December, January to February when there is economic income for the families. There are about four months with income and eight months with none. If the delivery occurs during those eight months, it is difficult to move a pregnant woman to a clinic because this requires financial resources. Transport is quite expensive, travelling from here to Santa Rosa costs no less than about three thousand five hundred to four thousand lempiras [approximately one hundred sixty dollars]; the cost is quite high. That is why women sometimes risk death. The project addressed this with the delivery plan and in my community we talk about this savings plan."


# 5. Conclusions and recommendations

The ttC and its planned, logical and coherent implementation integrated the findings of formative research and the communication strategy arising from this study. Similarly, it provided inputs for the structuring of what has been called the operational model to respond to the needs and priorities of the families living in four municipalities. In the previous chapters, the contribution of Project REDES has been confirmed in terms of improving behaviors regarding maternal, neonatal and child health and, with this, the quality of life of participating families, reflecting the project's relevance. However, it is important to reconsider four aspects: a) the participation of families; b) the learning process implicit in the ttC; c) the BC achieved and its challenges for the families, the context and the health system; and d) the project's innovation is not limited to the use of technology. Aspects implicit in project execution warrant further exploration because they present an opportunity for improving the levels of maternal, neonatal and infant populations' health.

In terms of family participation, it is clear that the culture of family participation in social projects in the municipalities covered by the project has been framed as 'aid.' However, of the 3,022 families that received at least one counseling visit, there are information system records accounting for 2,546 families that remained active and participated in 15 and up to 21 ttC visits (2,443 and 1,034 respectively) until August 2018 at the end of the intervention. This demonstrates participation by families that value health education and at its highest level can be interpreted as a fundamental value for the family with an ethical significance. Furthermore, it shows a deep willingness to share knowledge and experiences with others living in their community. How well did the families participate in any previous structured project? Although the families did not participate in the project management, their participation in the educational process specified in the counseling has given them knowledge and with it, empowerment, since they have made decisions essential to their own lives. Their capacities have been strengthened to better guide the processes of pregnancy, delivery, postpartum care, and newborn care. It is evident that the knowledge acquired has allowed them, in some cases, to appeal to and negotiate with health providers and, in the case of the Maya Chortí population, to become conscious of going beyond old traditions to new forms of family care. In other words, participation in the counseling has provided families with satisfaction that makes them appreciate

their self-esteem. They have knowledge that allows them to manage their health and, in addition, information that allows them to interact with other families, sharing their new life experiences. There are indications that the families who refused to participate understood the educational purpose of the project, but their 'aid' vision prevailed

***The learning process implicit in the ttC showed two results***. **The first** shows that knowledge acquired in counseling has supported the decision making that enabled them to practice behaviors that, prior to their participation in the project, were considered "avoidable." Among these are: consuming folic acid before and during pregnancy; savings in-kind for the delivery; choosing to go to the maternity clinic (shelter) before delivery; institutional delivery; postpartum checkups; and using family planning. In newborn care this included not using umbilical bandages or pacifiers, among others. This demonstrates that these actions were assimilated as "necessities" following the ttC. **The second** is that there has been dialogue and consensus within the family. It also reveals that the skills and abilities acquired reflect the presence of negotiation and dialogue between family members, representing a departure from community schemes including men's accompaniment to the health center during delivery and support with certain domestic tasks -in some cases-. In addition, these abilities and skills are underpinned by the knowledge acquired and have enabled their willingness to share them, mainly with the new generations.

The structured counseling supported by didactic materials and communication tools is an element with a strategy that encourages the development of cognitive skills in the families, in a specific context –their home-, facilitating the acquisition and understanding of each topic, making positive and negative comparisons of a reality, using other instruments such as ballads, riddles, songs for reflection (in a playful environment) and the reinforcement of the content to foster learning and behavioral change. It is evident that the BCAs reported, asked, questioned, warned, suggested, and supported; in other words, they solidified a reflection process in each session and motivated an internal process with the participating person(s) (family) for making better decisions.

The Project REDES team adapted the ttC to the reality of the municipalities by developing a validation process and although there were unanimous voices in the families indicating that, "They would not change anything in the counseling," it is desirable to accept that mistakes could have been made and to revisit the considerations expressed by REDES staff to adjust (already mentioned) procedures in the operating model, in the development of the counseling and, in the case of applying the experience in not in the context of a study. The recommendations led to improvements in the distribution of families for each BCA, the duration, teaching and communication materials, and a larger administration team in order to avoid work overloads.

The behavioral changes achieved and their challenges related to families, the context and the health system are difficult to separate from the strengthening of capacities in families and the educational nature of the project, which has also been the central task of project implementation. What will families do with the knowledge and their new practices? To answer this question, four dimensions are envisioned:

a) Personal environment: The reflections of the elderly and those who already had some experience in maternity, neonatal and childcare topics on their counseling experience will guide them in promoting their own care. For those who did not have this type of experience, it enabled them to manage these facets of their lives.

b) Family environment: Topics such as family planning, reproductive life plan, savings plan for delivery and emergencies, consumption of folic acid from 10 years on, avoiding pregnancy in adolescence, have supported a mechanism for dialogue within the family (decision making) and motivated individual and family actions to make requests (demands) of the health service providers.

c) Community level: Each participating family willing to share what they learned supports new community knowledge and establishes guidelines for creating new traditions, such as stopping use of umbilical bandages and pacifiers, seeking institutional delivery, having men accompany and take responsibility in the family, especially with the pregnant woman, the newborn, and child care.

d) Settings for health care providers: How can the health system take advantage of the knowledge and willingness of the 2,552 families that actively participated in the project?

The challenges remaining are: pregnancy tests in the first 3 weeks; reproductive life plans; adolescent pregnancy; consenting participation of the man in reproductive health, maternity and childcare; and the protection of pregnant women against zika. These topics are pending since they did not achieve the desired score in their practices; however, the foundations have been laid with ample information about them and the value they have for health in the families and villages.

Are the behavioral changes accomplished sustainable? In the project design actions were defined to support the sustainability of its results, including:

1. Selecting a methodology, in this case the ttC, that was adjusted to the needs of the population, although as already mentioned, it was necessary to make adjustments in songs, ballads and other teaching resources to foster dialogue, reflection, and decision making.

2. Encouraging the participation of the entire family, incorporating the children and each household member. Although men's participation was limited, there is evidence that some families chose to keep them informed and based on this information, they participated in decision making that promoted new behaviors.

3. The basis of the participation was the willingness of each family, which was maintained throughout the intervention through completion of the cycle of 15 or even 21 ttC visits. This indicates this educational process laid the foundations for knowledge and its use.

4. Generation of a learning process that enabled knowledge management in the family.

5. The families were not pressured to undertake behavioral changes, and the limitations identified were mainly economic. Many cultural barriers gave way and expectations were exceeded. For example, pregnant women stayed in the maternity homes, had their delivery in the clinic, and made use of family planning methods.

It should be pointed out that these actions were developed with equality between man and women with a gender and generational perspective; elderly people, young people, adults, adolescents, children and people with disabilities have participated.

Innovations from the project were not limited to the use of technology. In the context of the municipalities intervened, the project established a pattern in the concept of home health visits and their methodology, which in turn constituted an innovation, and broke with the local or traditional scheme in the following aspects:

a) Identifying the counseling topic based on the needs of the family, although structuring it on previously defined topics; b) investigating barriers and resistance to counseling; c) motivating a critical analysis based on positive and negative stories from lives of other people for reflection and decision-making in their own lives, based on the dialogue between the BCA and the family.

## Assessment and recommendations based on evidence collected in the evaluation process

| Conclusion | Recommendation | Responsible |
|---|---|---|
| **Operational model of Project REDES for implementation of the educational strategy** | | |
| ▪ The project implemented 82% (51,786) of the visits programmed (63,462) in the municipalities.<br>▪ 2434 families participated in 15 ttC visits and 1,034 in 21 ttC visits, completing the health education process.<br>▪ The families' perception of the possibility for learning encouraged their participation in the project while the 'aid' approach limited other families.<br>▪ The ttC has proven to be a methodology that can be adapted to the needs of the population.<br>▪ The ttC contents are aligned with national health policies, plans and strategies, and support improvements to maternal, neonatal and child health in the implementation area | Compartir al proveedor de servicios de salud los resultados del proyecto, entidades como el gobierno local y la organización Maya Chortí | World Vision<br>IDB |
| Learning process, the ttC | | |
| ▪ The 15 topics have addressed the knowledge needs of the families to opt for behavioral change.<br>▪ The project's monitoring system was precise, systematic and should be replicated in future initiatives. | Promote the institutionalization of the operative model through local government recognition and partnerships with other actors. | World Vision<br>IDB |
| Sustainability of Behavioral Change | | |
| ▪ Project innovations were not limited to the use of technology for learning. There were innovations in how counseling was conducted, meeting the requirements for privacy, ideal settings for families, involvement of the family in the decisions for ttC date, time, and topic selection based on their needs. | Share project results with the health services provider and entities such as the local government and the Maya Chortí organization | World Vision<br>IDB |

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# Annexes:

## Annex 1. Glossary of terms

**Attitude**: Way of being or a perspective; it involves tendencies or "a willingness to." It is an intermediate variable between a situation and the response to that situation. It helps to explain why a person adopts a certain practice rather than another from among the possible alternatives when subjected to a stimulus. Since attitudes cannot be observed as directly as practices, measuring them requires caution. It is interesting to point out that numerous studies show a link, often weak and sometimes non-existent, in relation to attitude and practice (Gumucio, 2011, page 5).

**Knowledge:** A set of known things, of learning, of "science." It also includes the capacity to represent oneself, to have one's own way of comprehending. In-depth knowledge of behavior that is considered beneficial does not imply its automatic application. The degree of knowledge found allows identification of areas where efforts are needed in the fields of information and education (Gumucio, 2011, p. 5).

**Belief:** Firm agreement and compliance with something (Dictionary of the Royal Spanish Academy of Language).

**MANCORSARIC:** Association founded in 1999, based on article 20 of the law of municipalities and became a legal entity in 2003. It comprises the municipalities of Copán Ruinas, Santa Rita, San Jerónimo and Cabañas in the Copan department. In the Project REDES pilot MANCORSARIC was responsible for implementing the new decentralized health model in these municipalities. This responsibility ended with the conclusion of the project.

**Practices** (or behaviors): Observable actions by an individual in response to a stimulus. Specific, concrete actions (Gumucio, 2011, page 5).

**Family planning:** Programs aimed at allowing couples and individuals to freely and responsibly decide on the number and spacing of their children and to obtain the information and means necessary to do so, ensuring they exercise their options with informed consent with a full range of safe and effective methods available (UNFPA, 1994, page 53).

**Reproductive health:** General state of physical, mental and social well being, not merely absence of diseases or ailments, in all aspects related to the reproductive system, its functions and processes. Accordingly, reproductive health involves the ability to enjoy a fulfilling and risk-free sexual life and to procreate, and the freedom to decide whether or not to do so, when, and how often. This last condition implies an individual's right to obtain information and family planning method of their choice, as well as other methods for controlling fertility that are not legally prohibited. It is also access to safe, effective, affordable and acceptable methods, the right to receive adequate health care services that permit risk-free pregnancies and deliveries and give couples the maximum chance of having healthy children (UNFPA, 1994, page 53).

**Maternal health:** Includes all aspects of women's health from pregnancy and childbirth to postpartum. Five directly related complications are responsible for more than 70% of maternal deaths (hemorrhages, infections, dangerous abortions, eclampsia and obstructed labor). Specialized care before, during and after childbirth can save the lives of pregnant women and newborns (WHO, 2016).

**Neonatal health:** Health of children from birth to 28 days.

**Health care model**: The contents of health care and main features of the interaction between health services providers and consumers.

**Maternal mortality**: Maternal mortality rate (MMR) is the annual number of deaths per 100,000 live births of women for any cause related to or aggravated by pregnancy or its management, excluding accidental or incidental causes. The MMR for a specific year includes deaths during pregnancy, childbirth, or within 42 days after termination of pregnancy, regardless of duration and place of the pregnancy (Index Mundi, n.d.).

**Counseling:** Space for health education oriented to the family's needs in relation to maternal, neonatal and reproductive health issues. It is the space for meetings between the BCA and families participating in REDES project. The objective is the development of 15 topics through application of the ttC methodology. Topic selection is based on the family's needs and can be reinforced in further counseling sessions. There are 15 sessions, one for each topic. Some families receive up to 21 counseling visits to reinforce specific topics or involve additional family members.

**CommCare:** Mobile app for use on smartphone devices, tablets and computers.

**CommCare HQ:** Online portal that facilitates creating and launching apps, viewing and analyzing data, and implementing and communicating with users.

## Idioms in the intervention zone

**Chupón** [pacifier] is a cloth dampened with pregnant woman's saliva, which is given to the child when (s)he has diarrhea. It is used for treating the "evil eye" or diarrhea. It is also used with honey and plant waters for a remedy with newborns.

