

PD-REG-570  
83888

**GUATEMALA TRIP REPORT #5:**  
**INCAP Quetzaltenango Maternal and Neonatal Health Project**  
**Evaluation and Monitoring Systems Development**  
**and**  
**Subcontract Development for the**  
**Technical Working Group on High Risk Women and Neonates**

**November 4-17, 1990**

**Patricia Taylor**  
**MotherCare Long Term Projects Coordinator**

Report Prepared for  
The Agency for International Development  
Contract # DPE-5966-Z-00-8083-00  
Project # 936-5966

**GUATEMALA TRIP REPORT # 5**  
**Patricia Taylor, MotherCare Long Term Project Coordinator**  
**November 4-17, 1990**

**EXECUTIVE SUMMARY**

MotherCare Long Term Projects Coordinator Patricia Taylor traveled to Guatemala in early November to work on the following assignments:

**INCAP Quetzaltenango Maternal and Neonatal Health Project:** MotherCare provides technical and financial support to INCAP for the implementation of this project which is testing a innovative case management approach to the reduction of maternal and intrapartum/neonatal deaths in highland Guatemala. After four months of activity, the project is impressively ahead of schedule.

INCAP's Principal Investigator, Dr. Barbara Schieber, has assembled a team of more than 20 well-trained and motivated supervisors and field workers and established an office and a transportation unit in Quetzaltenango. Planning sessions have been conducted with Ministry of Health teams at the Health Area, Health District, and Departmental Hospital levels and three diagnostic studies designed to provide important information for the development of project interventions are currently underway. They include studies of intrapartum/neonatal deaths in the four intervention districts, maternal mortality in the department of Quetzaltenango, and reasons for compliance and non-compliance with TBA referrals to the departmental hospital.

After a change in the project's research design in early October, the project team also initiated work to create a Vital Events Reporting System that will provide critical information for project monitoring and evaluation. By mid-November, more than half of the approximately 120 villages to be included in the system had been contacted.

Ms. Taylor assisted the INCAP team during this visit to:

- up-date the original budget projections for the project based on changes in its research design and staffing, and recent increases in the costs of basic commodities;
- continue the development of the project's evaluation and monitoring system;
- prepare a plan for MotherCare technical assistance to the project during the first half of 1991;
- review instruments and preliminary data from the studies of maternal mortality, intrapartum/neonatal mortality and referral by TBAs; and,
- review and recommend changes in the draft instruments for the Vital Events Reporting System.

**Technical Working Group on High Risk Women and Neonates:** MotherCare has also been asked by the USAID Mission to provide support, under a Mission buy-in, to a Technical Working Group on High Risk Women and Neonates. An earlier consultancy by Dr. Melody Trott resulted in the recommendation that support for the working group be subcontracted to the Guatemalan Association of Obstetrics and Gynecology. Ms. Taylor met several times with the in-coming President of the Association, Dr. Rolando Figueroa, to discuss the formation of the working group, its composition, and activities and the potential role of the Association in its support. A scope of work was developed and the Association was invited to submit a proposal and budget for MotherCare consideration. Two working group activities are planned for 1991: a two-day introductory workshop in April or May, and a second one-day workshop to be held mid-summer on topics of interest to the member organizations and USAID.

**Potential Study of GDS Iron Supplement with INCAP:** Ms. Taylor also explored INCAP's interest in working with MotherCare to test the effectiveness of a slow release, gastric distribution system (GDS) iron supplement in conjunction with its other iron supplementation studies. While piggy-backing the proposed study on current work was ruled out, INCAP expressed interest in undertaking such a study and the Director proposed that he meet with MotherCare and AID in Washington in early December to explore this possibility.

**Follow-up:** MotherCare's immediate follow-up to this visit will include the:

- assignment of staff and consultants and processing of approvals for technical consultancies to the Quetzaltenango project to be carried out in January, February and March 1991;
- completion of the draft evaluation/monitoring framework for the Quetzaltenango project;
- preparation and review of a subcontract for support of the Technical Working Group, which should be awarded by early February 1991;
- discussions with INCAP in December in Washington, D.C. about the potential GDS iron study.

## TABLE OF CONTENTS

### EXECUTIVE SUMMARY TABLE OF CONTENTS ACRONYMS

#### I. INTRODUCTION

#### II. QUETZALTENANGO MATERNAL AND NEONATAL HEALTH PROJECT

- A. Background
- B. Purpose and Activities
- C. Status of Quetzaltenango Project Activities
  - 1. Project Start-up and Administration
  - 2. Intrapartum/Neonatal Mortality Study
  - 3. Maternal Mortality Study
  - 4. Study of Compliance and Non-Compliance with TBA Referral
  - 5. Vital Events Reporting System
  - 6. Hospital Norms and Forms
  - 7. Clinic/TBA Norms and Training Plans
  - 8. Training of Nurses as TBA Trainers
  - 9. Conclusions and Recommendations
- D. Revised Budget Projections
- E. Project Monitoring/Evaluation Framework
- F. Technical Assistance Plan

#### III. TECHNICAL WORKING GROUP ON HIGH RISK WOMEN AND NEONATES

- A. Background
- B. Activities
- C. Scope of Work Drafted

#### IV. POTENTIAL FOR GDS IRON STUDY WITH INCAP

- A. Background
- B. Activities
- C. INCAP's On-going Iron Studies
- D. INCAP's Interest in a GDS Iron Study
- E. Conclusion/Follow-up

#### APPENDICES

- 1. List of Contacts
- 2. Quetzaltenango Project Monitoring/Evaluation Framework (Draft)
- 3. Proposed Technical Assistance Plan - January to June 1991
- 4. Scope of Work for Technical Working Group on High Risk Women and Neonates

## ACRONYMS

ACNM	American College of Nurse-Midwives
AID	Agency for International Development
CDC	Centers for Disease Control
CLAP	Latin American Center for Perinatology
CTO	Cognizant Technical Officer
GDS	Gastric Distribution System
ICRW	International Center for Research on Women
INCAP	Nutrition Institute for Central America and Panama
JSI	John Snow, Inc.
MCH	Maternal/Child Health
MOH	Ministry of Health
PI	Principal Investigator
ROCAP	AID Regional Office for Central America and Panama
TA	Technical Assistance
TBA	Traditional Birth Attendant
TT	Tetanus Toxoid
USAID	United States Agency for International Development
VERS	Vital Events Reporting System

## **I. INTRODUCTION**

The visit described in this report was my third to Guatemala as the MotherCare Long Term Projects Coordinator. It followed the October visit to Guatemala of the AID Cognizant Technical Officer (CTO) for the MotherCare Project, Dr. Mary Ann Anderson, and was concurrent with MotherCare Consultant Pam Putney's and MotherCare Intern Linda Hodge's work with the INCAP Project.

My objectives while in Guatemala were to:

- assess the status of INCAP's Quetzaltenango Maternal and Neonatal Health Project, which is funded by MotherCare, and provide technical assistance to INCAP for implementation of the project;
- develop a scope of work for support of the proposed Technical Working Group on High Risk Women and Neonates; and,
- discuss with INCAP a possible study of the slow release, gastric delivery system (GDS) iron supplement.

The background, purpose, activities and results related to each of these objectives are detailed separately in the sections that follow.

Upon my arrival in country, an initial briefing was held with Jayne Lyons (USAID/Guatemala) and Sandra Callier (ROCAP) to discuss the scope of work for this visit and the Mission's priorities. Ms. Callier also accompanied the INCAP team and the MotherCare Advisors to Quetzaltenango for a site visit. A debriefing was attended by Ms. Lyons, Ms. Callier and USAID/Guatemala Health and Human Resources Chief, Richard Martin, and Public Health Officer, Lynn Gorton.

A complete list of contacts is included as Attachment 1 of this report.

## **II. QUETZALTENANGO MATERNAL AND NEONATAL HEALTH PROJECT**

### **A. BACKGROUND**

Under a subcontract signed in August 1990, MotherCare is providing technical and financial support for the INCAP Quetzaltenango Maternal and Neonatal Health Project. The project is developing and testing an improved obstetric and neonatal case management approach in four highland districts of the department of Quetzaltenango. The hypothesis is that improved management of life-threatening conditions by TBAs and the health system will lead to significant reductions in intrapartum, neonatal and maternal mortality. MotherCare has received partial support for the Quetzaltenango project through buy-ins from USAID/Guatemala and ROCAP.

The standard WHO Risk Approach to the care of pregnant women focuses on predicting, through an initial interview and routine clinic visits, who should

receive special attention during the prenatal period and/or hospital attention during labor and delivery. For a variety of reasons, including extremely low utilization of the prenatal care offered in Ministry of Health clinics and the model's lack of sensitivity and specificity, the WHO Risk Approach has been found to be inappropriate in rural Guatemala.

The case management approach being tested by INCAP in Quetzaltenango varies from the clinical WHO model by focusing its attention on the traditional birth attendant (TBA) and the family and their interaction with referral health services when problems occur. Its hypothesis is based on the assumption that the following actions will save maternal and infant lives:

- recognition of the early signs of life-threatening problems during pregnancy, delivery or the puerperium by the TBA and/or the family (TBAs attend 70% or more of the deliveries in the rural highlands and they are the primary providers of prenatal care);
- rapid referral of such cases by the TBA to an appropriate referral facility;
- immediate transport of the client to the facility; and,
- appropriate management of such emergency cases by the referral health facility.

The principal project interventions include training 400 traditional birth attendants (TBA) to recognize and refer the conditions most frequently associated with mortality, and up-grading the quality of care provided to high risk and emergency cases at district clinics and the departmental referral hospital.

In preparation for the intervention phase of the project, INCAP is conducting three diagnostic studies:

- a retrospective case-control study of intrapartum and neonatal deaths (community and hospital);
- a similar study of maternal deaths in the entire department of Quetzaltenango; and,
- a study of the reasons for compliance and non-compliance with TBA referrals to the departmental hospital.

On the basis of work conducted by MotherCare consultant Dr. Nils Daulaire in early September, the project's Principal Investigator (PI), Dr. Barbara Schieber, is also working to establish a Vital Events Reporting System (VERS) that will provide information for monitoring and evaluating the effect of the project's interventions on intrapartum and neonatal mortality.

