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GUATEMALA TRIP REPORT #4:

**MotherCare Quetzaltenango Maternal
and Neonatal Health Project**

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ACRONYMS

INCAP	Institute for Nutrition for Central America and Panama
TBA	Traditional Birth Attendant
USAID	United States Agency for International Development
WHO	World Health Organization

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I. EXECUTIVE SUMMARY

The consultant was requested to review the process of existing policies and norms for service delivery at the hospital, health center/health post and TBA level and, in collaboration with Health Area staff, make appropriate changes. For a variety of reasons, beyond anyone's control, the scope of work was not carried out as planned. However, important work was carried out in: laying the groundwork for the development of new norms and forms for service delivery, reviewing newly developed INCAP TBA training materials, and assessing the knowledge, attitudes and practices regarding infant feeding at Xela Hospital.

II. BACKGROUND

Guatemala occupies one of the worst positions in the hemisphere in regards to maternal and infant mortality. The estimated maternal mortality rate is 100 to 144 per 100,000 live births and the the estimated infant mortality rate is 73.4 per 1,000 live births.

The majority of women give birth at home with the help of a traditional birth attendant (TBA) and the TBA is the major provider of health care for Guatemalan women. TBAs (estimated 20,000 total) attend 60% to 70% of all births, with this percentage rising to over 90% in certain rural highland areas. TBAs also provide the majority of prenatal care.

Despite their important contribution to the health care system, TBAs receive little recognition or support and rarely have established relationships within the formal health care system, which has the institutional capacity to provide services to only 20% of all women giving birth in Guatemala. TBA training has been carried out throughout the country for over 30 years. However, the training has been based on a Western, ethnocentric, urban, hospital-based model, which is not only inappropriate for childbirth in the community, but potentially increases maternal and neonatal mortality and morbidity. In addition, the training has had little impact on resolving the significant cultural, geographic, linguistic, economic and emotional barriers to establishing relationships between the community and the formal health care system.

A. The MotherCare/INCAP Quetzaltenango Maternal and Neonatal Health Project

In August of 1990, the MotherCare Project and INCAP signed an agreement to implement a three year project in four districts of the Quetzaltenango Health Area of Guatemala. The purpose of the project is to reduce maternal and neonatal mortality rates.

The design of the project is based on in-depth research conducted by the Principal Investigator, Dr. Barbara Schieber, on the maternal and neonatal knowledge, attitude and health practices of the community, TBAs and Area health staff (health center/post and hospital) in Quetzaltenango in 1988 and 1989. The Quetzaltenango Maternal and Neonatal Health Project is an innovative, culturally appropriate approach to solving priority maternal and neonatal health problems at all levels of the system (community/TBA, clinic and hospital) using a case management, rather than the traditional "risk-based" approach to prenatal, obstetric and postpartum care. The case management approach is more individualized and relies on the identification, referral and proper institutional management of clearly defined high risk events as they occur, rather than on broader and less sensitive predisposing factors such as age and parity.

The project recognizes the TBA as both a key element within the health care system and a major channel of communication for the mothers, families and communities whom she serves. Improving the standard of care and attitudes towards the TBA at the institutional level, while at the same time increasing the knowledge and skill levels of the TBA and the health center/post and hospital staff who receive and manage TBA referrals, is the focus of project interventions.

III. SCOPE OF WORK

The scope of work was to work with INCAP Investigators and the staff of the Quetzaltenango Area Health Office to:

1. Review policies and norms for management of normal and high risk pregnancies and neonates by TBAs at the community level, and by clinic and health post staff at the primary and first referral levels; assess both stated policy and actual practice against accepted standards for care; and, use the WHO "Check-list for Evaluating the Adequacy of Support for Breastfeeding in Maternity Hospitals, Wards and Clinics" to describe clinic policies and procedures surrounding breastfeeding.

