



**Impact Evaluation
Community Mobilization and Behavior Change
Maternal and Neonatal Health Component
Ministry of Health and Public Assistance**

Case Study

Guatemala, March 2004



**Ministerio de Salud Pública
y Asistencia Social de Guatemala**

Impact Evaluation Community Mobilization and Behavior Change Maternal and Neonatal Health Component Ministry of Health and Public Assistance

CASE STUDY

Guatemala, March 2004

JOHNS HOPKINS UNIVERSITY Center for Communication Programs

Fannie Fonseca-Becker, DrPH
Robert Ainslie, MHS
Maria Borda, BSc
Brandon Howard

MINISTERIO DE SALUD PUBLICA Y ASISTENCIA SOCIAL

National Reproductive Health Program (PNSR)
DAS de Sololá
Distrito de Panajachel

JHPIEGO An Affiliate of Johns Hopkins Maternal and Neonatal Health Program

Oscar Cordón, MD
Patricia de Leon Toledo, Lic.
Demetrio Margos

GSD Consultores Asociados

Leonor Hurtado, Lic.
Ricardo Valladares, MA
Irene Monzón, Lic.

Maternal and Neonatal Health Program Catherine Schenck-Yglesias, MHS



**Proyecto de Salud
Materna y Neonatal**



**JOHNS HOPKINS
BLOOMBERG
SCHOOL of PUBLIC HEALTH**

Center for Communication Programs



JHPIEGO An Affiliate of
Johns Hopkins
University

WORKING TO IMPROVE THE HEALTH OF WOMEN AND FAMILIES THROUGHOUT THE WORLD

Suggested Citation:

Ministry of Health and Public Assistance, Proyecto De Salud Materna Y Neonatal, Center for Communication Programs at Johns Hopkins University, JHPIEGO. 2004. Impact Evaluation: Community Mobilization and Behavior Change, Maternal and Neonatal Health Component, Ministry of Health and Public Assistance. Case Study. Baltimore: Johns Hopkins University, Bloomberg School of Public Health. Center for Communication Programs.

The opinions expressed in this report are those of the authors and do not necessarily reflect those of the funding agencies.

Inquiries should be directed to:

Fannie Fonseca-Becker, DrPH, MPH
Senior Research Associate
Department of Population and Family Health Sciences
Johns Hopkins Bloomberg School of Public Health
Center for Communication Programs
E-mail - ffbecker@jhucpp.org

Oscar Cordon, MD
Director, Proyecto de Salud Materno Neonatal
JHPIEGO
4 Calle A 13-12, Seccion B2
Ciudad S. Cristobal, Zona 8 de Mixco
Guatemala
E-mail - ocordon@jhpiego.org.gt

The report is available on-line at: <http://www.jhucpp.org>



This publication was made possible by support from USAID under the terms of Cooperative Agreement HRN-A-00-98-00043-00. The opinions expressed are those of the authors and do not necessarily reflect the views of USAID.

Table of Contents

1. Introduction.....	1
1.1 Implementation of the Behavior Change and Community Mobilization Component in Las Canoas.....	3
2. Methodology	5
2.1 Focus and Objective of the Case Studies.....	5
2.2 Selection of the Cases to Be Studied	5
2.3 Information Gathering	6
2.4 Analysis and Interpretation of the Data	7
3. Frame of Reference.....	9
3.1 The Community	9
3.2 The Health Committee.....	10
3.3 The TBAs.....	12
3.4 The Health Service Network.....	14
3.4.1 The Las Canoas Health Post	14
3.4.2 The Panajachel Health Center.....	14
3.4.3 The Sololá Hospital.....	15
3.4.4 The Directorate of the Sololá Health Zone (DHZ).....	15
4. The Case of María.....	17
4.1 Background.....	17
4.2 Prenatal Care.....	18
4.3 The Delivery	18
4.4 Treatment in the Hospital.....	19
4.5 Follow-up in the Community.....	20
4.6 Knowledge, Attitudes and Practices	20
4.6.1 Opinion on the Steps Necessary for a Healthy Pregnancy and Childbirth	20
4.6.2 Recognition of Danger Signs	21
4.6.3 Emergency Plan: Knowledge and Opinion.....	21
5. The Case of Juana.....	23
5.1 Background.....	23
5.2 Prenatal Care.....	25
5.3 The Delivery in the Hospital.....	26

5.4	Follow-up in the Community.....	27
5.5	Knowledge, Attitudes and Practices	27
5.5.1	Opinion on the Steps Necessary for a Healthy Pregnancy and Childbirth	28
5.5.2	Recognition of Danger Signs	28
5.5.3	Emergency Plan: Knowledge and Opinion.....	29
6.	Conclusions and Recommendations	31
6.1	Conclusions.....	31
6.2	Recommendations.....	32
7.	Glossary.....	35

Tables

Table 1.	Steps Recommended by María and Her Husband for a Healthy Pregnancy and Childbirth	21
Table 2.	Danger Signs during Pregnancy and Post Partum, as Identified by María and Her Husband	21
Table 3.	What Should Be in the Emergency Plan, According to María and Her Husband	22
Table 4.	Steps Recommended by Juana and Her Husband for a Healthy Pregnancy and Childbirth	28
Table 5.	Danger Signs during Pregnancy and Post Partum, as Identified by Juana and Her Husband	29
Table 6.	What Should Be in the Emergency Plan, According to Juana and Her Husband.....	30

1. Introduction

The Ministry of Health and Public Assistance of Guatemala (MSPAS) with technical support from the Maternal and Neonatal Health Program promotes maternal and infant survival by improving essential maternal services that optimize the management of emergency obstetrical complications, and by mobilizing communities through the implementation of Community Emergency Plans. In the south-western region of the country, about 80%¹ of women deliver at home, hence the need to identify the knowledge, attitudes and practices of families and the community towards obstetrical or neonatal emergencies.

In 2001, The Johns Hopkins Bloomberg School of Public Health Center for Communication Programs (CCP) in collaboration with the Maternal and Neonatal Health (MNH) Project funded by the United States Agency for International Development (USAID) conducted a household survey in 13 municipalities of the Departments of Quiché, Sololá and San Marcos in order to establish a baseline for the MNH “Behavior Change and Community Mobilization” component in Guatemala.

The study was designed to obtain information on knowledge, attitudes, perceptions and behaviors regarding the care given, both at home and in the health care system, to women and newborns during pregnancy, childbirth and the post-partum periods. To this end, women of childbearing age, married men and the household decision-makers were interviewed.

Activities promoting behavior change and community mobilization to improve maternal and neonatal survival were implemented in 2002 and 2003 in the three Departments under study. The basic strategy used consisted of coordinating with and training community organizations and health care providers, in order to define and organize the most efficient and flexible responses to obstetrical and neonatal complications.

A key component of this strategy is the knowledge and implementation of the “Emergency Plan,” which consists of recognizing maternal danger signs and making the necessary preparations both at the family level (knowing where to go, how much money needs to be on hand, and who will take care of the house and the other children), as well as at the community level (knowing who will accompany the woman, how she will be transported, and what economic assistance can be provided). The “Emergency Plans” are intended to facilitate the timely decision on the part of the family to seek qualified medical care² should an obstetrical or neonatal emergency arise.

¹ *Encuesta Nacional de Salud Materno Infantil – ENSMI 2002. Table 7.5 Place of delivery for births in last 5 years, p 48.*

² *"The term 'skilled attendant' refers exclusively to people with midwifery skills (for example midwives, doctors and nurses) who have been trained to proficiency in the skills necessary to manage normal deliveries and diagnose, "manage" or refer obstetric complications." Source: A joint WHO/UNFPA/UNICEF/World Bank Statement of Reduction of Maternal Mortality. Geneva, 1999.*

The impact evaluation of the “Behavior Change and Community Mobilization” component used various methodological approaches, including a cross-sectional household survey of women of childbearing age and their partners that would permit comparison with measures obtained by the baseline survey of 2001. Qualitative and semi-qualitative information was also obtained at the community level through in-depth interviews of community leaders and group interviews of health committee members. Another methodological approach consisted of reconstructing the case histories of women who experienced obstetrical complications in one of the communities that had an active health committee. The information presented in this report contains the key findings of the case studies carried out as part of the impact evaluation.