## B. PURPOSE AND ACTIVITIES

The objectives of my work with INCAP and the Quetzaltenango project were to:

1. Assess INCAP's progress towards the objectives stated in the project workplan;
2. Review the overall project budget with the PI and revise it to accommodate increased staff and data processing needs, as well as escalating transportation and salary costs;
3. Develop the framework for project monitoring and evaluation, including the determination of process and impact indicators to be measured over the life of the project;
4. Supervise the work of MotherCare intern, Linda Hodge, and consultant Pam Putney; and,
5. Prepare a plan for technical assistance to the project for the next six months.

Towards completion of these objectives two visits to Quetzaltenango were carried out with INCAP Principal Investigator, Dr. Barbara Schieber. The first took place during the week of November 5, and included Sandra Callier of ROCAP, the INCAP Co-Investigator Dr. Alfred Bartlett, Dr. Elizabeth Bocaletti also of INCAP, MotherCare Consultant Pamela Putney, and MotherCare Intern Linda Hodge. During this three-day stay we reviewed the status of project activities and the results of the technical assistance being provided by Ms. Putney and Ms. Hodge. A plan was also developed for technical assistance to be provided by MotherCare during the first half of 1991.

During the second visit to Quetzaltenango, I reviewed the questionnaires being used in the three concurrent studies with Dr. Schieber and discussed some of the preliminary findings with her. Work on the evaluation and monitoring framework, which was started in Guatemala City, was also continued. In conjunction with this work, a site visit to the Health District of Palestrina and discussions with the Department's Chief Nursing Officer were also carried out. Meetings were also held with the Chief of the Ob/Gyn Department and the Chief of the Neonatal Service of the Hospital, and with Lic. Luis Anibal Velasquez, a group process facilitator who will be working with INCAP on the project.

In Guatemala City, I worked with Dr. Schieber to revise the project budget and to review and make slight revisions in INCAP's first quarterly financial and technical progress reports. I also met with the directors of the transport, finance and computer sections of INCAP and with Dr. Raul Najaro, a Guatemalan obstetrician gynecologist who is working with INCAP on the revision of the Xela hospital's norms and procedures.

### C. STATUS OF QUETZALTENANGO PROJECT ACTIVITIES

My review of INCAP's progress focused on the status of the three studies mentioned above, the development of the VERS, and the PI's work with the Health Area Office and the Departmental Hospital to revise and/or develop norms for the management of high priority obstetric and neonatal conditions. At the same time, the general administration of the project and the organization of the offices in Xela and in Guatemala City were also of interest. The following paragraphs summarize findings related to each of these:

#### 1. Project Start-up and Administration

After only three full months of project activity, INCAP has: 1) established an almost fully-equipped project office and transportation unit in Quetzaltenango; 2) hired and trained all necessary administrative and technical staff for current project activities; 3) established all of the necessary administrative systems and controls required for project operations; and, 4) gotten all three of the planned diagnostic studies underway.

The INCAP staff in Quetzaltenango now numbers over 20 permanent and contracted workers, most of whom are assigned to the three diagnostic studies and the VERS. While project start-up has not been problem-free, it has proceeded ahead of schedule. INCAP and Dr. Schieber deserve a great deal of credit for their achievement in this area. In this relatively short time, Dr. Schieber has also been able to gather a team of highly motivated field workers in Quetzaltenango, to train them and to create an atmosphere in which they obviously feel challenged and committed to the work in which they are involved. This accomplishment is made more impressive by the fact that Dr. Schieber, who has very little previous managerial experience, has had to deal with several slow-moving bureaucracies to get the Quetzaltenango project up and running. She deserves our praise for her tireless efforts.

#### 2. Intrapartum/Neonatal Mortality Study

The questionnaires used in this study were first developed by Dr. Alfred Bartlett and Dr. Elizabeth Bocaletti (both of INCAP) for their study in Santa Maria de Jesus. The study instruments, which were originally designed to detect only the time, cause and risk factors associated with the death, were expanded for the Quetzaltenango study to investigate the family's decision-making process and the constraints they face when seeking help for a sick infant. An in-depth understanding of this process was felt to be extremely important before attempting to influence the response of families and communities to problems during pregnancy, labor and postpartum/neonatal periods.

Using funds remaining from the earlier TBA study, Dr. Schieber was able to start the field work for this study before the signing of

the MotherCare-INCAP subcontract. MotherCare support has been used to complete field work on the community study and to add to it the investigation of a set of hospital deaths that will eventually be compared to those in the community.

At the time of this visit, field work for the community study was complete, questionnaires had been coded and data was being put into the computer for analysis. A total of 120 out-of-hospital intrapartum and neonatal deaths and 120 controls (surviving infants) were investigated in the project's four health districts. The preliminary analysis of the community data is expected to be completed by early 1991.

A sample of in-hospital intrapartum/neonatal deaths was added to the original study to better understand the differences between families that seek hospital care and those that do not. It will also provide more indepth information about the hospital's care of emergency births and high risk neonates. Interviews are being conducted with all mothers experiencing an intrapartum or neonatal death in the hospital and with one control (mother of infant that survived) for each case. The study started September 23, and by November 14, 23 cases and 23 controls had been interviewed.

The questionnaire developed for the community study was modified slightly for use in the hospital. In addition to the information collected in the community, data are also taken from the infant's chart and the autopsy report, if one was performed. The sample size for this study has been set at 100 cases with a like number of controls. Completion of data collection is expected by early March 1991.

As part of her scope of work, MotherCare intern Linda Hodge, has been assisting Dr. Schieber to code and clean the data from this study. She is also preparing an in-depth analysis of a series of questions included in the study which focus on maternal attitudes towards the deaths of their infants.

### **3. Maternal Mortality Study**

This study was started in September when INCAP investigators visited every municipality in the Department of Quetzaltenango to obtain information about all deaths of women 15-49 years during the preceding twelve month period (July 1989-June 1990). At the same time, two births were selected for every suspected case as potential controls; control births were selected in the same location and during the same time period. Information on births and deaths was taken from the civil registry, hospitals (private and public) and funeral homes. 326 total deaths in women of reproductive age were identified in this phase.

The study instrument was developed and pretested and by October 1, all of the field staff for this study had been hired and oriented. (All field workers are physicians who have finished their studies

but have not yet graduated.) Field work was initiated on October 24, after an intensive standardization and training period for all personnel. Standardization included 139 interviews conducted in sociodramas and in the community with women of fertile age.

As of November 14, 104 families that had experienced the death of an adult female member had been visited. 13 of these deaths, or 12.5%, were determined to be maternal deaths (deaths during or within 42 days of the termination of a pregnancy). 21 controls had also been interviewed. One interesting finding is that of the 13 maternal deaths identified, only 7 had been correctly classified in the civil registry as maternal deaths. The other 6 had been registered as deaths from infectious disease, diarrhea and other causes. This demonstrates a significant under-reporting of maternal deaths and corroborates similar findings from an earlier INCAP study which showed under-reporting of maternal deaths in Guatemala's hospitals to be approximately 50%.

The investigators are following a rigorous schedule which includes weekly observation of each of the field workers, and daily review and cleaning of questionnaires. Completion of data collection was originally expected by late January 1991; however, it now appears that the study will be extended in order to reach a sample size of approximately 90 maternal deaths which will allow for comparison of cases and controls.

A sample size of approximately 90 maternal deaths and 180 controls were originally expected based on an estimated maternal mortality ratio of \_\_\_\_\_ per 1,000 live births. It is apparent, however, at this point, that fewer maternal deaths will be found than expected in the twelve months under review. This may be due to: 1) an overestimate of the true maternal mortality ratio; 2) more serious underreporting of adult female deaths than anticipated; and/or 3) misreporting of pregnancy status at the time of death by the family members interviewed. All three factors have been addressed by the PI, however, it still appears that the total sample size will fall well short of the 90 cases needed.

In order to reach the sample size required, the PI plans to extend the study for several additional months with a reduced team of only three field workers. Because the first 12 month sample of adult female deaths has been covered more rapidly than originally anticipated, this extension can be accomplished within the budget that was originally allocated for the diagnostic studies. This modification is acceptable and should be accepted by MotherCare.

In both the intrapartum/neonatal and the maternal mortality studies, INCAP's field workers have faced serious problems which they have had to overcome. The first difficulty was finding the families that had registered births and/or deaths. Addresses were often vague, when not incorrect, and travel was difficult because of roads and weather conditions. For the maternal mortality study, in particular, interviewers had to travel throughout the entire department to find possible cases. They also had to learn to

conduct interviews of grieving family members with great care and compassion and to approach private and public hospital officials carefully in order to gain access to important information about possible maternal deaths. All of this they have accomplished successfully due to their own perseverance and the capable leadership of the project's management team.

#### **4. Study of Compliance and Non-Compliance with TBA Referral**

According to the protocol for this study, all women admitted to the hospital who have been referred by a TBA, and a like number of women who have been referred by TBAs but have not complied with the referral, are to be interviewed. The study was initiated on September 23, and its duration is expected to be approximately 6 months.

The study uses a non-randomized sampling technique and is descriptive in nature. Its primary goal is to look for the differences between those families that comply with TBA referral and those that do not. For women admitted to the hospital, the investigation will determine the reason for referral, the delay in reaching the hospital, the means of transportation, the distance from the hospital in hours and kilometers, the attention received at the hospital, the neonatal outcome (survival, Apgar score), the client's perception of the services received and her suggestions for modifications in the hospital's care. In the community, the study should focus on problems during the pregnancy, delivery, and postpartum; health seeking behavior; the attention given by the TBA and others; reasons for non-compliance with referral; and neonatal outcome.

The hospital study of intrapartum/neonatal deaths and the study of TBA referral, are being carried out simultaneously by one interviewer who visits the hospital daily. Coding and data processing will take place early in 1991, with completion of the hospital portion scheduled for April 1991.

The PI no longer plans to carry out the community portion of this study as it was originally planned. Since the VERS will provide information on TBA referral, compliance and attitude toward referral, it will be more cost-effective to compare the baseline VERS data with that from the hospital, instead of attempting to identify and interview a separate community sample. This reduction in effort, while minimal, will allow needed resources to be shifted to the VERS.

#### **5. Vital Events Reporting System (VERS)**

The September consultancy of Dr. Nils Daulaire led to the decision to modify the research design of the Quetzaltenango project. At that time, it was decided to eliminate the pre/post study design originally planned in favor of the VERS which will allow INCAP and

MotherCare to measure changes in intrapartum/neonatal mortality as a result of project interventions.