2. Recommend changes in existing policies and norms to improve care of normal and high risk women and infants, with the goal being to achieve the highest quality care possible with the resources available at the community and district levels.
3. Recommend appropriate formats for presentation of norms and protocols so that they can be easily understood and used by public health staff.
4. Review existing and proposed norms and protocols for maternal and neonatal care and work with Health Area staff to revise them for selected, high-priority conditions.
5. Establish a time frame with Health Area staff and INCAP Principal Investigators for the completion of revised policies, norms and protocols. Identify additional technical assistance requirements, if necessary, and prepare written justification.
6. Make recommendations for training TBAs, health post and health center staff in the revised norms and protocols. This will include preparing written recommendations for pre-service and in-service training content and suggested methods for assessing training effectiveness and monitoring performance.
7. Review data collected by Dr. Schieber during her TBA study that is relevant to TBA, family and health provider attitudes and practices towards breastfeeding. Prepare a written summary of this information for MotherCare and advise on need for further investigation.

Due to the sudden, unexpected absence of the project's Principal Investigator for a week during the two and a half week consultancy (she was required by INCAP to travel to Nicaragua to participate in a conference), and the unavailability of key Health Area staff, the consultant was not able to carry-out the above scope of work as written. Instead, the consultant:

1. Laid the groundwork for the development and implementation of new norms and forms in the hospital and health centers by meeting with: the Chief of Obstetrics, the Neonatologist, the Director of Nursing and the Health Area Chief Nurse. In addition, the consultant was introduced to the residents and medical students while assisting with a seminar on the use of the Partogram for labor management.

2. Discussed breastfeeding policies with the nurses and Neonatologist and conducted some brief observations in the hospital regarding feeding practices. The analysis of Dr. Schieber's breastfeeding data was not available, however, the consultant reviewed the "raw" data.
3. Conducted a graduate seminar on health program evaluation at a university in Guatemala City at the request of the Principal Investigator.
4. Reviewed in-depth the TBA training materials developed by Dr. Alfred Bartlett and Dr. Elizabeth de Bocaletti for INCAP's Santa Maria Program and observed a TBA training session on newborns, conducted by Health Area staff, in Santa Maria de Jesus. These materials will be adapted for use in the Quetzaltenango Project. (See sample referral sheet in Annex III)
5. Worked with the MotherCare Technical Assistant, Linda Hodge, to develop a plan for conducting systematic observations of service delivery practices at Xela Hospital. (see Annex II)
6. Assisted with the development of project indicators. (see Annex IV)
7. Discussed the development of the TBA Technical Advisory Group with key persons, including Jayne Lyons, USAID Health and Nutrition Officer.

IV. NORMS AND FORMS FOR SERVICE DELIVERY

A. Nursing

Public Health Nurses

The manual used by the Area nurses in the health posts/centers, "The National Program for Maternal Infant Health", was reviewed. Basically, the information contained in the manual is accurate, useful, and appropriately oriented toward primary health care. For example, the section on breastfeeding recommends exclusive breastfeeding, with the newborn put to the mother's breast as soon as possible after birth, and gives accurate reasons why colostrum and exclusive breastfeeding are important. However, the manual is large and not organized in a way that would make it easy for a nurse seeing patients in a busy clinic to use. Screening for high risk cases (newborn and maternal) is mentioned, nevertheless the information given does not stand out as a priority approach to patient care.

The Chief Area Nurse expressed strong support for help with the development of norms and forms, and for the Quetzaltenango Project in general.

Hospital Nurses

The Director of Nursing and several of her key staff stated that they believed the major causes of maternal/infant mortality and morbidity in the hospital were: Salmonella and Psuedomonas infections (10 newborns died from this last year), sepsis, aspiration pneumonia (from meconium inhaled by newborns during the birth process), prematurity and complications from cesarean sections postpartum.