Two women living in communities covered by the project who had survived obstetrical complications were selected for the case studies. Both cases studied were in the Village of Las Canoas, in the Municipality of San Andrés Semetabaj, Department of Sololá. In addition to information gathered within the women’s family circles, information was also obtained from the TBAs, the members of the health committee, the staff of the health post or center, and at the hospital where the complications were treated.

The findings show that important changes and additions have been introduced at the community level since the "Behavior Change and Community Mobilization" component was implemented. These include (1) training and empowering the health committee, (2) familiarizing the TBAs with elements of the emergency plan, and (3) arrangements made by the committee to facilitate emergency transportation. The women had a favorable attitude towards making the necessary preparations for delivery, and possessed the knowledge required for early identification of warning signs.

The case studies revealed, however, that the women did not have knowledge of the emergency plan at either the family or the community levels. It also showed that they had not received information about it from the TBAs. Representatives of the different branches of the official health care system were aware of the community mobilization efforts being made to improve maternal and neonatal survival in the communities. While these representatives were supportive of the efforts, there did not seem to be any coordination or effective collaboration between the official health care system and the health committee's activities.

On the other hand, it was found that the National Hospital of Solola had engaged the services of several traditional birth attendants (TBA) to ensure 24-hour coverage as part of the culturally appropriate hospital strategy. The role of the TBA is to give information and emotional support to women in labor before and after delivery, in their own language and in their own cultural framework. This was deemed extremely positive, with great potential for integration with the community mobilization and behavior change activities at the community level.

Finally, these cases showed that the treatment women receive in the hospital may vary as a function of conditions apart from institutional policy. While in one case, the staff

treated the woman very well and provided high quality care, as perceived by the client, in the other case, the client reported inappropriate treatment, inadequate and hasty management of the complication, and early discharge (one hour after being admitted), which was canceled when the woman fainted at the hospital's exit.

Taken together, the results of the case studies confirm that behavior change and community mobilization can be promoted and attained. Moreover, they prove that such changes lead to improved chances of survival for pregnant women and newborns. The introduction of the behavior change and community mobilization component at the local level has shown that the community and the families that comprise it are key players in the fight to reduce maternal mortality.

1.1 Implementation of the Behavior Change and Community Mobilization Component in Las Canoas

The first community mobilization activity in the implementation of the community emergency plan in Las Canoas was to introduce the plan to health care providers, first at the Panajachel Health Center, then at the Technical Center for Rural Health and finally to the Auxiliary Nurse at the Las Canoas health post. Approximately 18 people participated in this first phase. The process continued with an inventory of organizational and human resources.

The next step was the formation of a community health committee. To accomplish this, a community assembly was held, at which community leaders (identified through the inventory) were present. The process and objectives were shared with them, and the community health situation was presented (including evidence of a maternal death that had occurred in the community in the second quarter of 2000). In subsequent meetings, the maternal and neonatal health situation in the community was analyzed in greater depth, resulting in the identification of problems and possible solutions.

Based on all this information, the community health committee proceeded to draw up a community emergency plan, taking into account the transportation system, economic resources available, contacts with pregnant women, prenatal care available at the community health post, the principles of clean and safe delivery, and other factors. The health committee, including a TBA and other leaders (people working as advocates, educators, facilitators and other committees), participated in discussions of the different components of the emergency plan. The main focus at this point was the fact that the TBA is an important player in improving women's health. With this in mind, the health center nurse trained the TBAs in recognizing danger signs.

Additionally, more emphasis was also placed on training TBAs at the departmental level, focusing on the TBA's role as a bridge between the pregnant woman and the health care system. Participating TBAs agreed to prepare a list of pregnant women under their care to enable a committee member to visit each of them and talk to them about several issues: (1) the importance of going to the health center for prenatal care, (2) the family

emergency plan, (3) danger signs, and (4) if the case warranted it, follow-up on referrals made. The community health committee is looking for ways to include more TBAs among its members as another strategy towards increasing the community's trust in the committee.

Community assemblies were also organized to acquaint the newly recruited members of the health committee with the objectives and processes of working in the community. The link between the health post providers and the community health committee was an asset that kept both sides from contradicting each other in the process. The health post was promoted during home visits as a facility that could offer quality care. However, there were still weaknesses to overcome, such as the fact that the health post did not observe the published hours of operation. Many times there was no one to look after the clients who came to the center. This has eroded the credibility of the services provided at this level in the system.

During meetings held with those responsible for health promotion, the community mobilization process for the implementation of the emergency plan was affirmed and won the support of these advocacy teams and their commitment to follow up on the committee's efforts.

2. Methodology

As part of the Impact Evaluation of the Behavior Change and Community Mobilization Component in the Management of Obstetrical and Neonatal Emergencies, two specific cases were studied of women who went through pregnancy, delivery and post delivery during the years 2002 and 2003, the years covered by the Community Mobilization and Behavior Change Component of the Maternal and Neonatal Health (MNH) Project.

2.1 Focus and Objective of the Case Studies

The study was carried out with the objective of gathering qualitative information and analyzing and organizing it so as to extract from it relevant knowledge concerning what happened during this period, who the players were, and the manner in which events unfolded. The study examined the various behaviors, decisions and interventions on the part of both the community and the institutions involved during the course of the pregnancy, delivery and post delivery of the two cases studied. The study also examined the factors that helped or hindered the process.

The qualitative study seeks to complement the findings of the household surveys which, being more quantitative in approach, did not provide an in-depth examination of the dynamic and contextual elements of the communities under study. Quantitative studies can be generalized through the use of statistical procedures. Case studies, on the other hand, require careful interpretation as specific expressions of a dynamic that can take on different forms in different geographical areas, sociocultural groups, and service delivery systems.

2.2 Selection of the Cases to Be Studied

To be selected for study, a woman had to be from one of the communities covered by the behavior change and community mobilization component, have been pregnant, confronted an obstetrical complication, and given birth after having been referred from the community level to an official health care facility—and survived the process.

The Maternal and Neonatal Health project, of which the component is a part, gathers information on the activities of the committees that includes the documentation of cases such as that described in the preceding paragraph. According to the report obtained, cases were selected that, in the opinion of the project team and according to the documentation available, had experienced the full range of interactions with the community organization, TBAs, and health care services, including the hospital level.

The two cases selected were women living in the village of Las Canoas in the municipality of San Andrés Semetabaj, in the department of Sololá in the Southwestern

region of the country. For reasons of confidentiality, the names of all participants have been changed in this report.

2.3 Information Gathering

In carrying out this study, the following documentary sources, data collection procedures and instruments were used:

1. Baseline Study (2001): Community Perspective on Pregnancy, Delivery and Post Delivery in the Departments of Quiché, Sololá and San Marcos, CCP, JHPIEGO, GSD.
2. Questionnaires for households, women, men, community leaders and Health Committees of the Impact Evaluation of the MNH Project.
3. In-depth interviews with women.
4. In-depth interviews with family members of the women participating in the process of pregnancy, delivery and post delivery.
5. Household observation guide, to expand the information on household socioeconomic characteristics in the baseline.
6. Spontaneous dialogue with the women, focusing on information learned through their experience and their conclusions.
7. Spontaneous dialogue with the family members of the women, focusing on information learned through their experience and their conclusions.
8. Dialogue with the husband on what he went through and how decisions were made in the home.
9. Visit to the Health Committee and to the Sololá Hospital where the women were taken care of.
10. Dialogue with the TBAs who looked after the women.
11. Dialogue with the Head of the Panajachel Health Center.³
12. Dialogue with the members of the Health Committee.
13. Dialogue with the Director of the Sololá Hospital.
14. Dialogue with the Director of the Sololá Health Zone.