## Annex 2. Structure of data system and indicators

| REDES registration system modules | |
|---|---|
| **Module** | **Module objective and / or forms and data collected** |
| **1** | Diagnostic visit or visit 0 |
| Visit 0 consists of six forms to collect data during initial "diagnostic visit," including the following actions:<br>▪ In the section on home verification, ensure correct home is being visited and data on each of household member is confirmed and updated.<br>▪ Rapid diagnosis is conducted, identification of warning signs in family members; if there is an emergency, it generates an alert in the supervisor module.<br>▪ Informed consent, if the family agrees to continue with Visit 0 form; if not, visit ends and the home is reported in CommCare HQ as "unconfirmed."<br>▪ Information on entire family; then date of next visit is set with the family (ttC Visit-1). | |
| **2** | **General forms developed before starting each ttC visit** |
| There are five forms to be completed on each ttC visit:<br>1. Home verification: ensure information on home visited is correct according to data provided by YINS. Record: date and time of ttC visit, GPS location of home. Verify: condition of house, whether family can receive the visit, who will receive the visit, and confirm or update information on family group. Determine the ttC module to be delivered.<br>2. Verification form for household members (individual). Objective: verify if there are members of the household.<br>3. Form for household members' health status. Check if there are warning or emergency signals that put health at risk. This form generates an alert referral to the supervisor.<br>4. Knowledge, attitudes and practices (KAP) form. Objective: collect data on family's adoption of knowledge or changes of opinion on key messages.<br>5. Agreement review form. Objective: verify compliance with agreements or commitments from previous visit (starting with second visit to family); 82 agreements are identified in the 15 topics. Each ttC has several agreements. | |
| **3** | **ttC visit** |
| Objective: Record execution of ttC visit.<br>▪ The ttC modules refer to implementation of the counseling visit for the 15 ttC modules.<br>▪ Modules 2, 5, 8, 10, 11, 12, 13, and 14 have one less form (they do not have form 6 on technical session.)<br>▪ Modules 1, 3, 4, 6, 7, 9, and 15 have the technical session. Module 3 has special feature of two positive stories. Form 03a corresponds to positive story on participation of the man and family in caring for the pregnant woman. Form 04a deals with questions on second positive story. | |

| 4 | Records of group meetings |
|---|---|

Objective: Collect information from group meetings.

- First form: information on participants in meeting is collected, including date of meeting, participants' full name and date of birth.
- Group meeting form: records community data, meeting place, date and time. The topics covered (from contents list) and date and time of next meeting are all recorded.

| 5 | Supervision |
|---|---|

Objective: Collect data on supervision of BCAs.

- Record supervisor's and BCA's names, date of supervision, type of supervision (home visit / group meeting).
- Record the number of the home, municipality and village.
- Record (based on a list) the skills the BCA develops or not during the visit.
- Verify materials BCA uses to conduct visit.
- Record duration of visit and ask family about the visits. These observations are recorded and opportunities for improvement are established, based on score assigned by the system.

This module records the warnings in order to ensure that work was done with the participating households. Each warning was verified by the supervisory team.

- Records: names of supervisor and BCA, date, type of supervision (home visit / group meeting).
- Record number of the home, municipality and village.
- Record (based on a list) the skills that the BCA applies or not during the visit.
- Verify materials BCA uses to conduct visit.
- Record duration of visit and ask family about the visits. These observations are recorded and opportunities for improvement are established, based on score assigned by the system.

This module records the warnings in order to ensure that work was done with the households included in the study. Each warning was verified by the supervisory team.

- Warnings reported by the BCA, called "flagged households," were indicated when the following situations were found during the visits: three visits to home found no one home; the people at home were not those on the YINS list (study); home could not be accessed due to violence or other extreme conditions; home was abandoned or uninhabited; the family declined the ttC; the family did not give their consent; the home was combined with another home. All reported warnings were verified by the team of supervisors and confirmed in the system.

| 6 | MANCORSARIC alert |
|---|---|

This form records the "warning" referral given by the BCA for any health situation in the families visited. The team of supervisors and technical supervisor provided follow-up and coordinated with maternal clinic, health center, or corresponding MANCORSARIC authorities, as needed.

| 7 | Quality monitoring of ttC visit |
|---|---|
| The objective of this form is to verify the quality of ttC visits conducted by the BCAs. It contains specific questions about development of steps in the visit, what families have learned and their assessment of ttC visits. | |
| **8** | **Rapid monitoring of adoption of practices** |
| The objective is to record the adoption of some specific family practices. This record was implemented by the BCA with the total number of active families from May 2017 to August 2018, and indicated:<br>▪ Where most recent delivery took place;<br>▪ Whether woman was accompanied by husband to prenatal checkup and did he enter consultation or not;<br>▪ Whether woman was accompanied by husband to clinic at time of most recent delivery;<br>▪ Use of umbilical bandage on most recent newborn; and<br>▪ Questions about pacifiers, folic acid consumption, family planning methods, and other topics. | |

## Annex 3: DICU–UNAH statement

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**JUDGEMENT No. 004 -- 2018**

**Project:** Use of social networks to improve maternal / neonatal / child health outcomes in rural Honduras

**Executed by:** World Vision Honduras in the framework of Salud Mesoamerica Initiative (SMI) of the Inter-American Development Bank (IDB)

**Date:** August 2018

**I. GIVEN:**

The request from World Vision Association Honduras (Tegucigalpa, Honduras) dated 19 October 2018, by Lesbia Maria Garcia, Project Coordinator for "Use of Social Networks / IDB," with attachments that include:

1. Cover letter and application;
2. Institutional endorsement letter;
3. Protocol and tools for qualitative evaluation;
4. Protocol and systematization tools;
5. CV of primary researcher for qualitative evaluation;
6. CV of primary researcher for systematization.

The cover letter and application contain the following:

Through this application I request the appropriate review and approval of protocol and tools for qualitative evaluation and systematization of the project: "Use of Social Networks to Improve Maternal / Neonatal / Child Health Outcomes in Rural Honduras."

Signed by **Eng. Jorge Isaul Galeano Rosa**, National Director of World Vision Honduras.


**II. SITUATIONAL DIAGNOSIS**

According to 2011–2012 National Demographic and Health Survey (ENDESA), newborn mortality in Honduras totaled 18 per 1000 live births. In 2008, newborn deaths accounted for 51% of total number of deaths in children under five; of this percentage, 40% was attributed to premature births and another 40% to asphyxiation and infections. About 10% of Honduran newborns register low birth weight. Although it has been found that 79% of infants were breastfed within the first hour of life, only 30% were exclusively breastfed during their first six months. Approximately 57% of deliveries occurred in rural areas where perinatal care can be insufficient or unsafe, as only half of these births were attended by qualified midwives (ENDESA, 2011-2012).

**III. CONSIDERATIONS**

**CONSIDERING THAT:**

The main questions are not invasive or detrimental to participating individuals, their privacy, dignity, etc. These are perceptive questions about project quality: quality of service, technology, message acceptance, referral and counter-referral. The protocols and their guidelines are entirely respectful of human dignity and the human right to participate or not in the processes planned.

**CONSIDERING THAT:**

The project is properly substantiated. It is oriented to improving health not only of children but also communities in the beneficiary municipalities. It is also focused on fighting poverty, an important contribution to life in general in these municipalities.

**CONSIDERING THAT:**

The theory is understandable and appropriate. It is clear we are undoubtedly dealing with an evidence-based intervention adhering to the science of networks, medicine, and behavior sciences. Three theoretical models are put forward for consideration:

**- Health belief model: A model of expectations between the value given to a specific objective and the probability of its occurrence.**


- According to PAHO: 1) behavior depends on whether people believe they are susceptible to a particular health problem; 2) they believe it is a serious problem; 3) they are convinced treatment / preventive activities are effective; 4) they also believe these are not costly; and 5) they receive an incentive for taking health measures.
- **Theory of planned behavior**, with two important aspects: one is the fact of intention to change; the second is the importance of behavior control.
- **Multidimensional work motivation scale** that proposes three basic concepts: a) motivation; b) extrinsic motivation; and 3) intrinsic motivation.

**CONSIDERING THAT:**

The intervention is compatible with the principles governing the research activity:

***Protection of individuals***

Insofar as it intends to test innovative and effective solutions that are easy to implement, improve and modify without great effort or cost, to provide high quality health interventions to poor populations.

***Scientific rigor: validity, reliability and credibility of methods***

The project intervention was implemented from November 2015 to August 2018 in 154 communities with participation of 3634 beneficiary families. The geographic area covered was in four municipalities of Copán department (Copán Ruinas, Santa Rita, San Jerónimo and Cabañas), which comprise the association known as MANCORSARIC.

***Dissemination of research***

Dissemination is key for this project, as expressed in the project's rationale: "to evaluate the use of social networks and their influence in the adoption, distribution and reinforcement of behavior standards at the group level and basic attitudes related to neonatal and child health in rural areas."

**CONSIDERING THAT:**

The intervention respects certain research standards:

***Responsibility***:

Honduras' context of violence was taken into account so that neither implementers or communities were put at risk. The project recognizes that the region has high crime rates that result in robberies, shootings, homicides, among other violent acts. This situation limits access to some communities, where authorization for entry must be requested from the leaders of these groups."

***Training of investigators***

In this context, WVH signed a contract with the IDB to implement an educational strategy focused on promotion of behavior changes in maternal / neonatal / child health through implementation of timed and targeted counseling (ttC) and community group meetings (CGM).

***Applying knowledge in matters of importance***

The project addresses 15 topics organized into three categories of interest:

a) Maternal health: pregnancy care and prenatal checkups before three months, birth and emergency plans; importance of institutional birth; importance of family planning; care for women after childbirth, warning signs in the puerperal and newborn; b) child health care: newborn care, care for children 1–6 months, warning signs of acute respiratory infections (ARIs) and acute diarrheal diseases (ADDs) in children under five; c) reproductive health: reproductive life plan, importance of taking folic acid, importance of pregnancy prevention before age 18, self-esteem, values and life goals, prevention of domestic violence, and preventive measures against zika, dengue and chikungunya.

***Sharing knowledge***

The project can be classified as relevant and providing learning in three respects:

1. At technological level: Interviews will be transcribed using a voice file program that is a digital dictaphone. It will also use CommCare, an adaptable and versatile mobile platform.

2. At community innovation level: REDES is an innovative community initiative that has used a communication strategy to develop an educational model based on the science of social networks to bring about behavior change to scale in order to improve status of family maternal / neonatal / child health. This model was supported with household visits and timed and targeted counseling (ttC) to implement an interpersonal and family education process to increase knowledge, understanding, acceptance, promotion and reinforcement of new behaviors. This type of intervention and its educational model is unprecedented in Honduras. The intervention is unique and requires evaluation of how it fostered adoption of new health behaviors in individuals and families.

3. At knowledge-sharing level: Based on study conducted by Yale University on use of social networks in community intervention, the evaluation can also provide valuable input for other studies of interest to the executing organizations or institutions of the country.


***Team work***

This project brought together several important national and international authorities in the field of sustainable human development:

MANCORSARIC (the Commonwealth of Municipalities of the Maya route) and its municipal members (Copán Ruinas, Santa Rita, San Jerónimo and Cabañas).

Project REDES is executed in the framework of the Salud Mesoamerica Initiative (SMI) of the Inter-American Development Bank (IDB).

Participation of Yale University.

Also ChildFund, for the purpose of supporting improvement of maternal / neonatal / child health, developing an intervention oriented to changes in knowledge, attitudes and risk behaviors through innovative educational methodologies.

**CONSIDERING THAT:**

The project **adheres to best ethical research practices**, including consideration of particular features and cultural worldviews, informed consent, confidentiality, reporting and disseminating project outcomes. Detailed description of aforementioned aspects:

***Unique cultural worldview***

Most of the population of MANCORSARIC is of Mayan and Chortí origin, with deep-rooted traditional customs, including distrust of interventions proposed by government and non-governmental organizations. As a result, implementation of project's Phase I included design of the intervention methodology, communication strategy, monitoring & evaluation plan, and data system and indicators. A formative survey was conducted at the onset to gain awareness of families' beliefs, attitudes, knowledge and practices on maternal / neonatal / child health to identify 15 topics on health concerns. With this intervention, individuals and families were provided information to make decisions on health care. In other words, the purpose was not to disclose information but rather to conduct a process to facilitate the gradual adoption of new behaviors.

***Confidentiality***

Privacy is ensured, especially in interviews and confidentiality of information obtained. This information will be carefully safeguarded and used only for purposes of this research. It will not be shared with anyone external to the research.

***Reporting on results***

The results obtained in the evaluation process will be reported to the technical personnel and beneficiary population for validation and to obtain inputs that have not been addressed in the data-collection phase. When this feedback phase is completed, the final report will be prepared and disseminated to the stakeholders and institutions involved.

***Outreach***

The results will be disseminated without distortions. The communication strategy focused on behavior change promoted through household visits for interpersonal and family education.