The VERS plan calls for selection of approximately 120 villages (60 intervention and 60 control) according to a stratified random sampling technique. In each village, basic information is collected and the village is either accepted or rejected according to a set criteria. If accepted, the local TBAs are identified and a monitor or monitors are recruited and given a short orientation.

By mid-November, the INCAP team had identified and contacted over half of the VERS villages. A set of draft questionnaires had also been developed for the case investigation of all births and all infant and maternal deaths in the villages. Initial comments were made on these instruments which will be finalized and sent to MotherCare in early December for review and approval.

At the time of this visit, the Principal Investigator was facing a serious problem with the start-up of the VERS. Based on the belief that female interviewers would be more acceptable to women in the villages than would male interviewers, the six field workers originally selected for the VERS were women. Unfortunately, while they proved to be capable interviewers and enthusiastic team members, four of the six were unable to pass the certification test to operate a motorcycle. And, after almost two months of lessons and coaching, it is safe to say that none of the six felt comfortable on the motorcycles that they would have had to ride over imperfect roads and under less-than-favorable weather conditions to visit their assigned villages.

Shortly after my visit, the PI informed MotherCare that she had released the female field workers from their positions and transferred five of the eight male interviewers working on the maternal mortality study to the VERS. While this was a difficult decision, it was made by INCAP based on the failure of the female workers to progress and the anticipated management burden and delay that this represented. The male interviewers are reportedly doing well and the PI estimates that all intervention and control villages will be selected, visited and ready for start-up by mid-January 1991.

## **6. Hospital Norms and Forms**

The project team has initiated work with the heads of the OB/GYN Department, the Pediatric Department, the Neonatal Care Service and the Chief nurse of the Xela hospital, to review and revise norms for the care of high priority women and newborns. As part of this process, project staff are working with the hospital to introduce and test the Perinatal Clinical History form developed by CLAP and adapted for use at the Hospital San Juan de Dios in Guatemala City. This will require the training and standardization of the hospital's staff, residents, and medical students in the use of the form and, subsequently, the evaluation of its use.

INCAP has identified two Guatemalan consultants, Dr. Erick Boy, an INCAP researcher, and Dr. Raul Najaro, a faculty member of both the Marroquin University and the San Carlos University Medical Schools, to work on this task. In November, both consultants participated in seminars with hospital staff during which the hospital's needs were explored and the consultants discussed their efforts to introduce the Perinatal History Form and revised norms for perinatal care at the Hospital San Juan de Dios in Guatemala City. INCAP will continue to use both of these experts as consultants at the hospital level. (See Technical assistance plan described in Attachment 3).

In my interviews with hospital staff, I was very impressed with their enthusiasm for the INCAP project and their apparent openness to changes in the hospital's procedures. They also appeared to be very pleased with the initial sessions with Dr. Boy and Dr. Najaro and they requested that both return to work in greater detail with hospital staff early in 1991. The hospital's neonatologist, Dr. Mario Mejia has completed a literature review in preparation for the development and introduction of norms for neonatal care and he is very enthusiastic about the planned consultancy of Dr. Roberto Sosa in January. (See Technical assistance plan described in Attachment 3).

Discussions with hospital staff explored concerns raised by MotherCare's CTO and the USAID/Mission about some of the hospital's practices and the negative effects they can be expected to have on maternal-infant bonding and the establishment of exclusive breastfeeding. (See Pam Putney's trip report for discussion of this topic.)

## **7. Clinic/TBA Norms and Training Plans**

According to the project workplan, revision of MOH clinic norms and development of training curricula for clinic staff and TBAs should begin during Project Month 6. MotherCare consultant, Pam Putney, was able to start this process with Dr. Schieber and Co-investigator, Dr. Alfred Bartlett during her November consultancy. She reviewed the TBA training plans developed and used in Santa Maria de Jesus and determined that, if revised slightly, they could be easily introduced to the Health Area for use in Quetzaltenango. (See Pam Putney's trip report for further discussion of this aspect of the project.)

## **8. Training of Nurses as TBA Trainers**

How best to train district nurses as trainers and supervisors of TBAs is a constant topic of discussion. During our initial meeting with USAID, Jayne Lyons requested that we explore the possibilities for training the district nurses in basic obstetrics and, in particular, normal birth. She expressed interest in potentially including such a training component in the Mission's new bilateral health and population project.

While the Quetzaltenango Project includes a training of TBA Trainers course for district nurses, the level of obstetrics training described by Ms. Lyons is not currently anticipated. The Training of Trainers planned in Quetzaltenango will focus on increasing the nurses':

- knowledge of a minimal number of priority health conditions that have a negative effect on women and newborns;
- their ability to recognize, manage, and stabilize a patient with these conditions until transfer to a referral facility is possible;
- use of an interactive training technique to teach these same skills to the TBAs.

In my discussions with the PI, she expressed her feeling that the more indepth. hands-on obstetrics training proposed by Jayne Lyons would be beyond both the scope and the intent of the current project. She also felt that it would most likely be unacceptable to district health officials for a consultant to do such training in a public facility since the consultant would have to be recognized and accepted at the central as well as the departmental level before being allowed to practice in Guatemala.

This concept was also discussed with MotherCare consultant Pam Putney and a separate memo was prepared for the Mission outlining the advantages and disadvantages of such an approach.

## 9. Comments and Recommendations

My overall assessment of INCAP's progress to date is extremely positive. A great deal of effort has gone into getting the various studies and the VERS up and running, and this shows in the quality of the work that is underway.

At this point, while the emphasis for the PI will remain with the VERS during its early days of field activity, her attention must begin to shift towards developing the project interventions (norms, forms and training curricula) with her Ministry counterparts and to the analyzing and using data from the three diagnostic studies. In order for this to happen, her time must be freed for these activities.

Dr. Schieber's rapid growth as a manager, as well as her continued development as a researcher, are impressive. At the same time, her knowledge of statistics and programming is limited, as is her experience working with programmers to extract and use data efficiently. It is unrealistic to expect that she will be able to take full advantage of the wealth of information that her team is collecting if she is not given additional help in this area from her colleagues at INCAP and from MotherCare. With this in mind, the following recommendations were made and discussed with INCAP and USAID:

- a. The PI requires special assistance to develop the VERS data base and the analytic plans for data from the VERS and the diagnostic studies. She would also benefit from some direct assistance during the write-up of study results.

Dr. Alfred Bartlett and Dr. Jorge Hermida, co-principal investigators on the project are available to Dr. Schieber. Both have provided assistance with study design and presumably their participation will continue during the analysis of the data produced by those studies. At the same time, both of the co-investigators have a number of other projects and priorities and it is likely that they will not be able to "get into" the Quetzaltenango data to the degree required. Also, neither has experience with the scope of population-based vital events monitoring proposed for Quetzaltenango.

Several different options were discussed with the PI and INCAP including: 1) the assignment by INCAP of a capable statistician/ programmer to work with Dr. Schieber on a part-time but continual basis; 2) a commitment of technical assistance from MotherCare for supervision, analysis and write-up of the VERS data; and, 3) MotherCare and/or local consultants with research background to assist the PI with the analysis and write-up of findings from the diagnostic studies.

All of these are potentially feasible, although each has budgetary implications for INCAP and/or MotherCare.

- b. The information collected by INCAP through the diagnostic studies should be written-up and shared with Guatemalan policy-makers, health care providers and the public as soon as possible. It is particularly important that this be done prior to the proposed Central American Safe Motherhood Conference which is planned for late 1991 or early 1990.

A social-marketing strategy could be developed for disseminating this information to academics, policy-makers and the general public. Messages related to the identification and management of high risk women and infants should be developed to both inspire and educate. Personally, I am always extremely moved by interviews with families that have experienced an infant or a maternal death. I may be wrong, but I expect that this is true with most people. Somehow the very personal tragedies described, make the impersonal statistics real. The point is that INCAP will have in its possession very powerful and very important information that must be used. MotherCare is eager to work with INCAP and perhaps the Technical Working Group for High Risk Women and Neonates described below to do this.

- c. For the next year, three supervisory level staff, in addition to the PI, are required to supervise the day-to-day activities of the field studies, the VERS and the project's training and management interventions.

In the original proposal, only two such persons were anticipated, the Medical Officer and a Field Supervisor who was budgeted for only the first 6 months of the project. With the addition of the VERS, another supervisory position was created, that of the Research Coordinator which was added for the length of the project. During the completion of the diagnostic studies, the write-up of study findings and the development of project interventions, the presence of these three supervisors will be critical. After that, a reassessment of roles and work load should be carried out to determine the appropriate number and level of supervisory positions.

- c. Given the Quetzaltenango project's hypothesis and time frame, it does not appear that it will be feasible to include more extensive obstetrics training for district nurses than originally planned.

MotherCare will continue to explore this possibility during the planned consultancies of Pamela Putney and a consultant from the American College of Nurse Midwives (ACNM) in February. At the very least, the Quetzaltenango experience should teach INCAP, MotherCare and USAID a lot about the need and feasibility for such a training program and how it might be

structured if the decision is made to proceed with this type of training under the new USAID project.

These recommendations were discussed with the PI, INCAP, USAID and ROCAP. The budget revisions and planning for MotherCare's technical assistance to the project, which are described in the following sections, were based on these recommendations.

#### **D. REVISED BUDGET PROJECTIONS**

A number of factors have affected project costs since budget estimates were completed in March 1990. These include:

- The decision by MotherCare and INCAP to establish the VERS in place of the pre/post survey design originally planned. This increased the number of field interviewers and the number of motorcycles required over the life of the project, as well as related salary, per diem and transportation costs. In addition, a Research Coordinator position was added for the life of the project and the number of computers required was increased to two - one of moderate and the other of high capacity.
- The costs of gasoline products and imported goods in Guatemala have increased approximately 40% during the past 6 months, due to both an inflationary trend and the worldwide increases in petroleum prices experienced as a result of the Persian Gulf crisis.
- The salaries of INCAP professional and non-professional staff were raised to keep up with inflation in mid 1990. While inflation nullified a large part of this increase, INCAP non-professional salaries, in particular, are now higher in US Dollar equivalents than originally budgeted.
- The need to up-grade one of the Field Assistant positions for at least the next 12 months, in order to meet demands that are greater than expected for supervisory staff. The need for this change has become apparent during the first quarter of the project and the PI requested that the project budget be adjusted to allow for it.