³ *The Head of the Health Center holds the title of Municipal Health Coordinator from the standpoint of the territorial and demographic jurisdiction over which he holds authority and serves as coordinator in the municipality. However, in this report he is cited for his role as director within the facility.*

2.4 Analysis and Interpretation of the Data

The Baseline Study carried out in December 2001 identified essential information for a quantitative study of the impact of the component. The qualitative study centered on case studies in order to gain an in-depth understanding of the knowledge, attitudes and practices of the women, their families, and the TBAs who cared for them. The information provided by the women and their families served to reconstruct the experiences that had been analyzed so that it could be compared to the families' own interpretation and knowledge. During the analysis, evidence of the implementation's influence on the decisions made at the family and community levels was looked for.

Information was organized concerning the Las Canoas Community Health Committee, a community organization whose principal objective is to support pregnant women in case of an emergency, as well as that of the three levels of healthcare available from the Ministry of Public Health and Social Assistance (MPH). The three levels include: the Las Canoas Health Post (HP), the Panajachel Health Center (PHC), the National Hospital of Sololá (Hospital), and the entity governing these institutions: the Directorate of the Sololá Health Zone (DSHZ)..

An effort was also made in these cases to reconstruct the experience, detect the attitudes and practices of the entities involved in the experience, and contrast this information with the approaches used in implementing the behavior change and community mobilization component.

3. Frame of Reference

This section provides a description of the community context, the community organization, and the TBAs, as well as of the various administrative and service delivery units within the health care network. These points of reference will be useful in understanding the case studies presented in the next chapter.

3.1 *The Community*

Las Canoas is a village of approximately 2,600 inhabitants, most of whom belong to the Mayan ethnic group Kaqchikel.⁴ The community is divided by the highway into two sections: Upper Canoas and Lower Canoas. The former is located on the higher part of the mountain, while the latter is at the foot of the mountain extending towards the ravine.

As told by the people of the locality, the town was given the name Las Canoas back in the 1700s. Families who liked the place came to live along the sides of the main road, where there were two large springs of water. The people who settled there began to cultivate the land and offer food to travelers. They placed enormous trunks of wood carved out like canoes at the springs to water the horses and cattle. As a result, the place began to be called Las Canoas (“the canoes”). In recent times, public faucets were constructed at the springs for washing clothes.

The main streets of Las Canoas are paved, although they have no sidewalks. The main public services, the health post, the basic training institute, the covered basketball court, the Catholic church, and four evangelical churches are located in Lower Canoas. There are two elementary and preschool establishments in Las Canoas, one in Upper Canoas, with 120 students, and another in Lower Canoas, with 330 students.

Las Canoas has electricity, including public lighting and residential service. There are public water spouts and running water in some homes, which are currently under repair. People use the community water spouts and public faucets for washing clothes. There is no service for disposing of solid waste in Las Canoas—each family disposes of its own as it sees fit. They usually pile it up in the back yard of the house, without sorting it or treating it. In Las Canoas, sewage runs along the ground into a creek that runs by the town. Most households have the traditional latrine erected two to five meters from the dwelling.

There is no market place in Las Canoas; the shops mostly sell long lasting industrial products of little nutritional value. To obtain vegetables, fruits, dairy products and meat, most of the population goes on Fridays to the market in Godínez 8 km away. Other families who sell flowers in Panajachel and Sololá stock up in the markets there. There are seven nixtamal mills for grinding roasted corn and making tortillas.

⁴ *The spelling of “Kaqchikel,” the name of the language, is the one recommended by the 2003 Linguistic Map of the Ministry of Culture and the Guatemalan Academy of Mayan Languages.*

Agriculture is the principal economic activity. Broccoli is the main cash crop. Beans and corn are tied for second, followed by flowers. Generally, the men of the family are the ones work in agriculture; however, for the broccoli harvest women are also hired, receiving Q20.00 (US \$2.50) for eight hours of work.

In Las Canoas, half the houses are constructed with adobe and the other half with cement blocks. The majority of the houses are roofed with sheets of zinc and surrounded by small fields. All the patios have freshly washed clothing spread out on the tiles, while pots or boxes of flowers adorn the surroundings.

The typical house in Las Canoas contains:

- one or two bedrooms depending on the number of children,
- a kitchen where food is prepared and eaten,
- a latrine,
- a sauna (temascal) for hot steam baths,
- a corral for fowl and
- if the family has a cow or horse, a roofed in area where they can be tied up for the night.

The houses are generally clean, and the latrines are solidly constructed and are used. All the houses visited had fires for cooking raised up off the ground, a counter top and a “Lorena” stove with chimney.

3.2 The Health Committee

The Las Canoas Health Committee was organized in 2001. Miss Ligia⁵, who works for MNH, called a meeting with the leaders of Las Canoas, and together they reviewed the types of care needed by pregnant women. After completing their analysis, they recognized that it was necessary to organize a Health Committee to offer support to women who had emergencies during pregnancy, delivery and post delivery.

Approximately three years ago, a woman died in the town of Las Canoas from an obstetric complication. At some stage of the pregnancy, her whole body swelled up. The attending TBA did not know how to treat her and suggested taking her to the Hospital but the family refused to move her. The woman and her baby died in the village. Recognizing the seriousness of the problem, the leaders were motivated to organize the Committee.

⁵ *The names of all the people who appear in this and the following sections are fictitious.*

According to the plan that was drawn up, the Health Committee proposed to offer the following services:

- Visit the homes of pregnant women to explain the danger signs during pregnancy and help them develop an emergency plan.
- Advise women presenting danger signs to go to the Las Canoas Health Post or to the Sololá Hospital, depending on when the emergency occurred and how serious it was.
- Help transport women in need of hospitalization to the Sololá Hospital, giving the required contribution of Q50.00 to the firemen.
- Speak with the TBAs of Las Canoas to let them know that the Health Committee existed and they could count on its help.

These services were planned; however, they are still not being offered consistently. The Committee did not have precise information on how many pregnant women were in the village and did not report the precise number of visits made to pregnant women.

The Committee was formed with 12 community leaders who participated in meetings led by Miss Ligia. Some Committee members explained that half of the members had withdrawn because, according to one, "To be a member of the Committee takes a lot of work, and we don't see a lot of results." As they indicated, being only six in number, the few that were left had to work harder, and the Committee's progress was slower.

Currently, the six people on the Committee are all on the Executive Board, in the positions of President, Vice President, Secretary, Treasurer, and 1st and 2nd At-Large Members, the last position being occupied by a TBA.

So far, the Committee has helped six women with serious health problems, five of them obstetrical. In five cases, the Committee paid to transport the woman and her attendants to the Hospital. The women assisted by the Committee were:

1. **María**, who retained her placenta. She was advised by TBA Ana to go to the hospital. The TBA also encouraged her family to take her to the Hospital.
2. **Teresa**, who began hemorrhaging profusely during pregnancy. The TBA convinced her family to take her to the hospital.
3. **Ursula**, who was not pregnant but had a health problem that required her to be taken to the Hospital.
4. **Violeta**, who had complications during childbirth. She was in labor for 24 hours and the child was still not born. For this reason, she was taken to the Hospital. She was cared for in the Hospital, where a caesarian section was performed and the child was born healthy.

5. **Yolanda**, who had complications during pregnancy. She was taken to the Hospital and the child was stillborn.
6. **Juana**, whose whole body swelled up a week before her due date. In response to the emergency, TBA Berta took her to the Las Canoas Health Post. The Auxiliary Nurse recommended taking her to the Hospital, but her husband did not want to. TBA Ana, of the Committee, also spoke with the husband and managed to persuade him. They used public transportation to take Juana to the Hospital.