***LASTLY***, the project's commitment on ***informed consent*** follows in its entirety:

Informed consent is requested to ensure that persons participate in a voluntary and informed way and thus respect one of the fundamental principles of bioethics: autonomy. The scope of participation will be explained, either through focus groups, in-depth interviews, or other techniques and procedures identified for data collection. Any participants who want to withdraw without having completed a session will not be prevented in any way, nor will coercive methods or direct or indirect persuasion be used to interrupt this withdrawal.

No procedure or technique for data collection will risk participants' physical or mental integrity, respecting the principle of non-maleficence. In the case of heightened emotions arising during presentation of a specific topic, psychological services will be available to the person if desired, providing care according to the highest standards established in the country and in this way take into account the principle of beneficence.

Consent will be requested before recording audio and taking photographs of participants during the research activities. Anyone not wanting to be photographed will be respected.


In the case of requiring an individual interview with an adolescent, permission will be requested from the parents or guardians. During the interview, no research team member will remain alone with the adolescent.

**IV. JUDGEMENT**

UNAH's research ethics manual stipulates that the UNAH research ethics committee will depend on the Directorate of Scientific University Research for administrative purposes and on the General Research Council for operational purposes. Since the research ethics committee is not formed yet, the Directorate of Scientific University Research will be responsible for directly resolving any matters of research ethics in this case, not as an opinion requested by the General Research Council, but as a service to an external institution as set forth in the ethics manual. This service will be conducted at no charge and will be recorded as a way for UNAH to contribute to national transformation and take on research work conducted by other national and international bodies. This service is still in the standardization process at UNAH and is expected to be established through the UNAH research ethics committee and the specialized committee (by faculty) and/or certified advisers in each field of science.

It should be noted that Article 160 of the Constitution of the Republic mandates that the "National Autonomous University of Honduras (UNAH) is an autonomous state institution with a legal personality and exclusive rights to organize, direct and develop higher and professional education. It will contribute to scientific, humanistic and technological research, the general outreach of culture, and the study of national problems. It should program its involvement in the transformation of Honduran society."

Therefore, the Directorate of Scientific Research, as the authority for general management of UNAH research, includes: planning, managing, reviewing, recording, monitoring, evaluating, accrediting, and certifying scientific and technological research (Article 25 of the Research Regulation),

based on specific functions related to this opinion (Article 28) to:

c) Record, monitor, evaluate and accredit the various activities of scientific research.

h) Conduct technical evaluation of research projects presented for review, evaluation and decision-making.

u) Develop, manage the approval or review, and ensure application of the Ethics Regulation for Researchers in order to safeguard the dignity, rights, security and well-being of direct and indirect participants in research processes.

Therefore, the Directorate of Scientific Investigation issues a judgment to:

1. Approve the Protocol of the Final Evaluation of project: Use of social networks to improve outcomes for maternal / neonatal / child health in rural Honduras, with all its guidelines:

**Guide 1**. Protocol for focus groups;

**Guide 2**. Protocol for interviews;

**Guide 3**. Protocol for focus groups;

**Guide 4**. Protocol for workshops;

**Guide 5**. Protocol for interviews.

Table of congruences.

And approves the project's systematization protocol, oriented specifically to reconstructing the implementation process for the ttC methodology from the perspective of the participating families and REDES personnel, where the following criteria of systematization are tested: a) **participation**, b) **relevance**, c) **articulation**, d) **comprehensiveness**, e) **historicity**. **It also includes the respective guidelines.**

2. In addition, the following documentation is annexed to this ruling:

1. Cover letter and application.

2. Letter of Institutional endorsement.

3. Protocol and tools for qualitative evaluation.

4. Protocol and systematization tools.

5. CV of primary researcher of qualitative evaluation.

6. CV of primary researcher for systematization.

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The Directorate for Scientific Research has been presented with the budget for project systematization and the informed consent form. These documents are well defined and present no risk for the intervention communities.

2. Requests from World Vision, if possible, receipt of final results of research. In the future, our researchers are available to carry out academic exchanges and even undertake joint research.

Drafted in University Complex, 24 October 2018.

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*Santiago I. Ruíz Ph.D.*
*Acting Director*
*Directorate for Scientific Research, UNA*

## Annex 4. Project REDES evaluation protocol

World Vision Association Honduras
Tegucigalpa, Honduras

# Project

# Use of social networks to improve maternal / neonatal / child health outcomes in rural Honduras

## FINAL EVALUATION PROTOCOL

Executed by World Vision Honduras in the framework of the Salud Mesoamerica Initiative (SMI), Inter-American Development Bank (IDB), August 2018.

# Contents

# Abbreviations

| | |
|---|---|
| ADDs | Acute diarrheal diseases |
| ARIs | Acute respiratory infections |
| BC | Behavior change |
| BCA | Behavior change agents |
| CGM | Community group meetings |
| CU-SMI | Coordinating Unit - Salud Mesoamerica Initiative |
| EBF | Exclusive breastfeeding |
| IDB | Inter-American Development Bank |
| KAP | Knowledge / attitudes / practices |
| MANCORSARIC | Commonwealth of Municipalities of Copán Ruinas, Santa Rita, San Jerónimo and Cabañas |
| PC | Prenatal checkup |
| Project REDES | Use of social networks to improve maternal/neonatal/child health outcomes in rural Honduras |
| SESAL | Ministry of Health of Honduras |
| SMI | Salud Mesoamerica Initiative |
| ttC | timed and targeted Counseling |
| WCA | Women of childbearing age |
| WVH | World Vision Honduras |
| YINS | Yale Institute of Network Science (Yale University) |

# I. Topic of study

The behaviors implemented and reasons for changes that took place in the families participating in REDES.

# II. Introduction

The project "Use of social networks to improve maternal / neonatal / child health outcomes in rural Honduras" was implemented by the World Vision Association Honduras (WVH) in partnership with ChildFund, to support improvement of maternal / neonatal / child health, and develop a community initiative to bring about changes in knowledge, attitudes and risk behaviors through innovative educational methodologies.

Project REDES was implemented in the framework of the Salud Mesoamerica Initiative (SMI) of the Inter-American Development Bank (IDB), to test innovative and effective solutions that are easy to implement, improve and modify without much effort or cost, and to provide high quality health interventions to poor populations. The community intervention of Project REDES is part of the SMI / IDB-promoted study, conducted by Yale University, to evaluate use of social networks and their influence on adoption, dissemination and reinforcement of group behavior standards and basic attitudes about neonatal and child health in rural areas.

In this context, WVH signed a contract with the IDB to implement an educational strategy focused on promoting changes in maternal / neonatal / child health behaviors via ttC sessions and community group meetings (CGMs). The project was implemented from November 2015 to August 2018 in 154 communities with initial participation of 3634 beneficiary families. The geographical coverage included four municipalities in the department of Copán: Copán Ruinas, Santa Rita, San Jerónimo and Cabañas, which comprise the commonwealth association known as MANCORSARIC.

# III. Background and context

World Vision Honduras (WVH) implemented the project "Use of Social Networks to Improve Maternal / Neonatal / Child Health Outcomes in Rural Honduras" in the municipalities of Copán Ruinas, Santa Rita, San Jerónimo and Cabañas (MANCORSARIC) in the department of Copán, located in the northwestern region of the country. This region is semi-rural, mountainous, with scattered remote communities and limited transportation services. Most of the population in MANCORSARIC is of Mayan and Chortí origin, with deep-rooted traditional customs, as well as distrust of interventions by the government and non-governmental organizations.

REDES beneficiaries by municipality

| Municipality | # of communities | # of homes |
|---|---|---|
| Cabañas | 25 | 671 |
| Copán Ruinas | 68 | 1452 |
| San Jerónimo | 11 | 262 |
| Santa Rita | 50 | 1245 |
| **Grand total** | **154** | **3630** |

Project REDES started its intervention in 154 communities in the four municipalities and a total of 3634 families selected in the department of Copán. Of approximately 53 families living in each village, 12 had a newborn among their members. The region has had high crime rates (violence of robberies, shootings and homicides); this situation limited access to some communities, where authorization to enter had to be requested from the heads of these groups (WVH, 2015).

## Health situation

The MANCORSARIC region has the poorest municipalities in the department; 87.3% of the households are poor. Of these, 75.8% live in conditions of extreme poverty and 11.6% in relative poverty. The most impoverished municipalities are Cabañas with 100% and Copán Ruinas with 88.7% (SEDIS, 2013).

According to the 2011–2012 National Demographic and Health Survey (ENDESA), newborn mortality in Honduras was 18 per 1000 live births. In 2008, newborn deaths accounted for 51% of total number of deaths of children under five; of this percentage, 40% was attributed to premature births and another 40% to asphyxiation and infections. About 10% of Honduran newborns register low birth weight. Although it has been found that 79% of infants were breastfed within the first hour of life, only 30% were exclusively breastfed during their first six months. Approximately 57% of deliveries occurred in rural areas where perinatal care can be insufficient or unsafe, since only half were attended by qualified midwives (ENDESA, 2011–2012).

According to data from MANCORSARIC (manager of the decentralized health system in the project area), health indicators persist at high levels. Both newborn and infant mortality as well as indicators of early recruitment of pregnant women, prenatal, neonatal and puerperal checkups and institutional delivery care have not reached the targets set by the Ministry of Health (SESAL). For the first half of 2016, 30 deaths were recorded in children under four, of which nine were infants 0–7 seven days, four were 8–28 days, ten post-neonates (1–12 months) and seven children 1–4 years. Compared to the first half of 2015, total number of deaths fell by five, but there is evidence of an increase of three deaths in newborns 0–7 days.

## Project description

Project REDES was implemented in two phases. **Phase I** was carried out from November 2015 to April 2017 by WVH in partnership with ChildFund. This phase was used for design of the intervention methodology, communication strategy, monitoring & evaluation plan, information system and indicators. A formative survey was conducted to identify family beliefs, attitudes, knowledge and practices on status of maternal, neonatal and child health. Based on the survey, 15 topics on health were identified.

With this input, the educational intervention package for family behavior change was specified along with an approach for designing communication materials and components that were validated and subsequently approved by SESAL specialists. The educational package was implemented through home visits using the ttC methodology, which was piloted for its final design together with the instruments, tools and communication materials. In **Phase I,** with the families on the original list submitted by Yale, Visit-zero (0) and ttC-Visits 1–5 were carried out by 52 behavior change agents (BCAs) and a team of five field supervisors. The communication strategy focused on behavior change promoted through home visits for interpersonal and family education.

**Phase II** of the project took place from May to September 2018 with WVH as sole executor. In this phase, the intervention continued with ttC methodology and community group meetings (CGM) were developed. Efforts focused on creative development of the educational strategy, with BCAs playing an important role. The field supervisors and project's technical team were also critical for successful completion of the cycle of 21 ttC visits to families.

Through the intervention, individuals and families received information for decision-making on their health care. The aim was not to disseminate information but rather to conduct a process to facilitate the gradual adoption of new behaviors.

The educational strategy applied through the ttC contains 15 topics, which took the form of monthly visits to homes of each participating family, creating a cycle of 21 visits in total during the community intervention. Each visit one of the 15 topics included in the strategy was addressed. In general terms, the topics were: 1) maternal health, including: pregnancy care and prenatal checkups before three months, birth and emergency plan, importance of institutional birth, importance of family planning, care for women after childbirth, warning signs in the puerperal and

newborn; 2) child care, including: newborn care, care for children 1–6 months, warning signs of acute respiratory infections (ARIs) and acute diarrheal diseases (ADDs) in children under five; 3) reproductive health, including: reproductive life plan, importance of taking folic acid, importance of pregnancy prevention before age 18, self-esteem, values and life goals, prevention of domestic violence, and preventive measures against zika, dengue and chikungunya.

For home visits, 52 individuals were hired and trained to work as BCAs. Each of these agents visited an average of 50 to 55 families. To improve their efficiency, they were organized into five groups of 10–12 agents led by a field supervisor. All activities carried out by the BCA with the family were registered in a special app of the educational program that could be uploaded on a tablet. For monitoring & evaluation purposes, each BCA reported daily on the number of visits made and problems encountered. This data was then sent from the tablet to the server to feed the information system.

**Monitoring and evaluation methodology**

The monitoring methodology was carried out in accordance with the monitoring and supervision plan as developed in Phase I. A digital app called CommCare was designed; it was the computer tool used for data collection, processing and generation of reports.

CommCare is an open source, mobile platform designed to collect data; it has two main components: the mobile application and CommCare HQ. BCAs and supervisors used the mobile app to collect data and information during the visit and develop ttCs with families. In addition, it served as an educational tool that included audio, image and video messages. The app is compatible with Android mobile phones and tablets.