I worked with the PI to revise the project's budget projections, incorporating the changes described above and adjusting other line items based on the recent devaluation of the Quetzal. Per these projections, the revised

budget total would be approximately \$499,000, or \$25,000 (5%) over the approved subcontract price.

This increase is primarily the result of a change in INCAP's scope of work which was requested by MotherCare and cost factors outside of INCAP's control. As such, it would normally be sufficient justification for a subcontract budget amendment. (The projections also show that an amendment may be necessary at some point in the future because of probable overages of more than 15% in several of the line items.) However, other factors that could make a budget increase unnecessary must also be considered.

First, after only three months of operation, the project's monthly cash needs are still very undefined. This makes long range projection difficult. Secondly, there are still a number of unknowns, including the approved INCAP overhead rate for this and subsequent years. If the overhead rate stays at its current 25%, an increase in direct costs may not push expenses over the approved budget. On the other hand, if the overhead rate is increased to the 30% originally estimated, a budget increase will probably be needed.

#### Recommendation:

On the basis of this analysis and at this very early point in project implementation, it is recommended that MotherCare and INCAP wait before considering a budget increase. An analysis of expenditures and prices at 12 or 18 months will be expected to produce a much more reliable estimate of the need for and exact details of such an amendment. In the meantime, MotherCare should encourage the PI to monitor costs and control expenditures in an attempt to stay within the approved total.

A separate memo has been prepared for INCAP detailing the revised budget projections, their implications and the recommendations above.

#### R. PROJECT MONITORING/EVALUATION FRAMEWORK

It is MotherCare's intent to develop written monitoring/evaluation guidelines for all long-term projects. These guidelines will help us to plan for comparison of specific variables which are of interest across projects as well as for the measurement of local project results. The draft Framework described below was developed with the PI and her staff. After further review and expansion, it will guide the management and use of the wealth of data generated by the Quetzaltenango Project.

Attachment A: (Draft) Quetzaltenango Evaluation and Monitoring Framework, synthesizes the work carried out with the PI to determine the indicators of interest to the project and how they will be collected and monitored. In trying to identify a minimal number of "process" and "impact" indicators, we first addressed the project's hypothesis and the series of assumptions made about the effects of our inputs (norms, forms, training, equipment) on intermediate change variables (TBA and family attitudes and behaviors, the content of health services) and the effects that these are expected to have on mortality. These assumptions are represented in Part 1 of the framework.

The second step in developing the Framework involved identifying the indicators that can be expected to tell us over time whether or not expected changes are taking place. Because we will also want to know something about how these changes are related to our inputs or why they are not taking place if this is the case, additional indicators were also listed. Subsequently, each of the potential indicators was described and the possible sources of the information required to construct the indicators were identified. The results of these steps are shown in Parts 2 and 3 of the Framework.

Part 4 of the Framework is the list of input indicators to be reported to MotherCare on a quarterly basis.

During development of the draft Framework, special attention was given to the potential use of information from the VERS for project monitoring and evaluation. The VERS calls for notification and investigation of all births and deaths in randomly selected intervention and control villages. It has the potential to provide population-based information on health knowledge and behaviors, cause of death and associated factors, as well as on-going estimates of intrapartum and neonatal mortality ratios. The availability of key service statistics from records generated by Ministry of Health (MOH) clinics was also assessed, with the idea that these could be used and/or expanded to measure changes in important process variables.

Once completed, the Framework will include the following elements:

- Part 1: A visual representation of the project's hypothesis. (completed in draft)
- Part 2: A list of the potential indicators that could be measured to detect expected changes at the level of the woman and her family, the TBA, the health clinic and the referral hospital. Indicators of the project's impact on intrapartum/neonatal mortality ratios and mortality associated with various causes and factors are also shown. (completed in draft)
- Part 3: Descriptions for each of the priority indicators and the proposed sources for the information required. (completed in draft)
- Part 4: Variables to be monitored and reported on a routine basis by INCAP to MotherCare. (Completed in draft)
- Part 5: Variables to be collected in routine contacts with TBAs. At present only the numbers of TBAs attending monthly meetings and training sessions are retrievable. No information on TBA referrals to clinics and hospital are recorded, nor are the numbers of births attended by TBAs or the outcomes of those births.

- Part 6: Variables to be collected at the level of the MOH clinics. At present, only the total numbers of prenatal visits and TT immunizations by dose are routinely reported. The Health Area and Health Districts express the need for a new MCH recording and reporting system that will allow them to plan and evaluate priority activities. It is one of the project's objectives to assist with the development of such a system with Ministry counterparts.
- Part 7: Variables to be collected at the referral hospital. With the introduction of the Perinatal History Form, a long list of potential variables for all admissions and outpatients should become available.

Once completed, this Framework will be used by the PI and MotherCare to guide data collection and analysis over the life of the project. During the coming months, it will be reviewed and streamlined with the project's evaluation consultant, Dr. Daulaire. MotherCare will also provide additional technical assistance to INCAP for creation of the project data base and the adaptation of existing software to facilitate routine data processing, analysis and reporting (see TA Plan below).

#### **F. TECHNICAL ASSISTANCE PLAN**

Brief scopes of work and tentative dates for consultancies to be carried out from January through June 1991, were prepared with the P.I. based on the assessment and recommendations described above. Technical consultancies will focus on:

- Development of hospital norms and forms (Dr. Roberto Sosa, neonatologist; Dr. Raul Najaro, Ob/Gyn, and Dr. Erick Boy, INCAP)
- Development of clinic norms, forms, training curricula for district teams and TBAs (Ms. Pam Putney and ACNM consultant, nurse midwives)
- Vital Events Reporting System start-up and supervision (Dr. Nils Daulaire); Computer programming, data base creation for VERS and project monitoring system (Ms. Mimi Church)
- Analysis and write-up of diagnostic study results (MotherCare staff or consultant)
- Special study of hospital practices related to maternal and neonatal care and the effect of revised norms on this care. (Linda Hodge)

The technical assistance plan can be found in Attachment 3.

### **III. TECHNICAL WORKING GROUP ON HIGH RISK WOMEN AND NEONATES**

#### **A. BACKGROUND**

MotherCare has been asked by USAID/Guatemala to provide support to a Technical Working Group on High Risk Women and Neonates. The formation of this group was recommended after the "High Risk Births Workshop" sponsored by the Mission earlier in the year. USAID sees this group as an important resource for the design of the bilateral health and family planning project which will start in 1992. It is for this reason that the USAID Mission has provided funding to MotherCare to undertake the formation and support of the group.

In September, consultant Melody Trott met with participants of the High Risk Births Workshop to discuss their expectations for the Working Group. During the visit reported here, the intent was to assess the feasibility of Ms. Trott's recommendations and to proceed with the development of a local subcontract for the group's formation and activities during 1991.

#### **B. ACTIVITIES**

I met and discussed the concept of and the activities proposed for the working group with:

- Jayne Lyons of USAID
- MotherCare consultant Pam Putney (one of the facilitators of the "High Risk Births Seminar" where the idea for the working group was born)
- Drs. Bartlett, Schieber and Bocaletti of INCAP
- Melody Trott, who was in Guatemala during this visit.

On the basis of these discussions and the recommendation from Ms. Trott that the Association of Guatemalan Obstetricians and Gynecologists would be the most appropriate coordinating organization for the working group, I also met with the in-coming president of the Association, Dr. Rolando Figueroa. Our initial discussion centered on the possible role of the Association in the formation of the Working Group, the group's objectives and composition, and its possible activities during 1991.

#### **C. SCOPE OF WORK DRAFTED**

A tentative scope of work for support of the working group through mid-1991 was drafted and reviewed with USAID and Dr. Figueroa (see Attachment 4). This scope of work calls upon the coordinating organization to: 1) form the working group, 2) plan and conduct two professional seminars on topics of

interest to group members, and 3) produce and distribute an information packet or a working paper on one of these topics. These activities will respond to the needs of group members and they should lead to the development of a group identity and action agenda. They will also allow members to address important issues and give them the opportunity to contribute to the content of the 1991 Central American Safe Motherhood Conference as well as the new bilateral AID Health and Population Project to be funded in 1992.

The Guatemalan Association of Obstetrics and Gynecology was subsequently invited to prepare and submit a proposal and budget to MotherCare for the completion of this scope of work. Their proposal is expected in Washington by the end of December at which time it will be negotiated, converted into a subcontract and processed for MotherCare and AID approval. The target date for start-up of the subcontract is February 1991, with the first seminar to be held in April/May.

#### **IV. POTENTIAL FOR GDS IRON STUDY WITH INCAP**

##### **A. BACKGROUND**

The AID Cognizant Technical Officer (CTO) for the MotherCare Project, Dr. Mary Ann Anderson, requested that I follow up on discussions she had in October with INCAP Researcher, Dr. Erick Boy, about a potential INCAP study of the gastric distribution system (GDS), time-released iron supplement. MotherCare has a buy-in from the Office of Nutrition to undertake this study and we have been looking for an organization interested in such an effort. From Dr. Anderson's initial discussions it appeared that INCAP might be a potential site for this activity.

##### **B. ACTIVITIES**

Prior to my departure for Guatemala, a meeting was held between MotherCare staff and Dr. Sam Kahn of the AID Office of Nutrition to discuss the draft protocol he has developed for a GDS study. Dr. Kahn also provided information about the specific GDS product to be tested and the necessary preconditions for the proposed study.

In Guatemala, meetings were held with INCAP's Executive Director, Dr. Hernan Delgado, and with its Director of the Health and Nutrition, Dr. Juan Riveira, to discuss INCAP's current iron supplementation studies and their interest in implementing the proposed study of the GDS iron capsules. I also reviewed the proposals for the current INCAP iron supplementation and fortification studies.

##### **C. INCAP'S ON-GOING IRON STUDIES**

INCAP is currently involved in a study of iron supplementation comparing the efficacy of various dosages of chelated iron with amino acids to that of a standard 120 mg per day dose of ferrous sulfate. The study, started by Dr. Oscar Pineda prior to his retirement, is comparing the effects of chelated iron and ferrous sulfate on seven different types of anemic individuals:

1. Infants and children (6 mos. to 2 years)
2. Teenage girls
3. Pregnant teenagers
4. Non-pregnant women
5. Non-pregnant women
6. Senior citizens
7. Hospitalized adult patients

In addition, INCAP is involved in a study of sugar fortification with both chelated iron with amino acids and vitamin A.