As mentioned before, transportation services are provided by the Voluntary Firemen of San Andrés Semetabaj. In January 2002 they made an agreement with the Committee that the Committee would make a contribution of Q50.00 (US \$ 6.25) for transportation by ambulance of a patient and companions from Las Canoas to the Sololá Hospital. The 48 km trip can cost between Q100.00 and Q250.00 by taxi. The Firemen are willing to offer this service because they know they are the best transportation alternative for women who have emergencies, not only because of the cost, but because the trip by ambulance is faster. Currently, the Committee is soliciting Q2.00 from each family to build up the patient transportation fund.

Miss Ligia, who lives in Sololá, visits Las Canoas once a month to support and encourage the Committee in its functions. They hold meetings to plan their work, report on what has happened, and train the members of the Committee. The September 2003 meeting was canceled so as not to interfere in the study.

The community leaders who were interviewed supported the existence and operation of the Committee, since it ensured accepted, flexible and accessible care for women who had emergencies during pregnancy, delivery and post delivery. They also thought that it was very useful and necessary for the townspeople to participate in an organized way in caring for their own health. They recognized that the situation the country is presently in demands that organized civic associations intervene directly to improve their living conditions.

3.3 *The TBAs*

In Las Canoas there are five TBAs who have received training from the Ministry of Public Health and Social Welfare (MPHSW). TBA Ana has visited the TBAs of Las Canoas to inform them of the existence of the Committee (on which she is 2nd At-Large Member) and offer them her assistance. In effect, the timely and appropriate work of the Committee is borne out in the work of the TBAs. They have strengthened their knowledge of the danger signs during pregnancy, delivery and post delivery. Furthermore, they are more knowledgeable about what to do for each complication and are confident about referring their patients to the Hospital.

In the Sololá Hospital, with the support of MNH and other organizations, a culturally appropriate program has been developed consisting of having a TBA on duty at the Hospital every day. The TBAs are organized so that each one takes a 24-hour shift

once or twice a month. The TBA is responsible for accompanying the women through labor and post delivery. She gives emotional support, coaching during labor, and helps satisfy her needs, such as offering a cup of tea or warm water. The TBA prepares and evaluates the woman and notifies the medical staff when she is about to give birth. The medical staff sees to the delivery and the newborn child. The TBA accompanies the woman and passes instruments as needed. The TBA can also serve as an interpreter between the patient and the medical staff if the woman does not speak Spanish.

TBA Elsa was interviewed during her shift at the Hospital. She has collaborated with the Hospital for two years. She receives Q100.00 (US\$ 12.50) per 24 hour shift. They also give her lunch, but do not cover her transportation costs. TBA Elsa performs this service because she thinks “it is her obligation [as a TBA] to help women who need it, because she can learn from it, because it helps give the Hospital a good image with the natural⁶ population, and because she feels good when she is serving; what they pay her is always useful, but that is not why she does it.” TBA Elsa feels that “the pay she receives is small, because it takes a great effort to leave her house and family, including not being able to attend to one of her own patients if the patient is looking for her in the community.”

Concerning her work at the hospital, TBA Elsa reports that, “You have to be attentive to the women, because especially those who are having their first child don’t know what to do and become nervous or desperate with the pain, then you explain to them what is happening and that the pain will be over soon.” For the post-partum client, “after she has rested a bit, you bathe her and comb her hair and fix her up so that she will feel good and look pretty when her family comes to get her.”

TBA Elsa says that “in the Hospital, all deliveries are performed with the woman lying down. That’s the form of delivery the medical staff prefer. With women who are having their first child, it’s easy, but with women who have had other deliveries on their knees you have to convince them, and that’s hard.”

When serving in the community, TBA Elsa delivers in the position the woman prefers. However, she believes that “it’s better when the woman is on her knees. It’s better for the woman and for the child being born, because it comes out more easily and quickly, and also doesn’t hurt the woman.” TBA Elsa affirms that “when they give birth on their knees the women are not torn, but when they do it lying down, sometimes they are torn or you have to cut them.” TBA Elsa acknowledges that “that position is more difficult for the TBA, because she can’t see and has to feel everything with her hands.” Still, she thinks that “it’s best to care for the woman the way she wants, since she is the one who works the hardest and suffers the most in childbirth.”

TBA Elsa thinks that this program of enlisting the participation of the TBAs is very good because:

⁶ The term “natural” is a direct quote from the interviews. The Royal Spanish Academy includes, among the 17 accepted uses of the term, the two meanings of “natural” used in this report: (2) native to a people or nation; (11) name indigenous people give themselves.

- The people in the communities are beginning to lose their fear of going to the Hospital. The natural population is starting to trust the Hospital.
- The Hospital workers are beginning to respect the natural people more and show them consideration as people.
- A woman can now find at the Hospital someone who understands her language and treats her with respect.
- The TBAs know their job better and know that if they have problems with a woman they can go to the Hospital for help.
- The people at the Hospital have learned to treat the women who come for emergency care better, with patience and consideration.
- The women who are attended by a TBA feel better because they are not left alone, the TBA is always there to accompany them or answer their questions, or give them something to drink if that is what they want.

3.4 The Health Service Network

3.4.1 The Las Canoas Health Post

The Health Post is the first level of care provided by the MPHSW to the people of the Village of Las Canoas. The official standard is that an Auxiliary Nurse works in the health post providing services five days a week and offering essential drugs and immunization to people who need them.

Members of the public who were interviewed had an unfavorable opinion of the Health Post due to the fact that the established hours were not observed, the supply of drugs was not of sufficient quantity or variety, and the staff did not know the local language. There were also reports of inadequate treatment of the clients. The relationship between the Health Post and the Las Canoas Health Committee is also unsatisfactory, partly because the staff of the post felt controlled by the committee.

3.4.2 The Panajachel Health Center

The Health Center, which represents the second level of care, serves three municipalities: Panajachel, Santa Catarina Palopó and San Andrés Semetabaj, with the village of Las Canoas located in the latter. Four health posts, located in Santa Catarina Palopó, San Andrés Semetabaj, Las Canoas and Godínez feed into the health center.

The Health Center was visited to obtain information on the support it was providing to the Las Canoas Health Committee. The Director reported that it had not given any support to the Committee, that the Committee had been formed with support from an international organization that had assumed all the responsibility for organizing and

training its members. Dr. Mario acknowledged that organizing the Committee was a good initiative because it could provide support to the HP staff and be an organization that could finance its operations. In addition, he indicated that he considered it a positive development that the population was getting directly involved in its own health care and assuming its rights and obligations for financing the services provided by the State.

The Director affirmed that the TBAs attend the majority of pregnancies, deliveries and post deliveries in the village – a fact which has led the MPHSW to develop an extensive program for training the TBAs over the last 15 years. In the Director's opinion, the TBAs should be the chief promoters of the Committee. The Health Center Director stated that the TBAs care for the women and also the children up to the age of one or two years, and thus are an essential health care resource in their communities.

3.4.3 The Sololá Hospital

The third level of care is provided by the National Hospital of Sololá. The Maternity Department of the hospital is supported by a program developed by MNH. The Program supports the culturally appropriate hospital strategy and consists, as mentioned in a previous section, of having a TBA on duty every day. In the interview with the Director of the Sololá Hospital, the Director indicated that the care provided by these TBAs was very important, because the TBAs spoke the language of the people, knew their customs and were able to meet the women's needs in the way they expected to be treated.

The hospital director said he was unaware of the existence of the Las Canoas Health Committee; however, he did know about the work that JHPIEGO and other organizations were doing with the TBAs, and thought the Committee should be a very positive initiative for the community.

3.4.4 The Directorate of the Sololá Health Zone (DHZ)

The Directorate of the Sololá Health Zone is the governing body of the Ministry of Public Health in the department. The Director of the DHZ had only recently assumed that position, and therefore did not have all the necessary information when he was interviewed. He indicated that the Panajachel Health Center would be better able to provide information on the personnel at the health post and on health organizations in Las Canoas. Dr. Francisco stated that the participation of the people in organizations promoting health was very important, and that the MPHSW considered it valuable and necessary to organize the community to care for its health. Dr. Francisco thought the organization of the Health Committee was a wonderful initiative that deserved the support of the Directorate of the Health Zone.