Data sent from the CommCare mobile app was stored in CommCare HQ and used to generate reports for the period or according to the required information. The app has nine modules, each containing the forms for the data to be collected:

- **Module I**: Diagnostic visit: This module consists of six forms to collect data on visit 0.
- **Module II**: ttC visit: The BCA arrives at the home on the date and time scheduled with the family, verifies the home and the household members, and confirms the health status of the household members.
- **Module III**: Group meeting: The BCA used this module for group meetings in the communities.
- **Module IV**: Group meeting - content covered: In this module the BCA recorded the content covered in the visit and scheduled the date and time of the next meeting.
- **Module V**: Supervisor module: This module was used by the field supervisor for direct observation of BCA's ttC performance.
- **Module VI**: Flagged households: alerts generated on BCA's tablet are collected, to be confirmed on site by the supervisor.

- **Module VII**: MANCORSARIC flagged households: This module collects information on critical health situations encountered by the BCAs that required referral to health services.
- **Module VIII and IX**: Baseline, KAPs: These contain the information from all homes assigned to the BCA, enabling the supervisor to provide support for the visits if for some reason the BCA is unavailable.

# III. Rationale

Project REDES is an innovative community initiative that has applied a communications strategy to develop an educational model based on the science of social networks to accomplish behavior change at scale for improvements to maternal/neonatal/child health of the families. This model was based on home ttC visits to develop interpersonal and family educational processes that increased knowledge, understanding, acceptance, promotion and reinforcement of new behaviors. This type of intervention and its educational model is unprecedented in Honduras, either in institutions or organizations that implement initiatives to address health issues. It is a unique intervention and requires an evaluation of how it promoted adoption of new health behaviors in individuals and the family.

Moreover, in light of the study carried out by Yale University on use of social networks in community intervention, this evaluation could provide valuable input for other studies of interest to executing organizations in the country.

# V. Research questions and objectives

In line with REDES interests, the study will assess behavioral changes and reasons why they occurred or not, from the perspective of participating families and project's technical staff. Accordingly, these questions focus on these objectives:

- What behaviors related to maternal/neonatal/child health and family planning do families recognize they have changed since the REDES intervention?
- What are the reasons for these behavioral changes?

The following questions address specific objectives:

- What information on maternal/neonatal/child health and family planning has been acquired by families participating in the project?
- What attitudes and behaviors related to maternal/neonatal/child health and family planning have been maintained or modified in participating families?
- What factors determined whether or not these behavioral changes were accomplished in participating families?
- What is beneficiaries' perception of project's operational model in development of the educational strategy regarding: BCA visits, quality of service, technology, message acceptance, referral/counter-referral?
- What is project team's perception of operational model for development of educational strategy regarding: BCA visits, quality of service, technology, message acceptance, referral/counter-referral?

The evaluation objectives are applied through these questions.

## General objective

To assess behavioral changes in maternal/neonatal/child health and reasons changes occurred or not in the beneficiary families by implementation of project REDES in the municipalities of Copán Ruinas, Santa Rita, San Jerónimo and Cabañas in the department of Copán from December 2016 to August 2018.

## Specific objectives

1. Identify knowledge, attitudes and behaviors related to maternal/neonatal/child health in participating families.

2. Understand reasons underlying behavioral changes in the family setting.

3. Investigate beneficiaries' perception of project's operational model for development of educational strategy.

Given the scope of these objectives, it is necessary to consider the 15 topics of the educational strategy that promote behaviors in project implementation in relation to the behaviors; the term: "reasons they have occurred" refers to aspects of motivation, facilitation, barriers and resistance and the current experiences the behaviors provide to these families; and on perceptions of the operating model, focus on the visit, quality of the service and technology as innovative elements in the project experience.

# VI. Theoretical framework

The theories selected to guide the qualitative REDES evaluation study comprise a set of hypotheses that in principle facilitate understanding the social action in health executed by the project and are identified as theories of behavior change. There are two general types: those that focus on causes of behavior and those that emphasize individual behavior change. Both approaches are necessary for this study. Project REDES is defined as educational and in this sense the theoretical goal or principal theory is identified as a health beliefs model proposed by Rosentock in 1960, and described by Aguilar, Sarmiento and Marchant:

> This model is based on the expected value theories (expectations) with the basic hypothesis that behavior mainly depends on two variables, the value that the person gives to a certain objective and the estimate that the person makes on the probability that when carrying out a specific action, the desired objective is achieved (Aguilar, Sarmiento, & Marchant, 2015).

They affirm that in its original version, the model identifies four variables (susceptibility, severity, perceived benefit, and psychological barriers) that appear to influence people when carrying out a certain action. Returning to Becker and Maiman in 2003, PAHO identifies five variables with this model: 1) behavior depends on whether people believe they are susceptible to a specific health problem; 2) they believe it is a serious problem; 3) they are convinced that treatment or preventive activities are effective; 4) they also believe these they are not expensive; and 5) they have an incentive to take health measures (PAHO, 2003). This is the central theory in project design because of the link to education. In particular, it indicates that health behavior is a function of both knowledge and attitudes. Specifically, this model emphasizes that one's perception of one's own vulnerability to a disease and effectiveness of treatment will influence one's decisions in relation to one's health behaviors. This model belongs to the type focused on causes of behavior.

Since REDES has designed a social intervention, a **second theory** is the **Theory of Planned Behavior**, which has two important factors. One is the intention for change, and the other is the importance of behavior control (which is determined by non-voluntary factors). This implies that behaviors move from a point where there is control to lack of control.

> This model shows the importance of taking into account the barriers, real or perceived, that eventually affect the perceived control of behavior. The perceived controls are those perceptions of the possibility of performing the behavior; the more resources and opportunities the person creates, the fewer obstacles he will have, giving him greater control (Ajzen and Madden, 1986).

Finally, to understand motivation for or against behavioral changes, the **multidimensional work motivation scale** will be used**,** which proposes three basic concepts: a) amotivation, which is lack of motivation, when the person is not interested in a behavior; b) extrinsic motivation, when people perform a behavior for external contingencies such as prizes, rewards, recognition, affirming that

the behavior will be maintained to the extent that these contingencies are present; and c) intrinsic motivation, when people perform a behavior due to internal factors, so independent of what happens with outside/external contingencies, people keep practicing the new behavior.

The theory illustrates how ideally motivation should intrinsic, since this ensures permanence of the behavior. Sometimes, though, especially with acquisition or cessation of habits, the change is not a distinct event but rather a gradual process. In other words, people move from amotivation to extrinsic motivation; and later, if they fully accomplish the process of change, they embody intrinsic motivation (LI, 1999, Cited by Noreña, n.d.).

In implementation of REDES, the behavior-change-promoting action is the ttC session, through the BCA's visits to families in the setting of the family home. The three theories described will help assess the changes made by the family and the barriers, resistances and motivations.

# VII. Methodology

The study substantiating the evaluation will use a qualitative method as well as quantitative data generated by the project's data system. The qualitative method will be used to investigate the issues of behaviors, knowledge, attitudes and factors that have encouraged or hindered behavioral changes in families.

### Theoretical sampling

Since the purpose of theoretical sampling is to identify relevant information for evaluating REDES and that its application has a procedural nature, the number of informants to be addressed is not defined. As categories appear, however, it is possible to evaluate new informants who strengthen the study analysis. In other words, data collection will stop on reaching theoretical saturation. Based on this logic and the proposal of Sampieri and other authors (Roberto Hernandez, Carlos Fernandez, Pilar Baptista, 2006), the following types of sampling will be applied, the participating population groups and estimated number of cases [individuals] who will participate for each type of sample.

| THEORETICAL SAMPLE | CONCEPT | CASES | ESTIMATED PARTICIPATION |
|---|---|---|---|
| **Confirmation Sample** | The purpose is to add new cases when there is a dispute or information emerges trending in a different direction. | Women and men with children under one year who have participated in at least 15 ttC visits.<br>Women and men who have participated in the 21ttC visits through end of project.<br>BCA, supervisors and technical team members who participated from beginning of project. | 40 participants maximum, in two workshops with project staff.<br>36 beneficiaries, in three focus groups. |
| **Sample of extreme cases** | Useful for evaluating special features, situations or phenomena outside the norms. | Women and men who participated in at least five visits and withdrew from the program. Families selected will be those that began project but withdrew within a month or two.<br>This will be done with families that come from communities that declined to participate in the project but who want to participate voluntarily. | 36 participants maximum in three focus groups in communities. |
| **Sample of test cases** | The aim is to analyze the values and meanings, to obtain rich, deep information of quality, not | Postpartum women or mothers of minors who fully complied with their birth plan, WCA with a reproductive life plan. | Six participants for interviews |

| THEORETICAL SAMPLE | CONCEPT | CASES | ESTIMATED PARTICIPATION |
|---|---|---|---|
| | quantity. Cases with specific typical features. | | |
| **Sample of extremely important cases** | Environmental cases that cannot be excluded or disregarded because of their relevance in the problem being analyzed. | Project's management and operational staff. Interviews will be conducted with Chortí leaders, SESAL and MANCORSARIC authorities, project management and WVH, CU-SMI / IDB management and IDB local consultant who provided assistance to project. | Six participants for interviews. |

On the basis of the types of sampling or groups that will participate and description of individuals identified for each, two types of selection criteria will be used. One will be to select the communities and the other to reach the required number of cases, up to theoretical saturation in the data collection phase.

To select communities, the criteria are related to access to services, transport and whether or not they are part of an ethnic group. The dimensions of each criterion include the following:

- **Access to health services:** People who live in the community are closer or further away from a health unit. Remoteness means greater distance in kilometers or access-limiting topography, and transfer time may take longer.
- **Easy transport:** When people have easy access to public transport that facilitates transfer to health units or private health services.
- **Belonging to ethnic group (or not):** People in the participating community are part of the Maya - Chortí ethnic group or are mestizos.

To select participating cases, criteria that will guide this selection include:

- Women and men with children <1 year one who have participated in at least 15 ttC visits.
- Women and men who have participated in the 21 ttC visits through completion of the project. They can be mothers of children under five; men as parents or who have no children; adolescents; young adults; WCA; pregnant women at all stages of pregnancy; grandmothers and mothers-in-law.
- BCA, supervisors and members of the technical team that have been involved since the beginning of the project.
- Women and men who participated in at least five visits but then withdrew from the project. Families will be selected who started the project but later withdrew. This will be done with families that come from communities that refused the project but want to participate voluntarily. Participants may be pregnant women at any stage of their pregnancy,

adolescents, youth or adults; WCA aged 15–49 years; mothers and fathers of children under five years.

- Postpartum women 1–42 days after giving birth or a mother of a child under one who fully complied with her birth plan; husband of a postpartum woman; partner of postpartum woman 1–42 days after giving birth.
- WCA (15–49 years) with a reproductive life plan. They can be WCAs who are not pregnant; adolescents, youth / adults who do not have children or who are mothers of children under five.

**Data collection methods**

Two methods will be applied: interviews and group discussions. The interview technique will focus on a problem, defined by Witzel and cited by Maren Bracker (1998). This is defined as semi-structured interview with selected groups of people where issues established in an open and participatory manner are discussed and moderated by a facilitator. The group discussion method will be applied through the focus groups and workshops, according to volume six: group guidelines (Bracker, the qualitative interview. Volume I, 1998).

**Data management**

Interviews will be transcribed using the voice files program, which is a digital dictaphone. Interviews are transcribed as they take place. Following transcription, matrices will be developed by topics and participants for data triangulation.

**Analysis and preparation of report**

In the qualitative method, analysis will be conducted parallel to data collection. With the transcripts, matrices will be developed and with them, and based on the sensitizing concepts, the emerging categories and topics will be developed. The report will be prepared combining the quantitative and qualitative findings related to the perception of the service.

**Pathway of analysis**

Data analysis is a dynamic and creative process conducted to obtain a deeper understanding of the object of study. The central idea is that the data will lead to the phenomena studied. The protocol below describes different stages of analysis (Taylor & Bogdan, 1987):

| PHASES OF ANALYSIS / STEPS TO BE IMPLEMENTED | RESULTS |
|---|---|
| **Phase for topic discovery, development of concepts and proposals** | |
| 1. Read the data repeatedly<br>2. Keep track of themes, interpretations and ideas<br>3. Search emerging topics<br>4. Develop typologies<br>5. Develop concepts [1] and theoretical hypotheses [2]<br>6. Develop a guide to the story | - Data is well known; implicit and emerging issues are recognized<br>- Typologies help specify / support concept development<br>- Concept enables moving beyond description to interpretation and theory<br>- Hypotheses |
| **Data coding [3] and refinements to understanding of topic** | |
| 1. Develop categories for coding<br>2. Code all data in category (negative and positive)<br>3. Mechanically separate data into each code category<br>4. Check remaining data. If there is data that does not fit, do not force its entry<br>5. Refine analysis | - List of topics, concepts, interpretations, typologies, interpretations, identified or produced<br>- Propose new categories<br>- Compare different fragments related to each topic concept, interpretation and typology |
| **Understanding data in context of its collection** | |
| 1. Data requested or unsolicited<br>2. Address influence of researcher's presence<br>3. Who was present<br>4. Direct and indirect data<br>5. Sources [4]<br>6. Assumptions of researcher | - Understand effect of researcher's presence<br>- Verify that data answers the question; do not include different things<br>- Validity diminishes if we rely on indirect data [5]<br>- Pay attention to data source; distinguish between perspectives of single person or larger group<br>- Take preconceptions into account |

The process described will be applied to primary and secondary data. The basic tools for structuring data will be the matrices developed from the theories guiding the process, the sensitizing concepts, categories and codes. The overall purpose of this analysis is to identify and build on the systems of importance of the respondents, the parameters, patterns or behaviors related to maternal / neonatal / child health and reproductive life plans. It will also present the similarities and differences and prepare the proposal for disseminating the findings.