The studies with adolescents and adults are comparing the effects of three different dosages of chelated iron (30 mg. elemental iron per day, 30 mg BID, 60 mg. BID) with the effects of the standard dosage of ferrous sulfate (60 mg. BID); the study with infants and children is comparing the effects of a suspension of ferrous sulfate with one of chelated iron plus amino acids. Tablets of chelated iron with amino acid are being made locally for the INCAP study by Unipharm. Both chelated iron and ferrous sulfate tablets include 250 mg of folic acid. Tablets are administered to each woman daily for four weeks by a health worker.

Sample sizes for these studies vary, but they are relatively small as shown below:

Study	Sample size per group (groups per study, Hmg values)
-----	
infants/children	24 (2 groups, hmg < 11g/dl)
teenage girls	22 (4 groups, hmg < 12g/dl)
pregnant teenagers	11 (4 groups, hmg < 11g/dl)
pregnant women	37 (4 groups, hmg < 11g/dl)
senior citizens	31 (4 groups, hmg < 12g/dl)
hospital patients	14 (4 groups, hmg < 12g/dl women) hmg < 13g/dl men)

The following parameters are being measured prior to the start-up of treatment and at the end of the 4 weeks of daily administration of the iron/folate tablets:

- Hemoglobin by "cianomethahemoglobina"
- Hematocrit (microhematocrit)
- Total Iron Blood Capacity
- Free Erythrocytic Protoporphyrin
- Ferritin
- Serum Iron
- Transferrin

The studies are being carried out in different service sites in Guatemala City, Esquintla and other locations. No mention was made of the need to adjust hemoglobin values for altitude or gestational age nor to control for these factors.

Unfortunately, Dr. Erick Boy was out of Guatemala at the time of this visit so it was not possible to discuss either the design of the studies nor their status with him. It was also not possible to tell from the study proposals given to me by INCAP how the individual studies are being carried out and by whom.

Given their design and the fact that they are already in progress, it does not appear that it would be either desirable or feasible to piggy-back an GDS study on the INCAP studies. The differences in the INCAP and GDS protocols are many. The INCAP protocol, for example, includes daily administration of the supplement by a paid worker; the GDS protocol depends on monthly or on-time distribution and women are expected to take the capsules on their own. Indeed, increased compliance because of fewer side-effects is an important part of the GDS hypothesis. The sample sizes for the INCAP studies are also much smaller than required for the proposed GDS study.

#### D. INCAP'S INTEREST IN A GDS IRON STUDY

I was able to discuss the studies described above and MotherCare's interest in testing the GDS capsule with Dr. Hernan Delgado, INCAP's Director, and with the Director of the INCAP Health and Nutrition Division, Dr. Juan Riveira. They explained the history of the current studies and both confirmed my feeling that it would be better to plan and carry out a separate study of GDS iron and not to attempt to piggy-back on the on-going work.

According to Dr. Delgado, 40-60% of the population of Central America is classified as anemic. INCAP's interest in chelated iron comes from work they have been doing on the fortification of sugar with this substance. Through this work, INCAP has found the absorption of chelated iron with amino acids to be significantly greater than that of ferrous sulfate, however, their fortification experiments have resulted in a product that will probably not be viable on a large scale. Thus, INCAP investigators launched the series of experiments described above to test chelated iron in tablet form as an alternative to ferrous sulfate.

Given INCAP's on-going work in this field, Dr. Delgado expressed his interest in exploring the possibilities for an GDS study with MotherCare. He will be in Washington December 4-6, 1990, to attend the PAHO conference on iron fortification and would be willing to meet and discuss this possibility with MotherCare and AID.

One of the study possibilities he mentioned would take advantage of a perinatal care project that INCAP is implementing in Honduras and Nicaragua, with technical assistance from the Latin American Center for Perinatology (CLAP). The project's focus on community outreach and up-grading prenatal services would allow for sample selection from both community and clinic groups, the orientation of mothers selected for the study and presumably the active follow-up of clients. Dr. Delgado would very much like to see such a study developed and carried out by INCAP outside of Guatemala, in one of the other Central American countries. This is both because INCAP is trying to decentralize its assistance and increase its presence in the other countries and because Dr. Delgado feels an iron study would be a natural add-on to the work INCAP is beginning in Nicaragua and Honduras.

We discussed the problem of folic acid and whether or not this would have to be added to the regimen. INCAP has been adding folic acid to the chelated iron tablets in the studies described above because they have evidence that up to 10% of the anemia in Central America is due to folate deficiency. Since the problems of iron and folate deficiency have been documented in Central America, it is likely that countries with pilot prenatal care projects are giving iron supplements and that these supplements include folic acid. In Guatemala, however, there is no "functioning" national iron distribution program, thus tablets and capsules without folic acid could theoretically be supplied if the study were conducted there.

#### **E. CONCLUSION/FOLLOW-UP**

My non-technical opinion is that INCAP is very interested in the problem of iron deficiency anemia and that they would be willing to work closely with MotherCare on the development and implementation of the proposed study. With assistance for development of the protocol and a monitoring visits at the initiation of and during data collection, they could be expected to do a very good job.

I left a copy of the protocol drafted by Dr. Sam Kahn for the GDS study, the sample capsules, a copy of the ICRW Jamaica study report and the CDC materials on adjusting hemoglobin values for altitude, gestational age and smoking with Dr. Juan Riveira for his review.

## APPENDICES

1. List of Contacts
2. Quetzaltenango Maternal and Neonatal Health Project Monitoring/Evaluation Framework (Draft Parts 1-4)
3. Proposed Technical Assistance Plan January-June 1991
4. Scope of Work for Technical Working Group on High Risk Women and Neonates

## APPENDIX 1. LIST OF CONTACTS

### USAID/Guatemala

Jayne Lyons, Population Advisor  
Lynn Gorton, Public Health Officer  
Richard Martin, Chief, Health and Human Resources

### AID/ROCAP

Sandra Callier, Advisor to INCAP/TRO Project

### INCAP

Dr. Hernan Delgado, Executive Director  
Dr. Juan Riveira, Director Health and Nutrition Division  
Dr. Barbara Schieber, Quetzaltenango Principal Investigator  
Dr. Alfred Bartlett, Advisor to INCAP under TRO Project  
Dr. Elizabeth Bocaletti, Santa Maria de Jesus Project  
Lic. Teresa Gonzalez-Cossio, Nutrition Research

### Health Area, Quetzaltenango

Lic. Clara Luz Barrios, Chief of Nursing and TBA Training Program

### Xela Hospital

Dr. Heberto de Leon, Acting Director Obstetric and Gynecology  
Dr. Mario Mejia, Chief Neonatology  
Dr. Victor Rodas, Chief Pediatrics

### Consultants

Dr. Raul Najaro,  
Lic. Luis Anibal Velasquez

### Guatemalan Association of Obstetrics and Gynecology

Dr. Jose Rolando Figueroa Anzuetto  
Clinica: 6a Avenida 7-72, Zona 10  
Tels: 316770, 315606, 347608, 347609  
Localizador: 347038. 348048

### MotherCare Consultants

Linda Hodge, intern  
Pamela Putney, consultant

**APPENDIX 2:      QUETZALTENANGO MATERNAL AND NEONATAL HEALTH PROJECT  
MONITORING/EVALUATION FRAMEWORK (DRAFT PARTS 1-4)**

Quetzaltenango Maternal and Neonatal Health Project

MONITORING AND EVALUATION FRAMEWORK  
PART 1: PROJECT HYPOTHESIS

PROJECT INPUTS

Diagnostic Studies	Revised norms for care of high priority conditions at hospital and clinic levels	Surveillance system
Improved TBA training strategy	Case review by Hospital and Health Area staff	Regular feedback on project results
400 Trained TBAs	Revised information system	
Regular meetings between TBAs and clinic staff		

PRIORITY PROBLEMS

High rates of maternal and intrapartum/neonatal deaths related to the following conditions:
Prenatal
Bleeding
Swelling
Labor
Prolonged/mismanaged labors
Obstructed labors
Malpresentation
Premature rupture of membranes
Hemorrhage
Maternal Postpartum
Maternal hemorrhage
Maternal sepsis
Neonatal
Neonatal infections
Low birth weight
Asphyxia/hypoxia

PROCESS EXPECTED RESULTS

DETECTION AND MANAGEMENT

PREVENTION

TBA:
Detects priority problems/conditions
Takes appropriate action per established criteria
Stops and/or reduces use of oxytocin during labor
Counsels women on danger signs during pregnancy, delivery and postpartum; importance of prenatal control; nutrition; breastfeeding.
Promotes community awareness of the need for emergency transportation for sick women and neonates

FAMILY/WOMAN:

Detects problem and seeks advice from trained health provider
Accepts referral by TBA when given
Does not delay between recognition of problem and transfer to health facility
Complies with TBA counseling
- at least one prenatal clinic visit
- immunized against IT
- immediate breastfeeding
- exclusive breastfeeding
- consumption of iron rich foods

HEALTH SERVICES:

Treat priority conditions according to revised norms and protocols
Use revised forms consistently and correctly
Treat patients with respect and open communications
Treat TBAs as valued members of health team

IMPACT

Improved survival of women and neonates with priority conditions
Fewer maternal, intrapartum and neonatal deaths

Quetzaltenango Maternal and Neonatal Health Project

EVALUATION/MONITORING FRAMEWORK

PART 2: POTENTIAL INDICATORS

INPUTS			
IBA	FAMILY/WOMAN	HEALTH SERVICES (Hospital/Health Center/Posts)	RESEARCH/EVALUATION
% IBAs (attending/not attending) monthly training sessions compared to target	% of births attended by project trained IBAs	% IHI members trained compared to target	% of surveillance villages in which mini-census has been conducted during the period
% of IBAs who have (received/not received) supplies and equipment compared to target	% of pregnancies in control by project trained IBAs	Median IHI member scores on training pre and post tests	% of surveillance villages contacted each month
% of trained IBAs using carnet consistently for their clients		% Ministry health centers/posts and hospital units in which revised norms are found compared to target	% of births investigated as compared to those expected
		% of workers interviewed who know where norms are located	% of births reported compared to those registered
		% of Ministry health centers/posts and hospital units in which perinatal history form is in use	% of births reported through surveillance system compared to those detected in minicensus
		% of perinatal history forms completed correctly	