In summary, all the organizations consulted, from the community level to the MPH, were in favor of the existence and continued operation of the Las Canoas Health Committee.

In addition, the case studies revealed that the participation of the Committee members had been fruitful in reducing maternal and infant mortality.

4. The Case of María

María lives in Upper Canoas, the highest area of the Village of Las Canoas. She has given birth three times. The case under study is her third. The first two births, attended by TBAs, were normal and without complications. The obstetrical problem that came up during her third delivery was the retention of the placenta.

The case study description starts with the information Maria had received in the past and continues with the course of prenatal care, the delivery and obstetrical complication, the family's decision to seek help, the support of the health committee, the care she received at the Hospital, and the knowledge, attitudes and practices displayed by María and other family members during the course of the interview.

4.1 Background

At the beginning of her first pregnancy, in 1996, 19-year-old María went to spend a month in Caliaj, Tecpán, where she was originally from, to ask her mother what she needed to know about her pregnancy. The key pieces of advice her mother gave her were:

- Eat plenty of good food every day.
- Don't do any hard work.
- Don't walk too much or carry heavy things.
- Ask your husband's relatives to recommend a good TBA and meet her to find out if you get along well together.
- Be generous and friendly towards the TBA so that she will take good care of you.
- Don't take any herbal medicines during pregnancy, only at the onset of labor, as directed by the TBA.
- Don't take another trip by bus, as it's not good for you or the baby.
- Talk over your doubts and problems with your husband.

TBA Ana has been María's birth attendant since her first pregnancy, as well as attending other women in her husband's family. TBA Ana agreed with the mother's advice. During her pregnancies, María talked freely about her condition and consulted with TBA Ana and her husband.

4.2 Prenatal Care

As in the first two pregnancies, TBA Ana's visits to María began after the sixth month of pregnancy. In the seventh month, she visited María twice, in the eighth month twice, and in the ninth month she paid weekly visits. TBA Ana gave María four sauna (temascal) baths to help the child be well positioned for birth, to warm and relax María, and to help the placenta know that it was supposed to come out with the child.

In her first two pregnancies, TBA Ana accompanied María to the HP to get the anti-tetanus vaccine. For her third pregnancy, she explained to María that it was not necessary to be vaccinated again.

TBA Ana spoke to María about the danger signs during pregnancy and childbirth, although without showing her the illustrations. She also told her that she took turns at the Hospital attending women who had problems during pregnancy or childbirth. This information helped the family maintain a more open attitude towards the possibility of an emergency and to be confident, knowing that there were TBAs on duty at the Hospital who spoke their language and knew their customs.

María's husband knew that his brother, the Committee Treasurer, was on the Committee, but he had not talked with him about what to do if there were problems, because he did not think there would be any.

4.3 The Delivery

When María began to go into labor, her husband notified TBA Ana, who came to help her. The first thing she gave her was a cup of chamomile tea with cinnamon, to calm her and warm her body. The first two deliveries handled in this way were normal, without any problems. Hence, María was calm as she prepared for her third delivery.

The child was born normally, but half an hour passed and the placenta had not come out. Although TBA Ana massaged her stomach and pulled on the umbilical cord, the placenta did not come out, and there was heavy bleeding. Faced with this problem, TBA Ana declared that it was essential to take María to the Hospital.

María's mother-in-law, who lived with them, did not agree with taking María to the Hospital. She said that the TBA could get the placenta to come out. She also argued that "it is not good to move a woman when the child has just been born" and that "you only go to the Hospital to die." She also argued that "if it's someone's time to die, it's a sin to go against their fate." Her two sons persuaded their mother to take María to the Hospital using the following arguments:

- The TBA says she has to go to the Hospital.
- The placenta is not coming out and María is losing so much blood she could die.

- María is feeling bad and wants to go to the Hospital.
- The Firemen will take María to the Hospital in an ambulance.
- The TBA will go with María to the Hospital.
- The Treasurer, who knows the arrangements that have been made for hospitalization, will go with them.

María's husband was very frightened to see that his wife María was ill and listened with attention to what TBA Ana was saying. He trusted the midwife's advice, and therefore notified his brother, the Treasurer, so that he could help them. The Treasurer walked to Las Cruces and phoned the Firemen from there. He did not call the Hospital to let them know they were bringing in a patient. An ambulance came to Las Canoas and got María. TBA Ana, María's aunt, and the Treasurer accompanied her to the Hospital.

4.4 Treatment in the Hospital

They arrived at the Hospital around 4:30 a.m. on May 1, 2002 (an official holiday). At that time, there was no doctor in the Hospital. The nurse who admitted her placed a phone call and a doctor came. That doctor was very rude toward María. He told her, "You have the strength and yet do nothing to help. You want us to operate on you so that you can lie in bed for several days. That's how women are, they make no effort and want you to do everything for them."

"The doctor kept talking like that and scolding, while I could do nothing more. The placenta was not coming out and I was feeling really bad and I had no more strength," recalled María. "Then another doctor came, and this second doctor was very kind. He said to me, 'My pretty daughter, I know that you are tired, but you are very strong and you still have a little bit of strength left. Besides, you're a very good girl and you're going to help me. You know, sweetheart, the operation is more difficult and it's hard for the wound to heal afterwards. It's better if we try a little bit longer to get the placenta to come out by itself.' That doctor massaged my belly and told me when to push while he pulled on the cord so that the placenta would come out," said María. "And so, little by little the placenta came out. The second doctor was the one who succeeded in getting the placenta out and he treated me well."

"But they gave me no medicine, nor serum, nor vitamins, nor anything to drink," said María. She feels that this was poor treatment, because she was very tired and felt weak. "They are not considerate in the Hospital; no one asked me how I felt or offered me anything."

At 6 a.m., the doctors told her that she had to go home. "Go now, because today is a holiday and there is no place for you to stay," is what they told her. She left the hospital, and as she was starting to go down a step, María fainted. Then they brought her into the Hospital again and gave her an I.V. TBA Ana, who had accompanied María,

complained about the poor care they were giving her, but no one listened to her and they left her talking to herself. When the I.V. was removed at 7 a.m., the doctors told her to go home. Her family, who was waiting for her, hired a car to take them from Sololá to Upper Las Canoas. The Committee financed the transportation from Las Canoas to the Hospital. The return trip was paid for by the family and cost them Q 250.00 (US \$31.25), which for them was very expensive.

4.5 *Follow-up in the Community*

TBA Ana could not accompany María during the delivery of the placenta because they would not allow her in. She thinks it would be good for hospitals to allow TBAs to accompany patients because they can provide comfort as well as learn from watching the nurses and doctors.

TBA Ana accompanied María when she was transported to the Hospital and when she returned home. This care was important to the family, and they acknowledged that TBA Ana was very responsible and attentive toward María. TBA Ana gave María four sauna baths after childbirth to help her body recover and the uterus return to its proper place. During the bath she massaged her, and at the end put a girdle on her. This treatment was repeated over the next 40 days. After that time had passed, María no longer needed to use a girdle.

4.6 *Knowledge, Attitudes and Practices*

María and her family's experience, and the knowledge they gained from it, are reflected in their comments on what needs to be done to have a healthy pregnancy and childbirth, on the danger signs that should prompt one to seek medical attention, and on the importance of having an emergency plan and what it should consist of.

4.6.1 *Opinion on the Steps Necessary for a Healthy Pregnancy and Childbirth*

In interviews and dialogues conducted with María and her husband, information was obtained on the steps they considered important for a healthy pregnancy and childbirth (Table 1). María and her husband believed that the mother's diet and the sauna baths were important for a healthy pregnancy and childbirth.