The last norms for patient care and procedures were developed in 1979 with assistance from Project HOPE nurses who were working at Xela Hospital during that time. Basically, the "norms" are a standard nursing procedure manual, based on a US nursing model, and not directly relevant to the day-to-day, practical nursing requirements for high risk screening and management of patients.

The nurses stated emphatically that they wanted help from the Quetzaltenango Project in the development of new norms and forms and they have already formed a working group of four nurses, plus the Neonatologist, to develop new norms. In addition, the nurses requested help from the project with materials development and staff in-service training.

The nursing staff has developed an excellent plan for the follow-up of high risk patients in the community, once they have been discharged from the hospital. The concept will be tested on a pilot basis and there are opportunities to link the program with TBAs who are involved in the Quetzaltenango Project.

B. Neonatology/Pediatrics Department

In the past, medical students and residents followed the guidelines for pediatric and newborn care based on the policies of whomever was currently acting as the attending physician. Often these practices varied considerably, depending on the experience, training and biases of each physician. The new Neonatologist is in the process of changing this system, with the institution of norms and forms to institute a new (and more consistant) standard of care.

The consultant and the Neonatologist collaborated to develop a draft outline of the priority problems to be addressed in the development of the norms and forms. The following will be further refined into categories of problems which occur during birth, immediately postpartum and in the days following delivery.

The principal causes of mortality in neonates are:

1. Asphixia (the causes of this need to be determined if possible).
2. Sepsis

Other major problems in neonates are:

- * Malpresentation and multiple gestation
- * Low-birth-weight and prematurity
- * Prolonged labor, obstructed labor and trauma during delivery
- * Prolapsed cord

The principal causes of mortality in mothers are:

1. Hemorrhage
2. Eclampsia/pre-eclampsia
3. Retained placenta

Other major problems in mothers include:

- * Malpresentation and multiple gestation
- * Prolonged labor

The most common problems referred to the hospital by the community are:

Newborns

1. Sepsis
2. Pneumonia
3. Prematurity
4. Jaundice

Mothers

1. Hemorrhage
2. Malpresentation and obstructed labor
3. Eclampsia
4. Retained placenta

Other priority problems which the Neonatologist requested project assistance in the development of norms and in-service training for medical students and residents include:

- * Meconium aspiration
- * Apgar scoring
- * Gestational Age Determination
- * Management of Jaundice
- * Resuscitation of Newborns
- * Management of Sepsis
- * Vaginal Exams
- * Feeding of the Newborn (including lactation management in high risk situations)
- * Analysis of lab results (eg; hematocrits, Coombs, Bilirubin)

C. Obstetrical Department

The Chief of Obstetrics expressed strong support for the Quetzaltenango Project and the development of new norms and forms. The medical students and residents have functioned similarly in obstetrics, as they have in pediatrics, with the management of patients differing depending on the mandate of whomever was the current attending physician.

There was not sufficient time available to work with the Chief of Obstetrics on norms and forms, however, the consultant participated in a seminar for medical students and Ob/Gyn residents on the use of the partogram for labor management, given by a physician from INCAP who is affiliated with the Quetzaltenango Project.

V. INFANT FEEDING PRACTICES

A brief review of Dr. Schieber's unanalyzed breastfeeding data indicated that although the practice of breastfeeding among Mayan women in Quetzaltenango is essentially universal, there are problems with knowledge, attitudes and practices in infant feeding patterns. In the community, supplementation (including prelacteal feeding) and the discarding of colostrum are often practiced and the newborn is not always put to the mother's breast immediately after birth.

In Xela Hospital, the Neonatologist and the nurses questioned all stated strong support for exclusive breastfeeding and the hospital policy is to encourage breastfeeding. However, there is a problem in the hospital with bottles being given to newborns (both sick and normal), especially on the night shift. The nurses stated that this was due primarily to the "shortage of staff". They are interested in starting a milk bank, however expressed a concern that "the mothers live too far away to come in regularly".