13

Quetzaltenango Maternal and Neonatal Health Project

EVALUATION/MONITORING FRAMEWORK  
PART 2: POTENTIAL INDICATORS

PROCESS (CHANGES IN BEHAVIORS/PRACTICE/COVERAGE)			IMPACT
The following indicators correspond to all pregnant/postpartum women and neonates separately:			
IBA	FAMILY WOMAN	HEALTH SERVICES (Hospital/Health Center/Posts)	
% of (women/neonates) with priority problem who are (told/not told) about problem by IBA	% of (women/neonates) with priority problem who report (contact with/no contact with) IBA	% of (women/neonates) with priority problems who are (treated/not treated, according to norms at the (hospital/health center/health post)	Maternal Mortality Ratio Intrapartum Mortality Rate Neonatal Mortality Rate Intrapartum/Neonatal Mortality Rate
% of (women/neonates) with priority problem who are (referred/not referred) by IBA	% of (women/neonates) with priority problem and referral by IBA who (did/did not) accept IBA referral	Frequency of specific inappropriate actions	For the above rates and ratios: Total Hospital/Community Cause specific
% of (women/neonates) admitted to hospital with one of priority problems who were (referred/not referred) by IBAs	frequency of reasons given for non compliance with IBA referral	Frequency of reasons given for inappropriate action	
Problems most frequently missed by IBAs?	% of (women/neonates) with priority problem who (went/did not go) to health center or hospital	Mean # hours delay between leaving home with sick (woman/neonate) and reaching health facility	% of (maternal/intrapartum/neonatal) deaths that are associated with:
Problems most frequently detected but not referred by IBAs?	% of (women/neonates) with priority problem who were transferred within ("acceptable/unacceptable" time period to health center/hospital	Mean # of hours delay between admission to hospital and surgery, if surgery is performed	1. IBA's failure to recognize priority problem and/or IBA's delay in referring to hospital
% of births in which oxytocin is (used/not used)	Mean # hours family delays between recognition of a priority problem and leaving home for the hospital	% of women/families who state they were treated well or acceptably treated by (hospital/health center/health post) staff	2. IBA's failure to refer to hospital
Average number of vials (quantity) of oxytocin used per labor	% of pregnant women attending at least one prenatal control at health center	Frequency of reasons given for perception of negative treatment by (hospital/health center/health post) staff	3. Use of oxytocin during labor
	% of pregnant women who report that IBA told them they should have at least one prenatal visit at health center	Health worker scores on interactions with clients	4. Family/woman's failure to recognize or seek care for problem
	% of pregnant women referred by IBA who (attended/did not attend) at least one prenatal control at health center	Health worker scores on interactions with IBAs	5. Family/woman's delay in seeking care
	% of women with at least (2,3) completed TT immunizations at the time of birth	% of total IBAs attending monthly meetings	6. Family/woman's non-compliance with IBA referral
		% of clients accompanied to the hospital by the IBA who has referred them	7. Family/woman's delay in transferring patient once problem recognized or referred by IBA
			8. Health system's delay in recognizing and/or taking appropriate action for priority problem
			9. Health system's lack of resources (staff, materials, equipment) making it impossible to take appropriate action

*AC*

Quezaltenango Maternal and Neonatal Health Project

EVALUATION/MONITORING FRAMEWORK  
PART 2: POTENTIAL INDICATORS

PROCESS (CHANGES IN BEHAVIORS/PRACTICE/COVERAGE)			IMPACT
The following indicators correspond to all pregnant/postpartum women and neonates separately:			
TBA	FAMILY/WOMAN	HEALTH SERVICES (Hospital/Health Center/Posts)	
	% of women initiating breastfeeding within 12 hours of birth	% of incidents reported by TBAs in which they were reprimanded harshly or unjustifiably by (hospital/health center/health post) staff	% of maternal/intrapartum/neonatal deaths that could have theoretically been prevented through:
	% of women reporting consumption of iron-rich foods during pregnancy/lactation		1. prenatal screening/hospital delivery
	% of women giving liquids other than breastmilk prior to initiation of breastfeeding		2. when face with problem, different action by:
	% of women giving liquids other than breastmilk during first month of life		a. woman/family
			b. TBA
			c. Health services
			3. improved emergency transport or decentralized emergency capability

Quetzaltenango Maternal and Neonatal Health Project

MONITORING/EVALUATION FRAMEWORK

PART 3: DEFINITIONS OF INDICATORS AND SOURCES OF INFORMATION

TBA INDICATORS	DESCRIPTION	SOURCE OF INFORMATION	VARIABLES
<p>% of (women/neonates) with priority problem who are (told/not told) about problem by TBA</p>	<p># (women/neonates) who report a problem and contact with TBA who were (told/not told) by TBA about the problem</p> <p>-----X 100</p>	<p>VEKS</p>	
	<p># (women/neonates) who report a priority problem and contact with a TBA</p>		
<p>% of (women/neonates) with priority problem who are (referred/not referred) by TBA</p>	<p># (women/neonates) who report a problem and contact with a TBA who were (referred/not referred) by TBA</p> <p>-----X 100</p>	<p>VEKS</p>	
	<p># (women/neonates) who report a problem and contact with a TBA</p>		
	<p># (women/neonates) who are diagnosed (in postpartum interview) to have problem and who report contact with TBA who were (told/not told) by TBA about the problem</p> <p>-----X 100</p>	<p>VEKS</p>	
	<p># (women/neonates) who are diagnosed (in postpartum interview) to have problem and who report contact with TBA</p>		
<p>% of (women/neonates) admitted to hospital with one of priority problems who were (referred/not referred) by TBAs</p>	<p># (women/neonates) who are diagnosed (in postpartum interview) to have problem and who report contact with TBA, who were (referred/not referred) by TBA for the problem</p> <p>-----X 100</p>	<p>VEKS</p>	
	<p># (women/neonates) who are diagnosed (in postpartum interview) to have problem and who report contact with TBA</p>		
	<p># (women/neonates) admitted to hospital with problem who report having contact with TBA who were (referred/not referred) by TBA</p> <p>-----X 100</p>		<p>Hospital records</p>
<p># (women/neonates) admitted to hospital with problem who report having contact with TBA</p>			

16

Quetzaltenango Maternal and Neonatal Health Project

MONITORING/EVALUATION FRAMEWORK

PART 3: DEFINITIONS OF INDICATORS AND SOURCES OF INFORMATION

TBA INDICATORS	DESCRIPTION	SOURCE OF INFORMATION	VARIABLES
Problems most frequently missed by TBAs?	# (women/neonates) with a specific problem who report contact with TBA but are not told of problem by TBA? (for each problem)	VERBS Hospital	
Problems most frequently detected but not referred by TBAs?	# (women/neonates) with a specific problem who report contact with TBA but are not referred by TBA? (for each problem)	VERBS Hospital	
% of births in which oxytocin is (used/not used)	# births in which oxytocin is used ----- X 100 # births	VERBS	
Average number of vials (quantity) of oxytocin used per labor	# ampules oxytocin used ----- Mean # births in which oxytocin used	VERBS	

35

Quetzaltenango Maternal and Neonatal Health Project

MONITORING/EVALUATION FRAMEWORK

PART 3: DEFINITIONS OF INDICATORS AND SOURCES OF INFORMATION

WOMAN/FAMILY INDICATORS	DESCRIPTION	SOURCE OF INFORMATION	VARIABLES
% of (women/neonates) with priority problem who report (contact with/no contact with) IBA	# (women/neonates) with priority problem who report (contact/no contact) with IBA -----X 100 # (women/neonates) with priority problem who report contact with IBA		
% of (women/neonates) with priority problem and referral by IBA who (did/did not) accept IBA referral	# (women/neonates) (accepting/not accepting) IBA referral -----X 100 # women referred by IBA		
frequency of reasons given for non compliance with IBA referral	# (women/neonates) not accepting referral by reason -----X 100 # women not accepting referral		
% of (women/neonates) with priority problem who (went/did not go) to health center or hospital	# women with priority problem not referred by IBA who went to hospital -----X 100 # women with priority problem		
% of (women/neonates) with priority problem who were transferred within ("acceptable/unacceptable") time period to health center/hospital	# (women/neonates) transferred within (____) hours of recognition of problem -----X 100 # with priority problem		
Mean # hours family delays between recognition of a priority problem and leaving home for the hospital	Total hours delayed by all families of clients that are transferred ----- X 100 # clients transferred		
% of pregnant women attending at least one prenatal control at health center	# pregnant women reporting they attended at least one prenatal control at health center -----X 100 # births		
% of pregnant women who report that IBA told them they should have at least one prenatal visit at health center	# women who report that IBA told them to go to clinic at least once during last pregnancy -----X 100 # births		

Quetzaltenango Maternal and Neonatal Health Project

MONITORING EVALUATION FRAMEWORK

PART 3: DEFINITIONS OF INDICATORS AND SOURCES OF INFORMATION

WOMAN/FAMILY INDICATORS	DESCRIPTION	SOURCE OF INFORMATION	VARIABLES
% of pregnant women referred by TBA who (attended/did not attend) at least one prenatal control at health center	# women attending at least one prenatal control at health center (referred by TBA/not referred by TBA) -----x 100 # births		
% of women with at least (2,3) completed TT immunizations at the time of birth	# women with at least (2,3) TT immunizations at time of last birth -----x 100 # births		
% of women initiating breastfeeding within 12 hours of birth	# women breastfeeding within 12 hours of birth -----x 100 # live births		
% of women giving liquids other than breastmilk prior to initiation of breastfeeding	# women giving liquids other than breastmilk prior to initiating breastfeeding -----x 100 # live births		
% of women giving liquids other than breastmilk during first month of life	# women giving liquids other than breastmilk during the first month of life -----x 100 # live births		
% of women reporting consumption of iron-rich foods during pregnancy/lactation	# women reporting consumption of iron-rich foods during pregnancy/lactation -----x 100 # live births		