## Use of quantitative data

The database available in the project's data management system, CommCare HQ, will be used to identify the level of compliance with a) the project's prioritized indicators; and b) agreements by topic and behaviors established in the intervention.

Based on the modules and data recorded, information from the system will be created on these items: family health data, MANCORSARIC alerts, perceptions of health services, KAP question data, quality monitoring of visits, flagged households, as well as other information deemed necessary to complement qualitative understanding and analysis.

As the usefulness of the information is established, it will be disaggregated by quarter and phase for each municipality. In addition, output tables will be compiled with frequency, indicator percentage, and agreements examined.

## RETURN OF RESULTS

The results obtained from the evaluation process will be returned to the technical staff and the beneficiary population in order to validate them and to obtain some inputs that were not addressed in the data collection phase.

Once this feedback phase is concluded, the final report will be prepared and disseminated according to the stakeholders and institutions involved.

## ETHICAL CONSIDERATIONS

Informed consent will be requested to ensure that people participate voluntarily and in an informed manner, thus respecting one of the fundamental principles of bioethics: autonomy. The scope of participation will be explained, whether in focus groups, in-depth interviews, or other techniques and procedures defined for data collection. In the event that any participant wishes to withdraw without having finished a session, (s)he will not be prevented in any way, nor will coercive or direct or indirect persuasion methods be used to prevent the withdrawal.

The participant's physical or mental integrity will not be jeopardized by any procedure or technique of data collection, thus respecting the principle of non-maleficence. In the event of any situation of emotional disturbance arising from the discussion of a certain subject, access to psychological services will be ensured, with treatment provided according to the highest standards established in the country, recognizing the principle of beneficence.

Participants' consent will be requested to record audio and take photographs during research activities. Persons not wanting to be photographed will be respected.

In the event an interview with adolescents is required, permission will be requested from their parents or guardians for authorization. During the interview, no member of the research team will remain alone at any time with the adolescent.

Privacy will be ensured, especially in conducting interviews and the confidentiality of the information collected. This information will be protected and used only for the purposes of the investigation and not shared with anyone external to the investigation.

# VIII. Schedule of activities

The following tables presents activities of steps of evaluation, including organizational aspects, data collection, data processing and analysis, and preparation and presentation of final reports.

| ACTIVITY | WEEKS IN 2018 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | August | | | | September | | | | October | | | | November | | | | December | | | |
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| **FIRST STAGE - ORGANIZATION** | | | | | | | | | | | | | | | | | | | | |
| 1. Review of evaluation proposal | | x | | | | | | | | | | | | | | | | | | |
| 2. Review of / consensus on methodology proposal | | | x | x | | | | | | | | | | | | | | | | |
| 3. Working teams for data collection | | | x | x | | | | x | x | | | | | | | | | | | |
| 4. Project team's initial workshop | | | | x | | | | | | | | | | | | | | | | |
| 5. Protocol / tool development | | | | | x | x | x | x | | | | | | | | | | | | |
| 6. Review, feedback, approval of protocol and tools | | | | | | | | | x | x | x | | | | | | | | | |
| 7. Selection of participants and notification of dates of activity | | | | | | | | | x | x | x | | | | | | | | | |
| **SECOND PHASE - DATA COLLECTION** | | | | | | | | | | | | | | | | | | | | |
| 8. Document review: secondary data - project reports, baseline and project information system reports, etc. | | | | | x | x | x | x | x | x | | | | | | | | | | |
| 9. Contact established with project team, community leaders, WVH and others, to ensure data collection (FG and interviews) | | | | | | | | | x | x | x | | | | | | | | | |
| 10. Validation of tools | | | | | | | | | | | x | | | | | | | | | |

| ACTIVITY | WEEKS IN 2018 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | August | | | | September | | | | October | | | | November | | | | December | | | |
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| 11. Collection of qualitative data: interviews, focus groups and workshops | | | | | | | | | | | | x | x | x | x | | | | | |

| ACTIVITY | WEEKS IN 2018 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | August | | | | September | | | | October | | | | November | | | | December | | | |
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| **THIRD STAGE - DATA PROCESSING AND ANALYSIS** | | | | | | | | | | | | | | | | | | | | |
| 12. Transcription of interviews, focus groups and workshops conducted with key stakeholders | | | | | | | | | | | | x | x | x | x | | | | | |
| 13. Processing of information in matrices - management and analysis | | | | | | | | | | | | x | x | x | x | | | | | |
| 14. Development of output tables and data triangulation | | | | | | | | | | | | x | x | x | x | | | | | |
| 15. Workshop to present findings | | | | | | | | | | | | | | | x | x | | | | |
| **FOURTH STAGE - PREPARATION OF FINAL REPORT** | | | | | | | | | | | | | | | | | | | | |
| 16. Preparation of preliminary report | | | | | | | | | | | | | | | x | x | | | | |
| 17. Review of the preliminary report document | | | | | | | | | | | | | | | | | x | x | | |
| 18. Adjustments to final report based o recommendations provided (from feedback received) | | | | | | | | | | | | | | | | | x | x | | |

| ACTIVITY | WEEKS IN 2018 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | August | | | | September | | | | October | | | | November | | | | December | | | |
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| 19. Delivery of final version of evaluation report and products (documents in print and digital version, database, etc.) | | | | | | | | | | | | | | | | | | | x | |

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# X. Annexes

**GUIDE 1**

**Protocol of focus groups**

**Participants:** Parents (of children under 1) who have participated in 15 or 21 ttC visits.

| **PROTOCOL OF FOCUS GROUPS – EVALUATION REDES PROJECT (15-21)** | | |
|---|---|---|
| Topics to discuss:<br>✓ Knowledge, attitudes and changes in behavior in maternal/neonatal/child health and family planning.<br>✓ Reasons behavior changes were able to be accomplished or not.<br>✓ Perception about operating model for development of education strategy. | | |
| **Method** | | Discussion group |
| **Technique** | | Focus group |
| **Date** | | 22 October –10 November 2018 |
| **PREPARATION OF FOCUS GROUP** | | |
| **No.** | **FACTORS TO CONSIDER** | **DESCRIPTION** |
| 1 | **Intention of focus group:** What are the objectives of the focus group? | 1. Identify from perspective of women with children under 1 and men their knowledge of maternal/neonatal/child health and family planning that they have learned through project intervention.<br>2. Explore attitudes and behaviors related to maternal/neonatal/child health and family planning that they continue to have or that they have modified.<br>3. Understand reasoning that has influenced success or failure of behavior changes in maternal/neonatal/child health and family planning in families participating in REDES.<br>4. Explore team's perception of: the ttC visit, quality of service, technology, acceptance of message and referral/counter-referral. |
| 2 | **Type of questions to ask** | Qualitative paradigm: Combination of methods with a thematic guide and structured and open questions. |
| 3 | **Structure of focus group:** Define what kind of person will participate. | Group discussion with parents (women and men with children under 1) who have participated in at least 15 or 21 ttC visits. |
| 4 | **Communication method:** | Questions will be presented orally through a natural conversation, observation, recording and note-taking. |
| 5 | **Means of communication in focus group:** What will be the most | Carried out in person in communities where women with children under 1 have been identified and selected and |

| PROTOCOL OF FOCUS GROUPS – EVALUATION REDES PROJECT (15-21) | | |
|---|---|---|
| | appropriate means to achieve communication? | men who have participated in at least 15 or 21 ttC visits. Scheduled at convenience of participants and locations in community. |
| 6 | **Communication style:** What will communication style be? | Easy and neutral. |
| 7 | **Form of questions:** What will approach to focus group be? | Open questions |
| 8 | **Format and time of focus group:** Optimal number of questions to ask, time, in what order, etc. | 26 questions for 3 hours (maximum) in logical order. |
| 9 | **Context of focus group** | Circumstance in which people act/experiences are developed |
| **DURING FOCUS GROUP** | | |
| 1 | Personal and objective presentation | Make a personal presentation and explain both the objective of the evaluation and objective of focus group |
| 2 | Factors to keep in mind | Foster climate of trust ( rapport ) |
| | | Empathic listening |
| | | Accept ideas |
| | | Avoid criticism |
| | | Do not infer answers |
| | | Simple language |

**THEMATIC GUIDE (15-21)**

***First stage. - Introduction: Establish affinity and general questions. Time: 30 minutes***

- ♦ Welcome, foster environment of trust;
- ♦ Presentation of moderator;
- ♦ Presentation of note takers;
- ♦ Presentation of each participant (name, community and what they do);
- ♦ Explain purpose of activity;
- ♦ Presentation of work plan and procedures;
- ♦ Agree with group working rules (equal participation, all responses valid, confidentiality of information, use of recorders, etc.)

We have the opportunity to talk with you to know your opinions about the visits or counseling talks in which you participated and about the work of the BCA (promoter), supervisors and team that visited you, in order to evaluate REDES' educational strategy. We will start with some general questions and then go deeper into our conversation.

1. What did you most like about participating in REDES counseling visits?

| THEMATIC GUIDE (15-21) |
|---|
| 2. What do you consider to be the main achievement or benefit gained by participating in ttC counseling?<br>3. In addition to REDES team, did you receive other visits to discuss health issues? Could you mention the organization that also visited? |
| ***Second step: Deepening. Time: 90 minutes*** |
| **Identify knowledge about maternal/neonatal/child care and family planning you have gained in the project.** |
| 4. What do you know about caring for a woman's health during pregnancy, childbirth and puerperium?<br>5. What care protocol do you know to maintain health of newborn during first 28 days?<br>6. What care protocol do you know for children under two?<br>7. What do you know about family planning?<br>8. What other topics did you cover in counseling and you can mention about what you learned from these topics? |
| **Investigate attitudes and behaviors related to maternal/neonatal health and family planning that have been maintained or modified.** |
| 9. What do you think of the counseling visits conducted by BCAs and supervisors of REDES?<br>10. How do you think these visits have benefited you?<br>11. What do you think about the importance of promoting health behaviors with families?<br>12. Regarding health behaviors, could you mention the changes that you have and have not made? (New behaviors)<br>13. Which behaviors do you consider have been the ones that have been modified the most and which least and why?<br>14. What behaviors of those agreed to with the BCAs during the visits failed or were difficult to practice? Why? |
| **Understanding the reasons that have influenced the participating families' accomplishment or not of behavior changes in maternal/neonatal and family planning.** |
| 15. What elements of educational strategy implementation process have been key to success (or not) of ttC visits?<br>16. What factors do you think helped accomplish the behavior change practice?<br>17. What factors do you think have limited accomplishment of change in behavior practice? (Barriers and resistances)<br>18. What do you think about the quality of care by health service providers and their relationship with the behavioral changes accomplished or not?<br><br>If the woman with children under one and her partner have participated in 21 visits ttC sessions, ask these questions:<br>19. After the first 15 visits, what motivated you to continue receiving the visits?<br>20. After the first 15 visits, how else have these visits helped you? |

| THEMATIC GUIDE (15-21) |
|---|
| |
| **Inquire about the team's perception of the BCA's visit, quality of service, technology, message, and referral / counter-referral.** |
| 21. Regarding the visit you received: What is your opinion on quality of the talk or counseling visit you received from the BCA?<br>22. Regarding the way in which the BCA conducted the visit to teach about health issues: What is your opinion about use of Tablet, songs, stories, riddles, coloring pictures, etc.? What did you think? Which one did you like the best? Why? Did it help you learn about health issues?<br>23. During the BCA's visits, what messages did you receive? How did these messages help you?<br>24. If the family presented any health problem or need, the BCA should make a referral to seek care in a health unit. Did you receive referrals from the BCA? What do you think about the referrals the BCA gave you to go to the health unit? What was the purpose of helping or having a referral signed by BCA when going to the health unit? What is use of referral?<br>25. What do you think about the care of health service providers and their relationship with the behavioral changes accomplished or not? What information did you receive from health providers (MANCORSARIC / health unit) and through what means?<br>26. Have they received information when they go to the health service, or by promoters other than those of the Networks project, for example, with video, stories, songs, coloring; Could you comment which ones? |
| ***Third step: closure. Time: 30 minutes***<br>If at this time you had the opportunity to make changes to the visit, what changes would you make?<br>♦ Summary of group comments, without making personal judgments.<br>♦ Appreciation and assessment of participation.<br>♦ Highlight participants' features and importance of their contributions. |