It appears that the problem of supplementation is not due to lack of support for breastfeeding, but rather a lack of knowledge regarding the dangers of supplementation and alternative ways of encouraging exclusive breastfeeding, even with an acute staff shortage. Given the general strong support for breastfeeding among the medical and nursing staff and leadership, with appropriate technical assistance (eg; in-service education, effective educational materials and links with the community), the problems with supplementation could probably be resolved with minimal inputs.

VI. TBA TRAINING MATERIALS DEVELOPED BY INCAP's SANTA MARIA de JESUS PROJECT

The TBA training materials which have been developed and are currently in the process of being tested by INCAP's Santa Maria de Jesus Project, were reviewed in-depth. In addition, a TBA training session on the identification and proper management of high risk newborns was observed. The training sessions have been conducted in a school in the town of Santa Maria de Jesus. Approximately fifteen TBAs attended the session, which was conducted by staff (a pediatrician and a neonatologist) from the local referral hospital (in Antigua), in collaboration with the project's Principal Investigator, Dr. Alfred Bartlett, and the Co-Investigator, Dr. Elizabeth de Bocaletti.

Although the materials require some further simplification and refinement, they are excellent and will be extremely useful in the Quetzaltenango Project. The materials use innovative and culturally appropriate training methodologies, such as the use of "stories" to teach case management, and the content is both relevant and based on priority high risk "events".

During the training session observed by the consultant, the TBAs were animated and participated in question and answer sessions after each presentation. The material was presented in a simple, clear format, using photographs and other training aids to emphasize and illustrate key points. The experience and materials developed by the Santa Maria Project will be invaluable to the project in Quetzaltenango.

VII. RECOMMENDATIONS

1. A simple, clearly written information sheet, stating the priorities and clear-cut steps for detecting, managing and referring high risk cases, which would be easy to use during a busy clinic, should be developed and implemented in the health centers and health posts. In addition, wall charts, showing high risk situations and brief keys to their detection and management, should be developed and hung in key clinic locations (all exam rooms).
2. In the development of hospital norms and forms, the priority should be on identifying and emphasizing the detection and management of the high risk problems which cause the greatest mortality and morbidity. The guidelines should be simple and clear. Accompanying materials for both nurses and physicians should be organized in a way that makes them easy to use while providing patient care, under stressful situations. Clear, simple and noticeable wall charts for priority problems should be developed and posted in all clinical areas.

3. In-service sessions to implement the norms and forms should take place in both large and small groups and include both nurses and physicians, who should alternate responsibility for conducting the sessions. Brief "refresher" sessions should be held periodically, at which time problems with the implementation and use of the norms and forms can be discussed and resolved.
4. A literature search on the management of each priority high risk problems should be conducted and appropriate educational and training materials should be provided for the use of the medical and nursing staff (eg; relevant neonatology books such as Klaus).
5. Basic inexpensive equipment for the obstetric and neonatal units should be provided to increase the effectiveness of patient care (eg; blood pressure cuffs, a doptone for labor and delivery, pediatric ambu bags for resuscitation).
6. Outside technical assistance should be provided during key in-service sessions on priority problems, if necessary and requested by the medical and nursing staff. This could be combined with other technical assistance visits to minimize the expense.
7. The nurses program to follow-up high risk patients in the community, after discharge from the hospital, should be linked to the Quetzaltenango Project and involve TBAs and medical students. This could provide an opportunity for health education in the community on key subjects (eg; infant feeding).
8. The Quetzaltenango Project should collaborate extensively with the Santa Maria de Jesus Project to share experience, resources and to develop "state of the art" training materials for TBA training and supervision for use in Guatemalan highland populations.
9. A in-service program to promote exclusive breastfeeding should be developed and implemented in the hospital and the health centers/health posts (including the TBAs), with outside technical assistance, if necessary. Additional funding from USAID/Guatemala, or other centrally funded programs, will probably be required in order to carry-out the program.