Quezaltenango Maternal and Neonatal Health Project

MONITORING/EVALUATION FRAMEWORK

PART 3: DEFINITIONS OF INDICATORS AND SOURCES OF INFORMATION

HEALTH SERVICE INDICATORS	DESCRIPTION OF INDICATORS	SOURCE OF INFORMATION	VARIABLES
% of (women/neonates) with priority problems who are (treated/not treated) according to norms at the (hospital/health center/health post)	# cases with priority problems that are treated according to norms at hospital -----x 100	Hospital records and observation	
	# cases with priority problems admitted to hospital		
	# cases with priority problems that are treated according to norms at HC/HP -----	HC/HP records and observation	
	# cases with priority problems registered in HC/HP		
	# women receiving iron/folate during pregnancy according to norms -----x 100	VERG HC/HP records Hospital records	
	# births		
Frequency of specific inappropriate actions	# women receiving iron/folate during pregnancy according to norms -----x 100	VERG HC/HP records Hospital records	
	# births		
Frequency of reasons given for inappropriate action	Frequency of specific inappropriate actions or lack of action (what) -----x 100	Hospital/HC/HP records and observation	
	# of cases with priority problems not treated according to norms		
Frequency of reasons given for inappropriate action	Frequency of reasons for inappropriate action or lack of action (why) -----x 100	Hospital/HC/HP records and interviews	
	# of cases with priority problems not treated according to norms		

*Handwritten signature*

Quetzaltenango Maternal and Neonatal Health Project

MONITORING/EVALUATION FRAMEWORK

PART 3: DEFINITIONS OF INDICATORS AND SOURCES OF INFORMATION

HEALTH SERVICE INDICATORS	DESCRIPTION OF INDICATORS	SOURCE OF INFORMATION	VARIABLES
Mean # hours delay between leaving home with sick (woman/neonate) and reaching health facility (indicator of accessibility)	Total hours from home to hospital reported by all families of patients who were transferred to hospital ----- # patients transferred	VERS	
Mean # of hours delay between admission to hospital and surgery, if surgery is performed (indicator of hospital efficiency/resources)	Total hours from admission to surgery, if surgery performed ----- # (women/neonates) on whom surgery performed	Hospital records	
% of women/families who state they were treated well or acceptably treated by (hospital/health center/health post) staff	# of women who state they were treated well or acceptably treated in hospital -----x 100 # women who were treated in hospital	VERS	
	# of women who state they were treated well or acceptably treated in health centers/posts -----x 100 # women who were treated in health centers/posts	VERS	
Frequency of reasons given for perception of negative treatment by (hospital/health center/health post) staff	Frequency of specific reasons given for perception of negative treatment -----x 100 # women/families reporting negative treatment	VERS	

1/12

Quezaltenango Maternal and Neonatal Health Project

MONITORING/EVALUATION FRAMEWORK

PART 3: DEFINITIONS OF INDICATORS AND SOURCES OF INFORMATION

HEALTH SERVICE INDICATORS	DESCRIPTION OF INDICATORS	SOURCE OF INFORMATION	VARIABLES
Health worker scores on interactions with clients	Health workers' mean score on client interactions -----x 100 Total possible score	Observations Checklist	
Health worker scores on interactions with TBAs	Health workers' mean scores on TBA interactions -----x 100 Total possible score	Observations Checklist	
% of total TBAs attending monthly meetings	# of TBAs attending monthly meetings ----- # of total TBAs registered in project areas	HC records	
% of clients accompanied to the hospital by the TBA who has referred them	# TBAs accompanying clients to hospital -----x 100 # clients referred by TBA and admitted to or seen at hospital	Hospital records TBA records VEKS	
# of incidents reported by TBAs in which they were reprimanded harshly or unjustifiably by (hospital/health center/health post) staff	# TBAs reporting that they were reprimanded or criticized by hospital staff	TBA meeting records or TBA interviews	
	# TBAs reporting that they were reprimanded or criticized by staff of Centro/Puesto de Salud	TBA meeting records or TBA interviews	

Uetzalterango Maternal and Neonatal Health Project

MONITORING/EVALUATION FRAMEWORK

PART 3: DEFINITIONS OF INDICATORS AND SOURCES OF INFORMATION

IMPACT INDICATORS	DESCRIPTION	SOURCE OF INFORMATION	VARIABLES
Maternal Mortality Ratio	$\frac{\# \text{ adult female deaths during or within 42 days of the termination of pregnancy}}{\# \text{ (live) births}} \times 100,000$	VERS Hospital records	
Intrapartum Mortality Rate (functional definition as used by Bartlett)	$\frac{\# \text{ stillbirths} + \# \text{ Day 1 infant deaths}}{\# \text{ births}} \times 1000$	VERS Hospital records	
Neonatal Mortality Rate (functional definition as used by Bartlett)	$\frac{\# \text{ infant deaths Days 2-28}}{\# \text{ live births}} \times 1000$	VERS Hospital records	
Intrapartum/Neonatal Mortality Rate	$\frac{\# \text{ stillbirths} + \# \text{ Day 1-28 infant deaths}}{\# \text{ births}} \times 1000$	VERS Hospital records	
For the above rates and ratios: Total Hospital/Community Cause specific			

MONITORING/EVALUATION FRAMEWORK

PART 3: DEFINITIONS OF INDICATORS AND SOURCES OF INFORMATION

IMPACT INDICATORS	DESCRIPTION	SOURCE OF INFORMATION	VARIABLES
<p>% of (maternal/intrapartum/neonatal) deaths that are associated with:</p> <ol style="list-style-type: none"> <li>1. TBA's failure to recognize priority problem and/or TBA's delay in referring to hospital</li> <li>2. TBA's failure to refer to hospital</li> <li>3. Use of oxytocin during labor</li> <li>4. Family/woman's failure to recognize or seek care for problem</li> <li>5. Family/woman's delay in seeking care</li> <li>6. Family/woman's non-compliance with TBA referral</li> <li>7. Family/woman's delay in transferring patient once problem recognized or referred by TBA</li> <li>8. Health system's delay in recognizing and/or taking appropriate action for priority problem</li> <li>9. Health system's lack of resources (staff, materials, equipment) making it impossible to take appropriate action (condense these)</li> </ol>	<p># of (maternal/intrapartum/neonatal) deaths associated with each of the factors listed</p> <p>-----x 1000</p> <p># of (maternal/intrapartum/neonatal) deaths</p> <p>(for maternal/intrapartum/neonatal deaths separately and combined)</p> <p>This type of analysis would require the classification of each of the deaths according to the principal behaviors or deficiencies that were related to it. While other factors may also be associated, these are the behaviors the project is trying to change.</p>	<p>VERC Hospital records</p>	
<p>% of maternal/intrapartum/neonatal deaths that could have theoretically been prevented through:</p> <ol style="list-style-type: none"> <li>1. prenatal screening/hospital delivery</li> <li>2. when face with problem, different action by             <ol style="list-style-type: none"> <li>a. woman/family</li> <li>b. TBA</li> <li>c. Health services</li> </ol> </li> <li>3. improved emergency transport or decentralized emergency capability</li> </ol>	<p># of (maternal/intrapartum/neonatal) deaths associated with each of the factors listed</p> <p>-----</p> <p># of (maternal/intrapartum/neonatal) deaths</p>	<p>VERC Hospital records</p>	

42

**APPENDIX 3: QUETZALTENANGO MATERNAL AND NEONATAL HEALTH PROJECT  
PROPOSED TECHNICAL ASSISTANCE PLAN  
JANUARY - JUNE 1991**

The following technical assistance requirements were defined with INCAP investigators for the period from January through June 1991:

---

**Objective: Development of hospital norms and forms and training of staff.**

---

Position/Qualification	Dates	Scope of Work
Neonatologist Dr. Roberto Sosa	1/14-19/91	Work with hospital neonatologist, pediatrics and nursing staff to assess hospital procedures and revise procedures and norms for care of newborns. Special emphasis will be placed on hospital practices related to the assessment and care of life-threatening conditions in the newborn. The consultant will also assist with the introduction of practices that promote immediate and exclusive breastfeeding and prevention of hypothermia in the newborn.
Obstetrician/Gynecologist Dr. Manuel Najaro	1/91-6/91	Dr. Najaro, a Guatemalan national, will be contracted directly by MotherCare. He will work with the heads of the Ob/Gyn department, neonatology, nursing and the interns program to develop standardized norms for the care of high risk/emergency conditions during pregnancy, labor and delivery and postpartum. This will include the adaptation and introduction of the Perinatal History Form, training of hospital staff and evaluation of the use of norms and forms after training.

---

Objective: Development of health center and TBA norms, forms and training plans

---

Position/Qualification	Dates	Scope of Work
Nurse Midwife Pam Putney	2/11-3/8/91 1 month	Work with PI and Health Area counterparts to develop: 1) norms for clinical care and referral of pregnant and postpartum women and neonates; 2) training plans for training of District Health Teams; 3) training plans for training of TBAs and training of TBA trainers.
Nurse Midwife ACNM Staff or Consultant	2/11-23/91	Work with PI and Health Area counterparts to: 1) develop norms for clinical care and referral of pregnant and postpartum women and neonates; and, 2) training plans for training of District Health Teams.

---

Objective: Training of District Health Teams, TBA Trainers and TBAs

---

Position/Qualification	Dates	Scope of Work
Nurse Midwife Pam Putney or ACNM	4/91 1 month	Work with PI to conduct Training of TBA Trainers and the first round of TBA training.
Nurse Midwife Pam Putney or ACNM	6/91 2 weeks	Observe TBA training, continue development of TBA training materials; observe clinic practice and use of norms and forms.

---

**Objective:** Supervision of vital events surveillance system and computerization of this and management information/monitoring system.

---

Position/Qualification	Dates	Scope of Work
Physician/ Epidemiologist Dr. Nils Daulaire	1/28-2/8/91	Assess progress with establishment of VERS. Assist PI to: 1) revise VERS instrument, 2) standardize interviewers, 3) develop terms of reference for data base and programming of surveillance system, 4) complete evaluation framework.
Systems Analyst/ Programmer Ms. Mimi Church	2/4-15/91	Provide technical assistance to INCAP for programming of the VERS data base and the project's information system.
	4/91	Follow-up on above.

---

**Objective:** Analysis and write-up of data from the three diagnostic studies for academic, health policy and public audiences.