Both thought that the TBA's visits during pregnancy and her presence during the home delivery, also contributed to a healthier obstetrical process. Drinking "aguas y hierbas"⁷ during childbirth was also considered important. María believed that "being on good terms with your husband" helps maintain a healthy pregnancy. Her husband, for his part, thought it was healthy to give birth in the hospital if danger signs were observed.

⁷ Literally, "waters and herbs." A therapeutic infusion of chamomile and cinnamon.

TABLE 1. STEPS RECOMMENDED BY MARÍA AND HER HUSBAND FOR A HEALTHY PREGNANCY AND CHILDBIRTH

Recommended Steps	Healthy Pregnancy		Healthy Childbirth	
	María	Husband	María	Husband
Eat well	X	X	X	X
Use sauna	X	X	X	X
Check-up visits by the TBA	X	X		
Be on good terms with husband	X			
Drink <i>aguas y hierbas</i>			X	X
Give birth at home with the help of a TBA			X	X
Give birth in a hospital if danger signs observed				X

4.6.2 Recognition of Danger Signs

What are the danger signs during pregnancy and after childbirth? Both María and her husband thought that loss of consciousness and severe vaginal bleeding were danger signs during pregnancy and after childbirth. Other danger signs during pregnancy that both identified (Table 2) included swelling, headache, high fever and an abnormal fetal position, among others. María added feeling ill and listless. As for the danger signs to watch for specifically after childbirth, María and her husband mentioned, among others, retention of the placenta for more than half an hour (the obstetrical problem María confronted), anemia and tetanus. María added high fever, foul smelling vaginal discharge, and convulsions.

TABLE 2. DANGER SIGNS DURING PREGNANCY AND POST PARTUM, AS IDENTIFIED BY MARÍA AND HER HUSBAND

Danger Signs	During Pregnancy		Post Partum	
	María	Husband	María	Husband
Anemia/Excessive fatigue			X	X
Convulsions	X	X	X	
Foul smelling vaginal discharge			X	
Severe headache	X	X		
High fever	X	X	X	
Swelling of the feet and hands	X	X		
Loss of consciousness	X	X	X	X
Abnormal fetal position	X	X		
Retention of the placenta for more than half an hour			X	X
Severe vaginal bleeding	X	X	X	X
Feeling ill and listless	X			
Tetanus			X	X
Prolonged labor	X	X		

4.6.3 Emergency Plan: Knowledge and Opinion

Neither María nor her husband had thought of an Emergency Plan for a possible emergency during pregnancy, delivery or post delivery. When asked if she had an emergency plan, María said, “No. Since everything was fine during the pregnancy, I never thought that there would be a problem at delivery.” When probed as to whether her husband had prepared anything, María said, “Yes, my husband had put a little

money aside because there are always expenses when a child is born, because you have to pay the TBA, and sometimes there is a special meal so that people will come to meet the baby.” It had not occurred to the family, in this case, that the money might be used for transportation.

María’s husband answered the same question saying, “No, we were not prepared, because everything seemed to be fine. The pregnancy went well just like the first two, and María felt fine. She was encouraged and energized about giving birth to her child. The problem was that the placenta didn’t want to come out, and that was why TBA Ana said that we had to take her to the hospital.” “Yes, I had set a little money aside, because that is customary when something important is about to happen. Everything costs money. If there is a birthday, you put together a little money, because someone from the family always comes to visit, and it’s good to be able to offer him something. Anyway, that’s what we were thinking, both for the birth and thinking about paying TBA Ana and having something in case we needed anything else.”

When María had a post-partum problem, she did what the TBA told her to do. Her husband sought the aid of his brother, who is Treasurer of the Las Canoas Health Committee. In this way, even though the family neither knew nor applied the concept of the Emergency Plan, the advice of the TBA and the support of the committee were key to María’s survival.

Currently, both María and her husband think it is important to be prepared and have a plan in case an emergency situation arises during pregnancy, delivery or post delivery. Both of them, María and her husband, feel that the plan should be drawn up by both spouses and the TBA. Table 3 shows what should be included in an Emergency Plan, according to María and her husband.

TABLE 3. WHAT SHOULD BE IN THE EMERGENCY PLAN, ACCORDING TO MARÍA AND HER HUSBAND

Contents of the Plan	María	Husband
Where to go to seek care		X
Knowing the danger signs	X	X
Care for the other children and household chores	X	X
Transportation arrangements	X	X
Having money ready	X	X

5. The Case of Juana

Juana lives in Lower Canoas. She has given birth nine times. The case under study is her ninth. In eight of her nine deliveries, Juana was attended by TBAs. During Juana's ninth pregnancy her whole body swelled up, including her face. The ninth delivery took place in the Sololá Hospital.

The case study description starts with the information available to her during her pregnancy, her prenatal care, the obstetrical complication, the search for help and the delivery, the support received in the community, the care received at the hospital, and the knowledge, attitudes and practices that Juana and her family now hold, based on the experience they lived through.

5.1 Background

Juana gave birth for the first time in 1984, when she was 24 years old. Her mother and mother-in-law advised her to do various things, including:

- Eat well, eat things that you like and that you crave.
- Don't do hard work or carry heavy things.
- Don't spend a long time doing laundry, or wash a lot of clothes at once.
- Don't get close to the fire when the baby is about to be born.
- Do what the TBA tells you and ask the TBA to relax you with baths and massages.
- Always stay with the newborn; don't let anyone else look after him until he is one year old.

Juana recalls that when her first four children were born, her mother was still living and explained many things to her. Her mother-in-law was alive for six of her pregnancies. When they were living, her mother and mother-in-law advised her and helped her with the household chores and the care of the other children.

Juana's first child was stillborn 18 years ago. Her first delivery was very difficult, remembers Juana, because the child was very big. It was very hard to get him to come out. "It's almost always like that the first time, because the woman doesn't know how to help the child be born. Also, since my body was not worn out and it was my first child, he came out very big and couldn't get through. It seemed as if he didn't fit and it was very hard for him to be born. Perhaps that is why he was stillborn."

Juana's first three deliveries were attended by a TBA from Agua Escondida, TBA Carmen, who was brought in because she had attended other women in Juana's family. Juana thinks that "she was very good, but since she lives far from here, sometimes she

only came twice before the child was born, and she didn't come very quickly either because her house is far from here. It also got to be expensive because we had to pay for her transportation each time she visited."

Your first delivery was attended by TBA Carmen. Why didn't you change TBAs if your first child died?

"It's because that wasn't her fault. That was my first delivery and I didn't know how to help him be born, and also, because the boy was so big he couldn't get out in time, and that's why he died."

TBA Carmen from Agua Escondida helped you with your first three deliveries. Why did you change TBAs? Who is your TBA now?

"Yes, TBA Carmen is very good; she attended the births of my first three children and I felt comfortable with her." "I changed because I got tired of her coming so few times and because she could not come quickly when I needed her. So we looked for another TBA from here in Las Canoas. TBA Dalia lives over there a little bit farther up. So she used to come at first every two weeks to see me, and when the child was about to be born she would come once a week or every five days."

Did TBA Dalia attend all the other six deliveries that you had?

"No, she only attended the next three births. She is very good and knows her job but she began to drink a lot [liquor]. Yes, she drank before attending a birth and then she would lose patience and want the child to be born quickly and get angry if you didn't hurry up. She was good all right, but as she got older she lost her patience and thought that drinking guaro would help her get it back, but no, it only made her angry. That is why my husband said that she would no longer be our TBA."

Who attended your last three deliveries?

That was another TBA, TBA Berta, who also lives here in Las Canoas, also over there a little farther down in the Chokiq neighborhood. She's good, too, so I can say that all three are good TBAs. What happens is that everything changes and what you like at first, later you don't like so much, so you feel like making a change."

In summary, Juana had been attended by three TBAs in the nine deliveries that she had. The first TBA was not retained because she lived far away in Agua Escondida. They stopped hiring her because she often arrived late and it was expensive to pay for her transportation. The second TBA, Dalia, who attended the next three deliveries, was not used again because she began to drink liquor while assisting at deliver and began to lose her patience. The third TBA, Berta, attended Juana for the last three deliveries and supported her during the obstetrical emergency that is recounted in this case study.