ANNEX I

LIST OF CONTACTS

Dr. Alfred Bartlett, Child Survival Advisor, Johns Hopkins University, Principal Investigator, INCAP

Dr. Elizabeth de Boccaletti, Co-Investigatior, INCAP

Dr. Erik Boyd, Official Medico, INCAP

Sandy Callier, Health and Nutrition Advisor, USAID/ROCAP

Linda Hodge, Research Assistant, MotherCare, INCAP Quetzaltenango Maternal and Neonatal Health Project

Lic. Miriam de Leiva, Staff Nurse, Xela Hospital

Dr. Heberto de Leon, Chief of Obstetrics, Xela Hospital

Lic. Clara Luz Ramos, Chief Area Nurse, Xela

Jayne Lyons, Health and Nutrition Officer, USAID/Guatemala

Dr. Mario Mejilla, Neonatologist, Xela Hospital

Dr. Najaro, Ob/Gyn Consultant, Chief, Residency Program, San Juan de Dios Hospital

Dr. Mark Paponia, Director, Project HOPE, Guatemala

Lic. Gisela Pimentel, Principal Nurse, PAHO, Guatemala

Juan Rivera, Director, Nutrition and Health Division, INCAP

Lic. de Robles, Chief Nurse, Xela Hospital

Dr. Barbara Schieber, Principal Investigator, INCAP Quetzaltenango Maternal and Neonatal Health Project

ANNEX II

PROPOSED XELA PROJECT INTERVENTION

LINDA HODGE, JSI TECHNICAL ASSISTANT

The purpose of the proposed intervention will be to determine the current service delivery practices of health care providers in the Quetzaltenango Maternal and Neonatal Project area in the hospital, clinic and community in the provision of care to women during the childbearing process and neonates.

The focus will be on the systematic observation, over a designated time period, of five to ten priority behaviors. The priority behaviors to be observed will be chosen based on known morbidity and mortality risk factors, which have been identified in the investigation phase of the current project. Other key behaviors may be documented and included in the overall assessment for use in program monitoring, implementation and evaluation.

The observations will take place prior to the implementation of the new system of using norms and forms in all three settings. This will be followed by similar observations after the implementation of norms and forms (time period to be determined) to determine/document if changes in practice have occurred.

HOSPITAL

The technical assistant will work with the nurses, auxiliaries, the neonatologist and physicians (including medical students).

Neonates (high risk and normal newborns)

The priority behaviors to be observed will be chosen based on known morbidity and mortality risk factors such as:

- *hypothermia
- *infection control
- *infant feeding practices (including maternal/infant bonding)

Pregnant Women/Postpartum

The technical assistant will observe priority behaviors during labor and delivery and the immediate postpartum period. This will include both high risk and uncomplicated deliveries.

The priority behaviors to be observed will be based on known morbidity and mortality risk factors, including:

- *infection control
- *hydration policies (eg; IVs, oral fluids, and foods allowed/encouraged)
- *ambulation policies
- *common medical interventions (use of oxytocin, forceps, instrumental delivery)

CLINICS

The technical assistant will work with the TBAs, medical students, physicians, nurses, and auxiliaries to observe priority behaviors in health service delivery in the health centers and health posts among women receiving prenatal and newborn care.

The priority behaviors to be observed will be chosen on the basis of known morbidity and mortality risk factors in the clinic and health post setting including:

- *risk detection and referral
- *health education and interaction with the TBAs/community members during visits.

COMMUNITIES

The technical assistant will systematically observe priority behaviors with the TBAs and their clients, during day-to-day/routine interactions within the community and during prenatal and post partum visits.

Observations will take place in communities within the four project intervention districts. (locations and number of communities to be chosen)

The priority behaviors to be observed will be chosen on the basis of known morbidity and mortality risk factors in the community, including:

- *risk detection and referral (in mothers and newborns)
- *health education and interaction with women and families in the communities.