**GUIDE 2**

**Interview protocol:** Puerperal women or mothers of minors who fulfilled their birth plan, newborn care and successful family planning.

| **PROTOCOL OF EVALUATION - INTERVIEWS WITH PUERPERAL WOMEN** | | |
|---|---|---|
| Topics to discuss:<br>✓ Knowledge, attitudes and behavior change in maternal/neonatal/child health and family planning;<br>✓ Reasons behavior changes have occurred or not;<br>✓ Perception of operating model for development of education strategy. | | |
| **Method** | | Qualitative interview |
| **Technique** | | Semi-structured interview |
| **Date** | | 22 October to 10 November 2018 |
| **PREPARATION OF INTERVIEW** | | |
| **No.** | **FACTORS TO CONSIDER** | **DESCRIPTION** |
| 1 | **Purpose of interview:** What are interview's objectives? | 1) Identify knowledge of the puerperal women or mothers of minors who fulfilled their full birth plan, care of newborn, and their family planning.<br>2) Investigate attitudes/behaviors related to maternal, neonatal and family planning health that helped them to fulfill or maintain their practice of new behaviors.<br>3) Understand reasons why they were able to adhere fully to their birth plan, newborn care and family planning and challenges they faced.<br>4) Investigate perception of postpartum women or mothers of children about: BCA's visit, service quality, technology, acceptance of message, and referral/counter-referral. |
| 2 | **Type of questions to ask** | Qualitative paradigm: combination of methods with structured and open questions |
| 3 | **Structure of interview:** Define type of person who can provide information | Individual interview with participants who have fully complied with their birth plan and life plan. |
| 4 | **Communication method:** | Presentation of questions will be done orally through a natural conversation, with recording and taking notes. |
| 5 | **Type of communication in oral interview:** What is most appropriate media to achieve communication | Conducted personally in the selected communities with criteria of having mothers or mothers who fulfilled their birth plan and life plan.<br>Scheduled at convenience of participants and locale in community. |

| PROTOCOL OF EVALUATION - INTERVIEWS WITH PUERPERAL WOMEN | | |
|---|---|---|
| 6 | **Communication style:** What will be communication style | Gentle and neutral. |
| 7 | **Type of questions:** What is type of approach of interview | Open questions. |
| 8 | **Format and time of the interview:** Optimum number of questions to ask, time and what should be the order of the same | 24 questions for maximum 1 hour, in inductive order |
| 9 | **Context of interview** | Describe circumstances in which individuals and/or experiences act or are developed |
| **DURING INTERVIEW** | | |
| 1 | Personal and objective presentation | Make personal presentation and explain both purpose of evaluation as well as purpose of interview |
| 2 | Factors to keep in mind | Foster climate of trust (rapport) |
| | | Listen empathetically |
| | | Accept ideas |
| | | Avoid criticism |
| | | Do not infer answer |
| | | Simple language |
| | | |

**THEMATIC GUIDELINES**

***First stage. - Introduction: Establishment of affinity and general questions. Time: 20 minutes***

- Welcome, foster environment of trust;
- Presentation of moderator;
- Presentation of note takers;
- Presentation of each participant (name, community, work specialty);
- Explanation of purpose of activity;
- Presentation of work plan and procedures;
- Group agreement on working rules (equal participation, all responses valid, confidentiality of information, use of recorders, etc.)

We are presented with the opportunity to talk with you to understand your views on visits or talks by the BCA (promoter), supervisors and team that visited, to assess the educational strategy that propelled the REDES project. We will start with some general questions and then go deeper into our conversation.

1. What part did you most like in the ttC visits conducted by REDES?
2. What do you think is the main achievement or benefit obtained from participating in counseling visit?
3. In addition to the REDES team, did you receive other visits to discuss health issues? Could you mention the organizations they were from?

| **DEVELOPMENT OF QUESTIONS BY OBJECTIVE OF INTERVIEW (puerperal)** |
|---|
| **Identify the knowledge of puerperal women or mothers of minors, who fulfilled their birth plan and life plan fully, on maternal, neonatal and family planning health.** |
| 4. During the ttC visits, several topics were discussed, now we would like you to tell us about your knowledge about caring for women during pregnancy/childbirth/puerperium:<br>• What do you know about care to maintain women's health during pregnancy?<br>• What do you know about care for women preparing to give birth?<br>• What about care for women after childbirth or postpartum?<br>5. What about care for health of newborn up to 28 days after birth?<br>6. What is the birth plan you applied?<br>7. What do you know about reproductive life plan? What did it include?<br>8. What do you know about family planning? |
| **Investigate attitudes and behaviors related to maternal/neonatal and family planning health that have been maintained or modified.** |
| 9. Based on your experience, what do you think about having had a birth plan with family participation?<br>10. How do you think it benefited or helped you, or your family, to have had a birth plan?<br>11. Regarding the birth plan, newborn care and family planning, what behaviors did you and your family practice successfully (new or modified) and what behaviors could you not practice? Why?<br>• Compliance with prenatal checkups;<br>• Identification of danger signs and seeking prompt care in health center;<br>• Savings in place for emergency and delivery care;<br>• Baby's and mother's bags packed/ready before delivery;<br>• Transportation identified in advance to ensure in place at time needed;<br>• Lodging at maternity care home in anticipation of labor/delivery;<br>• Institutional birth;<br>• Partner and/or family accompanies woman to health center at time of delivery;<br>• New mother has checkup within 3–7 days after delivery.<br><br>12. Regarding family planning, what behaviors (new or modified) did you and your family practice successfully and what behaviors could you not practice? Why?<br><br>13. Regarding newborn care, what behaviors (new or modified) did you and your family practice successfully and what behaviors could you not practice? Why?<br>• Take newborn to health unit to be treated within first 3–7 days after birth;<br>• Identify warning signs in newborn's health;<br>• Seek prompt treatment in health unit (savings, transportation);<br>• Special car practiced: exclusive breast milk, skin-to-skin holding, appropriate shelter, dry belly button care (no use of belt), no pacifiers, no watery drinks, no tea, general hygiene measures.<br><br>14. What behaviors of those agreed on with the BCA during the visits do you consider you failed to maintain to date? Why? And in family planning? |

| **DEVELOPMENT OF QUESTIONS BY OBJECTIVE OF INTERVIEW (puerperal)** |
|---|
| **Understand reasons why these women were able to adhere fully to their birth plan, newborn care and family planning and difficulties they faced.** |
| 15. What factors do you consider facilitated compliance with the birth plan?<br>16. What factors do you think made it difficult to adhere to the birth plan?<br>17. What factors facilitated newborn care, for example, early attachment, skin-to-skin, no use of umbilical belt, no pacifiers, no watery drinks, exclusive breastfeeding?<br>18. What factors limited newborn care, for example, early attachment, skin to skin, no use of umbilical belt, no pacifiers, no watery drinks, exclusive breastfeeding?<br>19. What factors do you think helped you accomplish family planning to date?<br>20. What factors do you think hindered your accomplishment of with family planning? (if applicable) |
| **Inquire about the perception of the mothers or mothers of minors about: The visit of the ACC , the quality of the service , the technology , the message and reference and reference .** |
| 21. Regarding the visits you received: What is your opinion on quality of the talk or counseling visit you received from the BCA?<br>22. Regarding the way in which the BCA visited to teach about health issues: What is your opinion about the use of Tablet, songs, stories, riddles, coloring pictures, etc. What did you think? Which one did you like the most, why? Did it help you learn about health issues?<br>23. During the BCA's visits, what messages did you receive? How did these messages help you?<br>28. When a health problem or need arose for you or your family, did you receive any referral to go to the health unit? What do you think about the referrals the BCA gave you to go to the health unit? What was the purpose of helping or having a BCA referral when going to the health unit? What is the use of the referral?<br>29. What do you think about the care offered by health service providers and their relationship with the behavioral changes achieved and not reached? What information did you receive from health providers (MANCORSARIC / health unit) and through what means?<br>24. Have you received information when you go to health service, or from health promoters other than those in the REDES project, for example, with video, stories, songs, coloring books, etc. Could you say which ones? |
| ***Third stage: Closing. Time: 10 minutes***<br>25. If right now you had the opportunity to make changes to the visit, what would you change?<br>♦ Summary of group comments, without making personal judgments;<br>♦ Appreciation and assessment of participation;<br>♦ Highlight the participants' features and the importance of their contributions. |

**GUIDE 3**
**Protocol of focus groups**

**Participants:** Women and men (with children under one) who have participated in at least five ttC visits (families that did not continue).

| **PROTOCOL OF FOCUS GROUPS – PROJECT REDES EVALUATION (5)** | | |
|---|---|---|
| Topics to discuss:<br>✓ Reasons why family did not continue with ttC visits or practice behavior changes for health.<br>✓ Perception of operating model for development of educational strategy. | | |
| **Method** | | Discussion group |
| **Technique** | | Focus group |
| **Date** | | 22 October to 10 November 2018 |
| **PREPARATION OF FOCUS GROUP** | | |
| **No.** | **FACTORS TO CONSIDER** | **DESCRIPTION** |
| 1 | **Intention of focus group:** What are objectives of focus group? | 1. Understand the reasons that influenced the family to discontinue ttC visits and the practice of behavior changes in maternal/neonatal/child health and family planning.<br>2. Explore the family's perception of BCA visits, quality of service, technology, acceptance of message and referral/counter-referral. |
| 2 | **Type of questions:** | Qualitative paradigm: Combination of methods with a thematic guide, with structured and open questions. |
| 3 | **Structure of focus group:** Define what kind of person will participate. | Group discussion with women and men (with children under one) who have participated in at least five ttC visits (families that did not continue in the program). |
| 4 | **Communication method:** | Questions will be presented orally through a natural conversation, observation, recording, note taking. |
| 5 | **Means of communication in focus group:** What is most appropriate means to achieve communication? | In-person in communities where women and men (with children under one) who have participated in at least five ttC visits are identified and selected. Scheduling will be arranged at convenience of participants and location in the communities. |
| 6 | **Communication style:** What will communication style be? | Easy and neutral. |
| 7 | **Type of questions:** What will approach to focus group be? | Open questions. |

| PROTOCOL OF FOCUS GROUPS – PROJECT REDES EVALUATION (5) | | |
|---|---|---|
| 8 | **Format and time of focus group:** Optimal number of questions to ask, time, in what order | 15 questions for 90 minutes (maximum) in logical order. |
| 9 | **Context of focus group** | The circumstances where the people and / or experiences act or are developed will be described. |
| **DURING FOCUS GROUP** | | |
| 1 | Personal and objectives presentation | Make a personal presentation and explain both objective of evaluation and objective of focus group. |
| 2 | What things should be taken into account | Promote a climate of trust (rapport) |
| | | Empathic listening |
| | | Accept ideas |
| | | Avoid criticism |
| | | Do not infer answers |
| | | Simple language |

| THEMATIC GUIDE (5) |
|---|
| ***First stage - Introduction: Establishment of rapport and general questions. Time: 20 minutes*** |
| ♦ Welcome, fostering an environment of trust;<br>♦ Presentation of moderator;<br>♦ Presentation of note takers;<br>♦ Presentation of each participant (name, community, what they do);<br>♦ Explanation of purpose of activity;<br>♦ Presentation of work plan and procedures;<br>♦ Group agreement on working rules (equal participation, all responses valid, confidentiality of information, use of recorders, etc.) |
| We have the opportunity to talk with you to know your opinions about the visits or counseling talks you participated in and about the work of the BCA (promoter), supervisors and team that visited you, in order to evaluate the educational strategy promoted by Project REDES. We will start with some general questions and then will go deeper into our conversation. |
| 1. World Vision's Project REDES visited communities and you were the families selected to participate in the project. Do you remember if you were ever visited by someone from WV with Project REDES? Can you remember who visited you and why?<br>2. How many visits did you participate in? |
| ***Second stage: Going deeper. Time: 60 minutes*** |
| **Understand the reasons that influenced the family to discontinue ttC visits and the practice of behavior changes in maternal/neonatal/child health and family planning.** |
| 3. Did you or your family receive any benefit from the visits? Could you mention them? |

| THEMATIC GUIDE (5) |
|---|
| 4. Can you remember any health topic from the BCA's visits? Could you mention it?<br>5. Even though you withdrew or did not continue in the program, did you make any behavior changes promoted by the project? Could you mention what they are?<br>6. What difficulties did you face or what were your reasons for not continuing with the visits?<br>7. Of the visits you received, what did you like best about participating?<br>8. Of the visits you received, what did you like least about participating? |
| **Explore perceptions about: BCA visits, quality of service, technology, acceptance of message and referral / counter-referral.** |
| On visits they participated in:<br><br>9. What is your opinion of quality of BCA's talks or counseling visits?<br>10. What activities led by the BCA during the visit did you not like? Why?<br>11. Opinion on how the visit went: What is your opinion on use of tablet, songs, stories, riddles, jokes, coloring pictures, etc.? Did you like them? Which did you like best? Which didn't you like? Why?<br>12. What messages do you remember from the visits? Did these help you to learn anything about health topics?<br>13. On health referrals, were you given a referral to go to the health center? Was this useful?<br>14. What information did you receive from health care providers (MANCORSARIC / health unit) and through which media?<br>15. Have you received information when you go to the health service or from other promoters not from REDES, for example, with video, stories, songs, and coloring? Could you comment on these?<br>16. In the future would you like to be visited for health counseling? |
| ***Third stage: Closing. Time: 10 minutes***<br><br>17. If you could make changes to the visit, what changes would you make?<br>♦ Summary of group comments, without making personal judgments.<br>♦ Appreciation and assessment of participation.<br>♦ Highlight participants' features and importance of their contributions. |