5.2 *Prenatal Care*

TBA Berta visited Juana eight times – every other week during the seventh and eighth months of pregnancy, and once a week in the ninth month. TBA Berta gave Juana four sauna (temascal) baths to help her feel better, alleviate the pains she had during pregnancy, warm her and help the fetus descend to a good position. TBA Berta also gave Juana three sauna baths after delivery to help her body recover and the uterus return to its proper place. During the bath she massaged her, and at the end put a girdle around her stomach. This treatment was followed during the 40 days following childbirth.

TBA Berta accompanied Juana to the HP to get the anti-tetanus vaccine in the next to last pregnancy.

TBA Berta did not show Juana illustrations of the danger signs during pregnancy, delivery and post delivery. TBA Berta took Juana to the HP when her whole body swelled up one week before delivery to consult with the Nurse. As the husband did not want to transport Juana to the Hospital, TBA Berta said that she would not attend the delivery and brought in TBA Ana to attend to her. TBA Ana told the husband that she would not attend Juana at home either, because she might die. The decision of the two TBAs obliged the husband to make the appropriate decision: take Juana to the Hospital.

This information is considered part of the training TBA Berta provided the family in Case 2, since it obliged the husband to make the correct decision. TBA Ana explained that she took turns in the Hospital, and that there was always a TBA there who spoke their language and knew their customs. That was another important link in persuading Juana's husband.

Juana's family had no concept of an Emergency Plan for a possible emergency during pregnancy, delivery or post delivery. When Juana had a problem before delivery, she ended up doing what the TBA told her to do. She relied on the support of the Auxiliary Nurse at the HP and that of TBA Ana, a member of the Health Committee, both of whom succeeded in persuading Juana's husband.

In speaking with Juana about what plans they had in case something happened, she explained, "No, we never said anything about that, because, since nothing had ever happened before, we didn't say anything." When probed as to whether they had made any preparations, Juana said, "No, we didn't prepare things or anything. But yes, my husband had some money because I was going to have a child and we had to pay the TBA."

In speaking with Juana's husband on the same subject, he stated, "No, I didn't think there would be a problem. Juana had already had other births, and she knew how to help so that the child would come out all right. But you always keep some money on hand, because there can always be something that you need. Because, even though

children are born all the time, it's not an everyday thing, so you keep some money on hand in case it's needed."

5.3 The Delivery in the Hospital

Everything was going smoothly with her ninth pregnancy. TBA Berta kept visiting her and saying that everything was fine. One week before delivery, however, Juana began to swell up. First her feet and hands became swollen, then the legs and arms, and finally, everything, even her face, was swollen. Seeing this, TBA Berta recommended that she go to the Hospital. TBA Berta also spoke about it with Juana's husband and told him that she would not be responsible for attending the birth. Among the arguments that TBA Berta used to persuade Juana's husband were mentioned:

- That she would attend Juana only if Juana were well, as in the previous deliveries.
- That perhaps Juana's body was tired now and that was why it was swollen like that, so she preferred not to attend Juana at home.
- That she knew of a case in the village of a woman who swelled up and did not survive childbirth. Both mother and baby died.
- That it was necessary to take her to the Hospital to protect her life and that of the child.

In spite of these arguments, Juana's husband said that he would not take her to the Hospital, and would she please attend her. Juana's husband did not know the Hospital, and was afraid that they would treat Juana badly or refuse to treat her because she was a "natural." TBA Berta explained that he did not have to be afraid, and also said that if they did not want to take Juana to the Hospital they had better get another TBA, because she would not work like that; she was not going to risk having her patient die in her care. The determined attitude of TBA Berta convinced Juana's husband to accept her advice. In a subsequent conversation with the 1st At-Large Member of the Las Canoas Health Committee, it was learned that TBA Berta had discussed the problem with the Auxiliary Nurse and that he had recommended taking Juana to the Hospital. He had also recommended speaking with TBA Ana. TBA Ana went with TBA Berta to visit Juana's husband and help persuade him.

They had to make many arrangements, because the only ones living at home were Juana, her husband, and their seven children. Neither grandmother was living, and the oldest daughter (12 years old) was still very young and could not take charge of the house. They arranged for Juana's sister to stay in the house to look after the family.

Three days before the birth, when everything was arranged and Juana had become very ill, they went to the Hospital: Juana, TBA Berta, and Juana's husband. They took

her in the minibus, which is the public transportation service that takes passengers from Las Canoas as far as Sololá, with a stop at the hospital.

At the Hospital, they admitted Juana and examined her, and told her she needed to stay. They gave the family a telephone number that they could call to ask about Juana, since neither the TBA nor her husband remained in Sololá. Juana was hospitalized for three days, and on the fourth day, her daughter was born. The delivery was normal, without complications, and was attended by a doctor.

Juana spent five days in the Hospital, and feels that she was treated well. The doctor who treated her was kind and respectful. There was a TBA who asked her, in Kaqchikel, how she felt. They also gave her well-prepared food, such as hot rice and beans, and she had a clean bed.

Juana thinks that in the Hospital they indeed have the skills and the medicines to take care of pregnant women who have problems. She stated that they gave her an I.V. and also gave her vitamin tablets to take after delivery. Juana and her husband are satisfied that they made the right decision.

5.4 Follow-up in the Community

One day after giving birth, Juana was discharged. Her husband and the TBA came to get her. They hired a taxi for the return trip to Las Canoas. The taxi cost Q150.00 (US \$18.75) for the trip, which the family considered expensive. Juana returned home and was attended by TBA Berta. She recovered well from the delivery, and her daughter has had no health problems.

TBA Berta accompanied Juana when she was taken to the Hospital and when she was brought home. This care was important to the family, and they acknowledge that TBA Berta is very responsible and attentive.

5.5 Knowledge, Attitudes and Practices

Both Juana and her husband confronted new situations as a result of the obstetrical problem that put Juana in the Hospital. Until then, all her deliveries had been attended at home. The midwives had not refused to attend her, not even in the first delivery, when the baby had difficulty coming out and was stillborn. This time, the TBA declared that she did not dare attend the birth, and brought the case to the staff of the Health Post. There, the nurse recommended contacting the Las Canoas Health Committee. TBA Ana, who is on the Committee, went to Juana's house, spoke with her husband, and convinced him to take Juana to the Hospital. The family's preparations, mostly in the form of savings, were useful in transporting the family. All of these experiences are reflected in the comments of Juana and her husband concerning what needs to be done to have a healthy pregnancy and childbirth, on the danger signs that should prompt one

to seek medical attention, and on the importance of having an emergency plan and what it should consist of.

5.5.1 *Opinion on the Steps Necessary for a Healthy Pregnancy and Childbirth*

Both Juana and her husband shared their opinions on the things that can be done to ensure that the pregnancy and delivery are healthy and danger signs are present (Table 4). An adequate diet and taking sauna baths were recommended by both spouses for pregnancy and after delivery. They also agreed on the importance of prenatal checkups for the pregnant woman, and drinking *aguas y hierbas* (a therapeutic infusion of chamomile and cinnamon) after childbirth. Juana considered it important to follow the TBA's instructions, and her husband mentioned the importance of delivering in the Hospital whenever danger signs were present.

TABLE 4. STEPS RECOMMENDED BY JUANA AND HER HUSBAND FOR A HEALTHY PREGNANCY AND CHILDBIRTH

Recommended Actions	Healthy Pregnancy		Healthy Childbirth	
	Juana	Husband	Juana	Husband
Eat well	X	X	X	X
Use sauna	X	X	X	X
Check-up visits by the TBA	X	X		
Do what the TBA says			X	
Drink <i>aguas y hierbas</i>			X	X
Give birth in a hospital if danger signs observed				X

5.5.2 *Recognition of Danger Signs*

Both Juana and her husband mentioned spontaneously as a danger sign that the woman's whole body swells up and that she bleeds before her time to deliver. They also agreed that it was a danger sign if, after birth, the woman remained swollen or she did not lactate.