The observations will serve to document baseline health service delivery behaviors from which the investigators will be able to make comparisons in changes in practice after the implementation of the new system of norms and forms. In addition, these observations will provide valuable information which can be used by project staff and health care providers in Quetzaltenango to modify and improve the provision of health services.

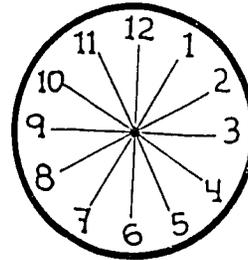
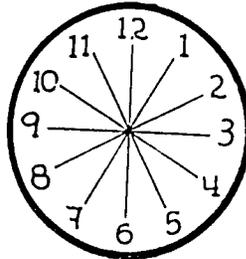
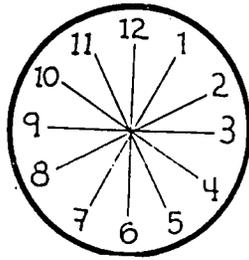
ANNEX III



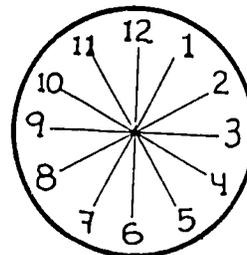
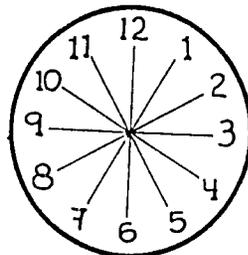
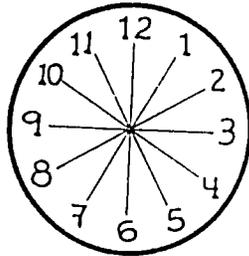
HOJA DE REFERENCIA

NOMBRE: _____ LUGAR/FECHA: _____

MOTIVO DE LA REFERENCIA: _____

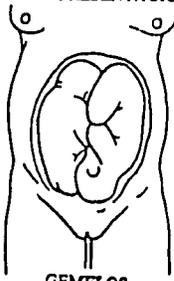


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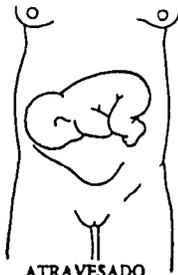


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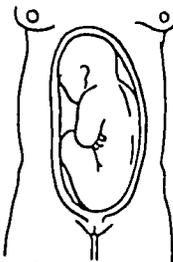
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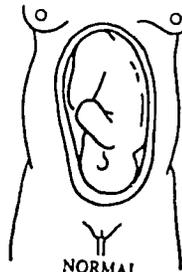
GEMELOS



ATRAVESADO



PARADO/SENTADO



NORMAL



HEMORRAGIA
SI _____ NO _____



CONTROL PRENATAL SI _____ NO _____



CONTRA REFERENCIA

NOMBRE: _____

DIAGNOSTICO: _____

TRATAMIENTO: _____

RECOMENDACIONES PARA SEGUIMIENTO EN LA COMUNIDAD: _____

ANNEX IV

SAMPLE OF INDICATORS

1. A reduction of 25% in the peri and neonatal mortality.

Data Collection Instrument

1. Dead or alive.
2. Used health system or not.
3. Was treatment adequate for those referred.

Indicators

1. Went to health services or not.
2. Received iron and/or tetanus toxoid or not.
3. If there was a complication, was the patient treated or referred (detection and referral of problems).
4. If the patient was referred, did she/the family accept the referral.
5. Result of referral.
6. Was oxytocin used by the family/midwife/hospital.

2. Treatment in Health Centers.

1. The presence of forms.
2. Have the forms been filled out correctly or not.
3. Number of prenatal visits (coverage).
4. Number of referrals made.
5. Were forms for referrals filled out.

3. Training (direct and indirect)

1. Pre and post tests.

2. Practices (history and observations)

4. TBA (not completed)