**GUIDE 4**

**Protocol of workshops**

**Participants:** Technical and operational project personnel

| WORKSHOP PROTOCOL – EVALUATION OF REDES |
|---|
| Topics to discuss:<br>✓ Behavior in maternal / neonatal / child health and family planning that families have successfully changed, modified and maintained. |

| | | |
|---|---|---|
| ✓ Behaviors in maternal/neonatal/child health and family planning that families have not managed to change, modify or maintain.<br>✓ Reasons that family attitudes and behaviors have / have not changed.<br>✓ Perceptions of operating model for development of education strategy. | | |
| **Method** | | Discussion group |
| **Technique** | | Workshop |
| **Date** | | 22 October to 10 November 2018 |
| **PREPARATION OF WORKSHOP** | | |
| **No.** | **FACTORS TO CONSIDER** | **DESCRIPTION** |
| 1 | **Intention of workshop:** What are objectives of workshop? | 1. Identify, from perception of project's technical and operations personnel, the attitudes and behaviors related to maternal/neonatal/child health and family planning that families have successfully changed, modified and maintained.<br>2. Explore attitudes and behaviors related to maternal / neonatal / child health and family planning that families have not managed to change, modify or maintain.<br>3. Understand the reasons, from their perspective, that have influenced accomplishment or not of behavior changes in maternal/neonatal/child health and family planning in participating families.<br>4. Explore project team's perception of BCA visit, quality of service, technology, acceptance of message and referral/counter-referral. |
| 2 | **Type of questions to ask:** | Qualitative paradigm: Combination of methods with a thematic guide; structured and open questions. |
| 3 | **Structure of the workshop:** Define what kind of people will participate. | Group discussion with the project's technical and operational personnel (BCA, supervisors, technical personnel) |
| 4 | **Communication method:** | Questions will be presented orally through a natural conversation, observation, recording and note taking. |
| 5 | **Means of communication in the workshop:** What will be the most appropriate means to achieve communication? | In-person in appropriate venue for workshop.<br>Schedule:<br>**Day 1**: 8 a.m.–5 p.m.<br>**Day 2**: 8 a.m.–12 p.m. |
| 6 | **Communication style:** What will be the style of communication? | Easy and neutral. |
| 7 | **Form of questions:** What will workshop's approach be? | Open questions. |

| | | |
|---|---|---|
| 8 | **Format and time of workshop:** Optimal number of questions to ask, time, in what order | 30 questions for 1.5-day workshop, in logical order. |
| 9 | **Context of workshop** | Circumstances where the people and / or experiences act or are developed will be described. |
| **DURING WORKSHOP** | | |
| 1 | Personal and objectives presentation | Make a personal presentation and explain both purpose of evaluation and purpose of workshop. |
| 2 | What should be taken into account | Promote a climate of trust (rapport) |
| | | Empathic listening |
| | | Accept ideas |
| | | Avoid criticism |
| | | Do not infer answers |
| | | Simple language |

**THEMATIC GUIDE**

***Step 1. - Establish rapport and general questions. Time: 1 hour***

- Welcome, foster environment of trust;
- Presentation of facilitating team;
- Presentation of note takers;
- Presentation of each participant (a dynamic exercise will be carried out to learn each participant's: name, position, time working on project, main responsibilities, what they like best about the project);
- Explanation of activity's purpose;
- Presentation of work plan and procedures;
- Group agreement on working rules (equal participation, all responses valid, confidentiality of information, use of recorders, etc.)

Introduction:
We have the opportunity to evaluate the project and your participation is very important to know your opinions, perceptions and assessments in relation to accomplishments, difficulties, successes and failures in project implementation with emphasis on behavior changes and the operational model used in executing the educational strategy.

We will start with some general questions and then go deeper in the following activities.
Give you opinion orally and freely on the following questions:

1. What have you liked most about the project, both generally and specifically, in terms of carrying out your responsibilities?
2. According to your assessment, what are the main accomplishments of the project's work?
3. How do you feel about having worked on this project? Why?

***Step 2: Going deeper. Time: 8 hours***

**Identify, from perspective of project's technical and operational personnel, attitudes and behaviors related to maternal/neonatal/child health and family planning that families successfully changed/modified/maintained.**

With respect to key behavior changes promoted in the 15 ttC topics, give your opinion on the following questions:

4. What topics on maternal health (pregnancy, childbirth and postpartum) were successfully changed, modified and maintained by families that participated in the 15 to 21 ttC visits you conducted? Describe what those changes were.
5. What behaviors related to newborn care were successfully changed / modified / maintained by families that participated in the 15 to 21 ttC visits you conducted? Describe what those changes were.
6. What behaviors related to pediatric care were successfully changed, modified and maintained by the families that participated in the 15 to 21 ttC visits you conducted? Describe what those changes were.
7. What behaviors related to family planning, reproductive life plan, and prevention of zika, dengue and chikungunya do you think were successfully changed by families participating in the 15 to 21 ttC visits you conducted? Describe what those changes were.
8. What behaviors related to prevention of gender-based violence and adolescent pregnancy do you think were successfully changed by families participating in the 15 to 21 ttC visits you conducted? Describe what those changes were.
9. Can you identify other behavior changes made by the families as a result of the ttC visits conducted?
10. Specifically, what change in health behaviors did you make on the topics that you covered with the families, and why? If you made no changes, explain why that was.
11. What do you think are the benefits the families have with new health behaviors?
12. How have you benefited from ttC visits to the participating families?

**Understand the reasons, from the team's perspective, for accomplishment (or not) of behavior changes in maternal/neonatal/child health and family planning in participating families.**

Behaviors accomplished:

13. In your judgment, what elements or factors helped accomplish behavior changes?
14. What elements/factors/conditions do you think influenced or facilitated families to agree try new behaviors?
15. How were you able to verify the new practice or behavior negotiated with and agreed to by the families?
16. How were key messages for the practice of new behaviors reinforced?
17. How do you think your role contributed to the process of behavior change in the families or individuals participating in the ttC?

Behaviors not accomplished:

18. What expected behaviors were not accomplished, changed or modified with the families you visited?
19. What new behaviors presented the most difficulty in becoming accepted and practiced? Why?
20. What factors/obstacles/resistance do you think limited accomplishment of change in some cases?
21. How did you identify obstacles/resistance in the families and what did you do to seek solutions?
22. What is your opinion of the quality of care the local health services provide and their relation to behavior changes accomplished or not?

**Investigate team's perception of project's implementation model: ttC visits, quality of service, technology, acceptance of message and referral/counter-referral.**

23. What is your assessment of project's implementation model in relation to:
24. Organization and implementation of ttC visits?
25. Supervision of ttC by supervisors and technical team?
26. Monitoring of ttC visits?
27. CommCare technology app and the data?
28. Communication and educational materials to conduct ttC?
29. Training of teams?
30. What elements of implementation process for educational strategy have been key for success (or not) of ttC visits?
31. What has been the most important activity of the model or way educational strategy was developed?
32. What is your perception of quality of the services provided to the families?
33. What concerns do you have about acceptance (or not) of messages provided to the families?
34. What is your opinion of the care offered by the health providers and its relation to behavior changes accomplished or not?
35. Did families receive information when they went to health units or from promoters not from REDES, for example, with video, stories, songs, and coloring? Indicate what these were.
36. What is your opinion of referrals/counter-referrals provided to families participating in project?

***Step 3: Closure. Time: 60 minutes***

37. If you could make changes to ttC visits, what changes would you make?
38. If you could make changes to operating model, what changes would you make?

- Summary of group comments, without making personal judgments.
- Appreciation and assessment of participation.
- Highlight characteristics of participants and importance of their contributions.

**GUIDE 5**

**Protocol for interview**

**Protocol of interview: Project management personnel (manager, supervisors, monitoring and evaluation) and other key actors**

| **PROTOCOL FOR INTERVIEW – PROJECT REDES EVALUATION** |
|---|
| Topics to discuss:<br>✓ Principal achievements of project in behaviors on maternal/neonatal/child health and family planning with the families.<br>✓ Reasons the changes in attitudes and behavior in the families have occurred or not.<br>✓ Perception of operating model on development of educational strategy. |

| | |
|---|---|
| **Method** | Qualitative interview |
| **Technique** | Semi-structured interview |
| **Date** | 22 October to 10 November 2018 |

**PREPARATION FOR INTERVIEW**

| **No.** | **FACTORS TO CONSIDER** | **DESCRIPTION** |
|---|---|---|
| 1 | **Intention of interview:** What are objectives of interview? | 1) Identify, from perspective of the project's management personnel, the main accomplishments made in relation to behaviors promoted by the project.<br>2) Understand, from your perspective, reasons for accomplishment (or not) of behavior changes in maternal/neonatal/child health and family planning with the participating families.<br>3) Explore perception of project management personnel on development of educational strategy in terms of: ttC visit, quality of service, CommCare technology, communications strategy, health services and challenges of this model for future interventions. |
| 2 | **Type of questions to ask:** | Qualitative paradigm: Combination of methods with a thematic guide, with structured and open questions. |
| 3 | **Structure of interview:** Define what kind of person will be able to provide information. | Individual interviews with persons from management team of World Vision, CU-SMI/IDB and other key actors. |
| 4 | **Communication method:** | Questions will be presented orally in a natural conversation, with observation, recording and note taking. |
| 5 | **Means of communication in oral interview:** What is most appropriate means to achieve communication? | Interviews will be personally conducted in their office in Copán Ruinas and/or by Skype when necessary. Scheduling at convenience of participants. |

| | | |
|---|---|---|
| 6 | **Communication style:** What will be the style of communication? | Easy and natural. |
| 7 | **Form of questions:** What will be the way to approach the interview? | Open questions. |
| 8 | **Format and time of the interview:** Optimal number of questions to ask, time, in what order. | 18 questions for two hours (maximum) in logical order. |
| 9 | **Context of interview** | Circumstances where people / experiences act or are developed will be described. |
| **DURING INTERVIEW** | | |
| 1 | Personal and objective presentation | Make a personal presentation and explain both the objective of evaluation and objective of workshop. |
| 2 | Factors to take into account | Foster a climate of trust (rapport) |
| | | Empathic listening |
| | | Accept ideas |
| | | Avoid criticism |
| | | Do not infer answers |
| | | Simple language |

**THEMATIC GUIDE**

***Step 1. - Establish rapport and general questions. Time: 15 minutes***

- Welcome, foster environment of trust;
- Presentation of interviewer;
- Presentation of note taker;
- Presentation of each participant;
- Presentation of interview procedure;
- Record (all responses valid, confidentiality of information, use of recorders, etc.)

Introduction:
We have the opportunity to evaluate the project and your participation is very important to know your opinions, perceptions and assessments in relation to the accomplishments, difficulties, successes and failures in project implementation with emphasis on behavior changes and the operational model used to develop the educational strategy.