Using the household questionnaire, they were asked about danger signs from a list. Juana and her husband's answers are shown in Table 5.

TABLE 5. DANGER SIGNS DURING PREGNANCY AND POST PARTUM, AS IDENTIFIED BY JUANA AND HER HUSBAND

Danger Signs	During Pregnancy		Post Partum	
	Juana	Husband	Juana	Husband
Anemia/Excessive fatigue			X	X
Convulsions		X	X	
Foul smelling vaginal discharge			X	
Severe headache	X	X		
High fever	X	X	X	
Swelling of the feet and hands	X	X		
Loss of consciousness	X	X	X	X
Abnormal fetal position		X		
Retention of the placenta for more than half an hour			X	X
Severe vaginal bleeding	X	X	X	X
Feeling ill and listless				
Tetanus				
Prolonged labor	X	X		

Both members of the couple in Case 2 thought that, under normal conditions, pregnancy, delivery and post delivery should be attended at home by a TBA. They stated that one should go to the Hospital only if there was a problem and the TBA advised it. They feel that a TBA gives the best care because:

- TBAs do their job well.
- It is more convenient because she comes to the house. The woman does not need to walk anywhere, and there is no transportation expense.
- The TBA looks after the mother and child with kindness.
- The TBA speaks the language and knows and respects their customs.
- The TBA is a woman with whom you can feel comfortable, and she gives sauna baths.
- What you pay them is within your ability to pay.

5.5.3 Emergency Plan: Knowledge and Opinion

Juana's family did not have an Emergency Plan for pregnancy, delivery and post delivery. When Juana had a problem before delivery, she did what the TBA told her. They received the support of the HP Auxiliary Nurse and of TBA Ana, a member of the Health Committee, who managed to persuade Juana's husband to take her to the hospital. Concerning an emergency plan, Juana explained, "No, we never said anything about that, because, since nothing had ever happened before, we didn't say anything." When probed as to whether they had made any preparations, Juana said, "No, we didn't prepare things or anything. But yes, my husband had some money because I was

going to have a child and we had to pay the TBA.” Juana’s husband added, “No, I didn’t think there would be a problem. Juana had already had other births, and she knew how to help so that the child would come out all right. But you always keep some money on hand, because there can always be something that you need. Because, even though children are born all the time, it’s not an everyday thing, so you keep some money on hand in case it’s needed.” The family had not considered, in this case, that the money might be used for transportation.

Now Juana and her husband think that it is important to prepare and make a plan in case an emergency situation arises during pregnancy, delivery or post delivery. Both spouses and the TBA should draw up the plan together. Table 6 shows what should be included in an Emergency Plan, according to Juana and her husband.

TABLE 6. WHAT SHOULD BE IN THE EMERGENCY PLAN, ACCORDING TO JUANA AND HER HUSBAND

Contents of the Plan	Juana	Husband
Where to go to seek care		X
Who to go to in case of emergency		X
Knowing the danger signs	X	X
Care for the other children and household chores	X	X
Transportation arrangements	X	X
Having money ready	X	X

6. Conclusions and Recommendations

An analysis of the information gathered in the field work, carried out from September 1 to 17, 2003, produced the following conclusions and recommendations.

6.1 *Conclusions*

- a. The behavior change and community mobilization component, according to the evidence of the case studies, has introduced important changes into the community environment.
- b. These changes include training and empowering the health committee, training TBAs on aspects of the Emergency Plan, and arrangements made by the committee itself to facilitate emergency transportation.
- c. The women have a favorable attitude towards the preparation required for childbirth, and possess the knowledge needed for early identification of the warning signs.
- d. The case studies showed, however, that the women did not have an emergency plan, and had not been told anything about it by the TBAs, although the TBAs had discussed the danger signs.
- e. In both cases studied, the women to some extent, but mainly their husbands, made the decision in time to seek qualified attention to protect the life of the mother and the newborn. The opinion of the trained TBAs was a determining factor in this decision. The TBAs correctly managed the danger signs and knew that when any of them appeared, they needed to go for help, and in both cases they did that, referring the women to the Sololá National Hospital.
- f. In the cases studied, the Health Committee played a determining role in saving the lives of the two women and their newborn children. A member of the Committee intervened, helping to persuade a family to take the woman to the Hospital. This timely intervention helped save the woman's life.
- g. In another case, the woman in an emergency situation was transported in an ambulance from Las Canoas to the Sololá Hospital by the Voluntary Firemen of San Andrés Semetabaj. The committee followed through with its pledge to the firemen to contribute Q50.00 (US \$6.24) for transportation.
- h. In the Sololá Hospital, the woman who arrived on a day and at a time when doctors and beds were available was treated well. Her delivery was attended by a doctor and she remained in the hospital for five days. The other woman, who arrived at 4:30 in the morning on a holiday, found neither doctors nor beds; the one who was called to handle her case treated her badly. Her placenta was extracted roughly and hastily and they discharged her an hour and a half later. The scant supervision and

the inadequate staff coverage helped cause the client to have a negative impression of her experience.

- i. The various units of the official health care system are aware of the community mobilization activities and have expressed their support. However, there is no indication that there is effective coordination or collaboration between the official health system and the health committees.
- j. The women acknowledge that it is necessary to go to the Hospital for care when problems come up and the TBA recommends it. The TBAs acknowledge that it is very useful to be able to rely on the support of the Hospital in emergency cases.
- k. The TBAs think that it would be good to allow them to accompany the women who are in their care into the delivery room. This would allow them to provide the women emotional support and learn how to resolve more emergency situations.
- l. The TBAs think that the Program supported by MNH developed at the Hospital with support from the TBAs is important because it helps the indigenous population to have more confidence in the Hospital and the women who are treated there feel better having someone with them. The TBAs think that their participation at the Hospital has taught the health care personnel to treat the indigenous population with more respect and consideration.

6.2 Recommendations

Taken together, the results of the case studies confirm that behavior change and community mobilization can be promoted and attained. Moreover, they show that such changes translate into improved chances of survival for pregnant women and newborns. This study has shown that the community as well as families are important players in the effort to reduce maternal mortality.

Other timely recommendations are:

- a) Provide incentives and strengthen the health committees which, like the Las Canoas Health Committee, are useful organizations that are needed in the community, so that they can do their job properly.
- b) Support the Health Committees so that they can obtain information on all the pregnant women in the village and provide them with information and skills for healthy childbirth.
- c) Get the health committees, the health posts, the health centers and hospitals to work together in the coordination and supervision of their activities.

- d) Advocate hiring personnel who know the languages spoken in the communities at health care sites closest to the community, since that is what the communities are asking for.
- e) Continue to strengthen the "Process of Improving the Quality of Maternal and Neonatal Care" that includes culturally appropriate hospitals as well as the Traditional Birth Attendant Program such as the one being implemented in the Sololá National Hospital.
- f) Let the TBAs accompany the women under their care at the time of delivery in the Hospital, so that they can provide the women with emotional support and so that the TBAs can learn to identify emergency cases.

7. Glossary

Aguas y hierbas	Literally, “waters and herbs.” A therapeutic infusion of chamomile and cinnamon.
Village	Population cluster living in a geographical area. Las Canoas is considered a village and has a population of approximately 2,600 inhabitants.
Committee	The Las Canoas Health Committee
Health Committee	The Las Canoas Health Committee
Department	The first level of local political and administrative jurisdiction, the municipality being the second level. Sololá is a department.
Municipality	A political and administrative division within a department. The village of Las Canoas is located in the municipality of San Andrés Semetabaj, which belongs to the department of Sololá.
Naturals	A term used by members of the kaqchikel indigenous population to refer to themselves and to distinguish themselves from the latino or mestizo population.
Temascal	A small room used for steam baths.