---

Position/Qualification	Dates	Scope of Work
MotherCare Staff or Consultant	15 days	Work with the PI and INCAP computer unit to complete data analysis and write-up of case-control and descriptive studies. Products to include write-ups for academic, health policy and public audiences.

---

**Objective:** Perform an internal administrative check of the project's financial management, record keeping and reporting.

---

Position/Qualification	Dates	Scope of Work
MotherCare Project Associate Marcia Monterroso	5 days	Conduct on-site review of financial records, reports, and administrative management of project.

---

In addition to the above foreign consultants, INCAP will continue to use Dr. Erick Boy as a consultant for the revision of hospital norms and forms and the training of staff and residents. Dr. Boy's participation will be funded under the INCAP subcontract.

## APPENDIX 4

### SCOPE OF WORK

#### HIGH RISK WOMEN AND NEONATES/TECHNICAL WORKING GROUP

##### 1. Background

Guatemala has made substantial progress in lowering maternal and infant mortality during the last decade. Despite this fact, the country's maternal and infant mortality ratios still ranks among the highest in the hemisphere. The Guatemalan Ministry of Health estimates that 86% of maternal deaths are due to direct obstetrical causes and other research suggests that close to 50% of all infant mortality occurs during the birth process or the first month of life. The principal causes of maternal mortality are known to include hemorrhage, sepsis, and eclampsia. Important causes of intrapartum and neonatal mortality are thought to be asphyxia, birth trauma, low birth weight, sepsis, and respiratory infection. While neonatal tetanus is a factor in some parts of Guatemala, particularly the lowland areas, it is not considered to be a principal cause of neonatal death in the highlands. Increasingly, overcrowding of urban hospitals has also emerged as a factor associated with iatrogenic infection and high rates of neonatal mortality.

Between 60-70% of births in Guatemala are home births attended by comadronas (traditional birth attendants referred to hereafter as TBAs). The role of the TBA and home birth is likely to continue to be an extremely important one for the foreseeable future as the Ministry of Public Health estimates that existing facilities are equipped to handle only 20% of the expected births each year and that this capacity is not likely to change dramatically during the next 10 years. Therefore, improvement in the survival of mothers and newborns is and will continue to be directly linked to the care provided by the TBA, to her knowledge of the danger signs during pregnancy, delivery and postpartum and to her willingness and ability to refer patients with these problems for hospital care. Referral facilities must also be equipped, staffed and trained to handle such high risk cases appropriately.

In March 1990, a national seminar supported by USAID was held with organizations working in maternal health care, including the Ministry of Health, UNICEF, INCAP, Project Concern, the Guatemalan Association of Obstetrics and Gynecology, and the Francisco Marroquin University. The majority of these organizations include as an integral part of their activities the training and support of the traditional birth attendant (TBA). The seminar followed an assessment of TBA knowledge and practice

conducted by PRITECH consultants, Dr. Barry Smith and Pamela Putney in February 1989.

The High Risk Births Seminar resulted in a series of recommendations from the participants including the need for a national policy in support of TBAs and improved care for high risk women and neonates. Toward this end, the concept of a national working group on High Risk Mothers and Neonates was born. Formation of such a group is felt to be an important step towards information-sharing between those organizations working with TBAs and those providing referral care for both normal and high risk women and newborns. It is also seen as an opportunity for recruiting a larger constituency of individuals and organizations which, if not working directly with TBAs, are sensitive to improved maternal and child health through better management of high risk women and neonates at the community level. The collective ability of such a group to address important issues and to lobby for needed changes in policy and programs will make it a potentially important force for change. USAID also views such a group as a source of information and recommendations for the development of a new bilateral health program to begin in 1992. This new USAID project will focus increased attention on prevention of and appropriate attention to high risk births throughout the country.

## 2. Objectives

The Subcontractor will:

- 2.1 Provide organizational support for the formation of the proposed High Risk Births Technical Working Group, including administration of funding provided by MotherCare for the groups activities during 1991;
- 2.2 Conduct two workshops to be held before July 1990, on topics to be determined in consultation with USAID/MotherCare and carried out under the guidance of a steering committee made up of representatives of the organizations defined below;
- 2.3 Prepare written proceedings of the above meetings including any issues papers that are developed and/or presented, a summary of the meeting's activities, its findings and recommendations generated for future action.
- 2.4 Produce and distribute at least one edition of a newsletter, or an information packet, on the topic of High Risk Women and Neonates in Guatemala, in which Working Group Members are invited to contribute articles, items of interest and examples of materials used in their programs to improve the detection and care for High Risk Births. The preparation of this document and the issues papers mentioned above will contribute to national efforts in preparation for a national Safe Motherhood Conference to be held in 1991.???

### 3. Description of Activities

#### 3.1 Formation of Working Group

The Subcontractor will work with the MotherCare Representative and USAID Guatemala to determine the composition of the Working Group. All government, private voluntary, health worker training, and donor agencies working with TBAs and referral health facilities should be invited to participate in the group and its planned activities. The potential list of organizations to be included is as follows:

##### TBA Training Programs

Ministry of Health, Maternal Child Health Division

Jefaturas de Area with Special TBA training activities

INCAP

Jocaltenango

Project Concern

Other NGOs

IGSS (Social Security Institute)

##### Referral Facilities and Services

Ministry of Health Hospitals in areas with special TBA training activities

IGSS hospitals

Training Institutions

Francisco Marroquin University

San Carlos University

##### Professional Organizations

Association of Obstetrics and Gynecology

Association of Pediatrics

Association of Neonatologia/Perinatologia

## Donor Agencies

USAID

UNICEF

UNFPA

OPS

All of the organizations identified will be contacted by letter and, where possible, by telephone to invite their participation in the Working Group. This invitation will explain the proposed objectives for the group and the planned activities described in this subcontract. Groups will be asked to respond expressing their interest in membership in the working group and giving suggestions for topics to be included in the planned workshops. Each organization will be asked to nominate a representative to the working group and to further describe the contribution that it could make in terms of planning, presentations, exhibitions, contributions for publications, etc. to the workshops.

### 3.2 Conduct Two Workshops on Topics Related to High Risk Women and Neonates, the first in April 1991, and the second before July 31, 1991.

The following model for the organization of the workshops has been proposed:

- Development of a background or issues paper which synthesizes the views or activities of participating organizations. This could be prepared by a consultant selected by the Subcontractor and MotherCare for each workshop.
- Presentation by an "outside expert" in the topic area under discussion in an initial session during the workshop. This expert could be provided by MotherCare or another USAID centrally funded project. Resources for this presentation would be provided outside of the present subcontract.
- Small group discussion/working groups during the workshops to explore different aspects of a problem or a topic of interest, followed by presentation of results to the larger body. This segment of a workshop could be used to develop consensus on recommended actions or strategies for improvement.

- Recommendations summarized in the workshop proceedings and, if desirable, in a working paper for distribution to a wider audience.

This model will be explored and modified by MotherCare and the Subcontractor during planning for the workshops. The format selected will insure full participation during the workshop, focused discussion of important issues, and recommendations for the consideration and implementation of the participating organizations and other key decision-makers.

The Subcontractor will form a Steering Committee from those organizations expressing interest in assisting with the planning for the workshops. Steering Committee members should be representative of the organizational types listed above but with membership favoring organizations with on-going TBA programs and referral services. The Steering Committee should be made up of individuals who are willing to attend all scheduled planning meetings and to assist with the logistics of the workshops. The Steering Committee will:

- Identify the principal topics or issues for discussion and the agenda for the workshop. Topics will be chosen from those suggested by the interested organizations during formation of the Working Group. A number of considerations will be kept in mind, including: a) the topic's general interest to all of the organizations which might participate; b) the group's potential for reaching conclusions and recommendations pertaining to the topic; c) the manageability of the topic within a one-day meeting structure; and d) the potential educational benefits for groups external to direct TBA programming or high risk births but who influence policy or program operations. Topics to be avoided will include those which organizations find objectionable and those for which there is little option for change, at least in the short run.
- Prepare an outline for a briefing paper for each of the workshops which will be distributed to participants. These papers will summarize the topic(s) to be discussed in the workshop and set the stage for discussions. The Steering Committee will also identify appropriate consultants to be subcontracted for preparation of these papers and supervise the consultants' work.
- Identify the list of workshop participants and prepare an invitation letter.

- Facilitate workshop sessions, as necessary.
- Oversee preparation of workshop proceedings/working papers and their distribution.

The Subcontractor will act as the coordinator of the Steering Committee and will organize and provide logistical support for its activities. All production of materials, hiring of consultants, choice of facilities, logistical arrangements and support for the workshops will be provided by the Subcontractor under this Subcontract.

The workshop agenda, the choice and hiring of consultants to prepare issues papers and the contents of those papers will require MotherCare and USAID/Guatemala approval prior to implementation.

The draft report of each workshop will be submitted to MotherCare and through MotherCare to USAID Guatemala no later than 30 days after completion of a workshop. The final reports will be due no later than 30 days following receipt of MotherCare and USAID Guatemala comments.

#### 3.4 Prepare and distribute at least one Working Paper on High Risk Women and Neonates.

This Working Paper(s) will include a discussion of an issue of particular interest defined by the organizations participating in the workshops. The issues papers prepared in preparation for the workshops could serve as the basis for this discussion. In addition, it will summarize findings of organizations that have tried to address this issue, their constraints and experiences. The Working Paper will also include recommendations generated during the workshops pertaining to the chosen topic, with a full discussion of the implications for each.

The topic and proposed outline for the Working Paper will be submitted to MotherCare and USAID/Guatemala for approval prior to preparation. The Subcontractor will hire and supervise a consultant who will prepare this document. Subcontractor will also coordinate the production and distribution of the document with the Steering Committee once it is approved.

4. Deliverables

Workshop #1: Plan and Budget

Issues Paper

Workshop

Workshop Report

Workshop #2: Plan and Budget

Issues Paper

Workshop

Workshop Report

Working Paper:

Outline

Draft

Final

54

5. Time Frame

Jan Feb Mar Apr May June July

Formation of Group

Workshop #1 - 40 persons  
Selection Steering Committee  
Planning  
Prepare Issues Paper  
Workshop  
Report Preparation

Workshop #2 - 40 persons  
Planning  
Prepare Issues Paper  
Workshop  
Report Preparation

Working Paper  
Select Topic/Outline  
Prepare Draft  
Prepare Final  
Distribute