We will start with some general questions and then go deeper in the following activities.
Give you opinion orally and freely on the following questions:

1. What have you liked most about the project, both generally and specifically, in terms of carrying out your responsibilities?
2. How do you feel about having participated in this project? Why?

| **Step 2. - Development of questions by objective of the interview. Time: 90 minutes** |
|---|
| **Identify, from the perspective of the project's management personnel, the principal achievements in relation to project-promoted behaviors.** |
| 3. What do you think are the principal achievements of project implementation?<br>4. Based on what you know about project implementation, what were the behaviors achieved and not achieved?<br>5. How do you think families have benefited from the ttC visits? |
| **Understanding the reasons, from your perspective, for the accomplishment or not of behavior changes in maternal/neonatal/child health and family planning in the participating families.** |
| 6. What elements in the process of implementing the educational strategy have been key for the success (or not) of the ttC visits?<br>7. What factors do you think have helped accomplish these behavior changes?<br>8. What factors do you think have limited accomplishment of behavior changes in the families?<br><br>In terms of behaviors not accomplished:<br>9. What expected behaviors were not accomplished, changed or modified with the families you visited?<br>10. Which promoted behaviors presented more obstacles and resistance for compliance? Why?<br>11. What factors, obstacles or resistance do you think limited accomplishment of change?<br>12. How did you identify the obstacles or resistance in families and what did you do to find solutions? |
| **Investigate management personnel's perception of project's operational model for development of the educational strategy in terms of: the ttC visit, quality of services, CommCare technology, communications strategy, health services and this model's challenges for future interventions.** |
| 13. How do you assess the project's implementation model in relation to:<br>• Organization and implementation of ttC visits;<br>• Supervision of ttC visits by supervisors and technical team;<br>• Monitoring of ttC visits with the families;<br>• CommCare app technology and the information;<br>• Communication and educational materials to conduct ttC;<br>• Training of team.<br>14. What concerns do you have regarding communications strategy developed with the families through the ttC?<br>15. What is your opinion of referral/counter-referrals provided to families participating in project?<br>16. What do you think of the care offered by health providers and its relation to behavior changes accomplished or not? |
| ***Step 3: Closure. Time: 15 minutes***<br><br>17. If you could make changes to the ttC visits, what changes would you make?<br>18. If you could make changes to operating model, what changes would you make?<br><br>♦ Summary of group comments, without personal judgments.<br>♦ Appreciation and assessment of participation.<br>♦ Highlight characteristics of participants and importance of their contributions. |

# Consistency table QUALITATIVE EVALUATION OF PROJECT REDES

To evaluate behavior changes and the reasons they did / did not occur in maternal, neonatal and child health in beneficiary families in Project REDES implementation in the municipalities of Copán Ruinas, Santa Rita, San Jerónimo and Cabañas in the department de Copán from December 2016 to August 2018.

| Specific objective | Scope of objectives / sensitizing concepts | Theoretical sample | Method / technique | Cases / sources | Guiding questions |
|---|---|---|---|---|---|
| **1. Identify knowledge, attitudes and behaviors related to maternal, neonatal and child health in participating families** | Behavioral changes related to maternal and neonatal health and the limiting / facilitating factors.<br>• Care during pregnancy and puerperium (early intake, prenatal check-ups, folic acid and prenatal vitamins, nutrition, rest, husband's accompaniment)<br>• Identification of warning signs in pregnant and postpartum women and seeking timely care at health services<br>• Birth and savings plan<br>• Institutional delivery (childbirth care in maternal and child clinic / hospital)<br>• Newborn care (early bonding, skin to skin, dry umbilical care, use of umbilical bandages and pacifiers, warning signs, EBF)<br>• Reproductive life plan and use of family planning methods<br>• WCA use of folic acid<br>• ARIs and ADDs (identifying warning signs and promptly seek medical care, use of oral serum and zinc<br>• Care by health service providers as a factor facilitating behavior change (or not) | Confirmatory sampling | • Discussion / focus group | Women and men with children under one year that participated in at least 15 ttC visits | 1. What is your opinion of BCA visits?<br>2. What is your opinion of the BCA counseling sessions?<br>3. How do you think these visits have benefited you?<br>4. How many BCA counseling visits have you received?<br>5. Which of the behaviors agreed to with the BCA in the visits to your homes were you able to modify / change?<br>- Care during pregnancy and puerperium<br>- Early prenatal checkup<br>- Attending all prenatal checkups on scheduled dates<br>- Folic acid consumption during indicated period<br>- Prenatal vitamin consumption throughout pregnancy and puerperium<br>- Nutrition<br>- Resting during the day<br>- Husband actively participates in household chores<br>- Identification of warning signs in pregnant and postpartum women<br>- Seeking timely care at health services<br>- Birth and savings plan<br>- Institutional delivery (childbirth care in maternal and child clinic / hospital)<br>- Newborn care: early bonding, skin to skin, dry umbilical care, use of umbilical belts and pacifiers, warning signs, EBF<br>- Reproductive life plan and use of family planning methods |

| Specific objective | Scope of objectives / sensitizing concepts | Theoretical sample | Method / technique | Cases / sources | Guiding questions |
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| | | | | | - Use of folic acid in WCA<br>- ARIs and ADDs: identifying warning signs and seeking timely care at health services, use of oral serum and zinc<br>- Care at health services<br>6. What factors have facilitated achievement of these behavior changes?<br>7. What factors have limited the achievement of these changes? |
| | | Sample of extreme cases | • Discussion / focus group | Women and men who participated in at least five ttC visits | 8. What is your opinion of BCA visits?<br>9. What is your opinion of the BCA counseling sessions?<br>10. How do you think these visits have benefited you?<br>11. How many BCA counseling visits have you received?<br>12. Which of the behaviors agreed to with the BCA in the visits to your homes were you able to modify / change?<br>- Care during pregnancy and puerperium<br>- Early visit to the prenatal clinic<br>- Attending all prenatal controls on the scheduled dates<br>- Folic acid consumption during the indicated period<br>- Prenatal vitamin consumption throughout pregnancy and puerperium<br>- Nutrition<br>- Resting during day<br>- Husband actively participates in household chores<br>- Identification of warning signs in pregnant and postpartum women<br>- Seeking opportune care at health services.<br>- Birth and savings plan<br>- Institutional delivery (childbirth care in maternal and child clinic / hospital)<br>- Newborn care: early attachment, skin to skin, dry umbilical care, use of umbilical belts and pacifiers, warning signs, EBF |

| Specific objective | Scope of objectives / sensitizing concepts | Theoretical sample | Method / technique | Cases / sources | Guiding questions |
|---|---|---|---|---|---|
| | | | | | - Reproductive life plan and use of family planning methods<br>- Use of folic acid in WCA<br>- ARIs and ADDs: identifying warning signs and seeking timely care at health services, use of oral serum and zinc<br>- Care at health services<br>13. What factors have facilitated achievement of these behavior changes?<br>14. What factors have limited the achievement of these changes? |
| | | Sample of test cases | • Interview | Postpartum women or mothers of minors who fully complied with their birth and reproductive life plan | 15. What is your opinion of BCA visits?<br>16. What is your opinion of the BCA counseling sessions?<br>17. How do you think these visits have benefited you?<br>18. How many BCA counseling visits have you received?<br>19. Which of the behaviors agreed to with the BCA in the visits to your homes were you able to modify / change?<br>- Care during pregnancy and puerperium<br>- Early visit to the prenatal clinic<br>- Attending all prenatal controls on the scheduled dates<br>- Folic acid consumption during the indicated period<br>- Prenatal vitamin consumption throughout pregnancy and puerperium<br>- Nutrition<br>- Resting during the day<br>- Accompaniment of the husband in household chores<br>- Identification of warning signs in pregnant and postpartum women<br>- Seeking timely care at health services<br>- Birth and savings plan<br>- Institutional delivery (childbirth care in maternal and child clinic / hospital) |

| Specific objective | Scope of objectives / sensitizing concepts | Theoretical sample | Method / technique | Cases / sources | Guiding questions |
|---|---|---|---|---|---|
| | | | | | - Newborn care: early attachment, skin to skin, dry umbilical care, use of umbilical belts and pacifiers, warning signs, EBF<br>- Reproductive life plan and use of family planning methods<br>- Use of folic acid in WCA<br>- ARIs and ADDs: identifying warning signs and seeking timely care at health services, use of oral serum and zinc<br>- Care at health services<br>20. What factors have facilitated the achievement of these behavior changes?<br>21. What factors have limited the achievement of these changes? |
| | | Sample of extremely important cases | • Discussion / focus group<br>• Interviews | Project management and operational staff | 22. Which behavior changes achieved by the different groups of participating families do you think have changed the most / the least, and why?<br>23. What factors have facilitated the achievement of these behavior changes?<br>24. What factors have limited the achievement of change?<br>25. What do you think of the health service provider's care and their relationship to behavior changes accomplished / not reached?<br>26. What elements of the implementation process of the educational strategy have been central / key to the success / or not of ttC? |

| Specific objective | Scope of objectives / sensitizing concepts | Theoretical sample | Method / technique | Cases / sources | Guiding questions |
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| | | | | CommCare HQ information system<br><br>Formative evaluation | Frequency and percentage of:<br>- Care during pregnancy and puerperium<br>- Early visit to the prenatal clinic<br>- Attending all prenatal controls on the scheduled dates<br>- Folic acid consumption during the indicated period<br>- Prenatal vitamin consumption throughout pregnancy and puerperium<br>- Nutrition<br>- Resting during the day<br>- Accompaniment of the husband in household chores<br>- Identification of warning signs in pregnant and postpartum women<br>- Seeking opportune care at health services<br>- Birth and savings plan<br>- Institutional delivery (childbirth care in maternal and child clinic / hospital)<br>- Newborn care: early attachment, skin to skin, dry umbilical care, use of umbilical belts and pacifiers, warning signs, EBF<br>- Reproductive life plan and use of family planning methods<br>- Use of folic acid in WCA<br>- ARIs and ADDs: identifying warning signs and seeking timely care at health services, use of oral serum and zinc<br>- Care at health services |
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| Specific objective | Scope of objectives / sensitizing concepts | Theoretical sample | Method / technique | Cases / sources | Guiding questions |
|---|---|---|---|---|---|
| **2. Understand the reasons why / not behavior changes have taken place in family and community settings** | Behavioral changes related to maternal and neonatal health and the limiting / facilitating factors.<br>• Care during pregnancy and puerperium (early intake, prenatal check-ups, folic acid and prenatal vitamins, food, rest, husband's accompaniment)<br>• Identification of warning signs in pregnant and postpartum women and seeking timely care at health services.<br>• Birth and savings plan<br>• Institutional delivery (childbirth care in maternal and child clinic / hospital)<br>• Newborn care (early bonding, skin to skin, dry umbilical care, use of umbilical bandages and pacifiers, warning signs, EBF)<br>• Reproductive life plan and use of family planning methods<br>• WCA use of folic acid<br>• ARIs and ADDs (identifying warning signs and seeking timely medical care, use of oral serum and zinc<br>• Care by health service providers as a factor facilitating / not BC | Confirmatory sample | • Discussion / focus group | Women and men with children under one year that participated in at least 15 or 21 ttC visits | 1. Why do you think these behavioral changes have occurred in families participating in Project REDES?<br>2. Why do you think families participating in Project REDES have not achieved these behavior changes? |
| | | Sample of extreme cases | • Discussion / focus group | Women and men who participated in at least five ttC visits | |
| | | Sample of test cases | • Interview | Postpartum women or mothers of minors who fully complied with their birth and reproductive life plan | |
| | | Sample of extremely important cases | • Group discussion / workshop<br>• Interview | Project management and operational staff | |
| | | | | CommCare HQ information system<br>Formative evaluation | |

| Specific objective | Scope of objectives / sensitizing concepts | Theoretical sample | Method / technique | Cases / sources | Guiding questions |
|---|---|---|---|---|---|
| **3. Investigate the perceptions of the beneficiaries of the project's operational model for the development of the educational strategy** | Perception of beneficiaries and project team on:<br>• BCA visits<br>• Service quality<br>• Technology<br>• Acceptance of message<br>• Referral / counter-referral | Confirmatory sample | • Discussion / focus group | Women and men with children under one year that participated in at least 15 or 21 ttC visits | Questions for BENEFICIARIES AND PROJECT TEAM MEMBERS<br>1. What is your opinion of BCA visits?<br>2. What is your opinion of the quality of services provided to the population participating in the project?<br>3. What is your opinion of the technology used by the project to implement this educational strategy?<br>4. What comments do you have regarding the acceptance / not of the project messages by the participating families?<br>5. What is your opinion of the referrals / counter-referrals provided to families participating in the project? |
| | | | • Discussion group / workshop<br>• Interview | BCA, supervisors and technical team | |
| | | Sample of extremely important cases | • Discussion group / workshop<br>• Interview | Project management and operational staff | |

Taylor and Bogdan suggest these steps to follow to develop concepts: 1) search the vocabulary of informants for words and phrases that capture the meaning of what they say. These are called individual concepts and are derived from the culture studied, not from the scientific definition. Bracker cites what Emerson and Patton call first-order concepts, which arise from the persons being investigated and second-order when the concepts explain the social behavior of those being investigated; 2) When a topic is identified in the data, compare the statements and actions to determine if there is a unifying concept; and. 3) As different topics are identified, look for the underlying similarities that may exist between them. A word or phrase transmits their similarities.

Taylor and Bogdan indicate that a proposal is a general statement of facts based on data, developed by careful study of the data.

Generalization is the product of careful study of the issues relating to each different pieces of data and is reached gradually.

Taylor and Bogdan Codification is a systemic means to develop and refine data interpretations. The process includes the collection and analysis of all data relating to topics, ideas, concepts, interpretations and proposals. During this stage of analysis, what were initially vague ideas and insights are refined, expanded, discarded, or fully developed. Try to give readers an idea of who said it: an informant, some people, or the majority of the informants.

Taylor and Bogdan cite Becker and Geer: The more you read the data and draw inferences based on indirect data, the less certain you can be about the validity of the interpretations and conclusions.

# Project REDES: Use of social networks to improve maternal, neonatal and child outcomes in rural areas of Honduras


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