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**TOWARDS IMPROVING MATERNAL AND  
NEONATAL HEALTH AND NUTRITION**

**TRIP REPORT**

**LA PAZ, BOLIVIA**

**JUNE 1-8, 1989**

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## TABLE OF CONTENTS

### Acronyms

#### I. Executive Summary

#### II. Background

- A. Objectives
- B. The Lives of Bolivian Women
- C. Maternal Mortality and Morbidity
- D. Neonatal Mortality and Morbidity
- E. Structure, Content and Use of Health Services

#### III. Trip Activities

- A. USAID and Other Donor Agencies
- B. Ministry of Social Provision and Public Health
- C. USAID-Funded Private Voluntary Organizations
- D. Other Potential Collaborating Organizations and Individuals

#### IV. Conclusions

#### V. Recommendations/Potential for MotherCare Involvement

#### VI. Proposed Follow-up

### Appendices

- A. Individuals and Organizations Contacted
- B. Individuals and Organizations Not Contacted

## ACRONYMS

HP	Health Promoters
IMR	Infant Mortality Rate
MMR	Maternal Mortality Rate
MPSSP	Ministerio De Prevision Social and Salud Publica
PVO	Private Voluntary Organization
RTI	Reproductive Tract Infections
TBAs	Traditional Birth Attendants
TFR	Total Fertility Rate
TT	Tetanus Toxoid Immunization

## I. EXECUTIVE SUMMARY

A fact-finding mission to Bolivia was carried out from June 1-8, 1989, by MotherCare Project staff. The objectives of the trip were to collect information about the health status of Bolivian women and neonates, the programs designed to reach them and the organizations involved in order to determine the potential for future MotherCare Project involvement.

USAID, the World Bank, UNFPA, UNICEF, PAHO, the InterAmerican Development Bank and other international donor agencies are investing significant resources in the Bolivian health sector. Most of this assistance focuses on improving the management of existing MPSSP programs, especially the traditional Child Survival programs, and on up-grading health facilities. Both in written program documents and actual programs, little realistic attention is paid to improving maternal and neonatal care.

A number of gaps in knowledge and services that could be addressed through the MotherCare Project were detected during this initial visit. These include:

1. Lack of epidemiological information about the extent and causes of maternal and neonatal mortality and morbidity, including nutritional status. While the DHS now underway in Bolivia will help to fill this gap, it will not provide information about the causes of maternal and neonatal mortality and morbidity, the nutritional status of women nor the types of care sought during pregnancy and delivery.
2. Lack of information about the cultural beliefs and practices that influence behaviors during pregnancy, delivery and the neonatal period, including utilization of health services.
3. Prenatal and delivery services designed around a Western model that is unrelated to the actual problems experienced by Bolivian women and their perceptions of appropriate care. While norms exist for prenatal, intrapartum and post-partum care, little information is available about the content of the services that are actually provided.
4. A very low level of knowledge and awareness on the part of women and their families about reproductive physiology, the need for prenatal care, the danger signs of pregnancy and delivery, safe birthing practices, and the care of the neonate and post-partum mother.
5. Very low utilization of existing maternal and neonatal services, due to the above and other related factors.

6. PVOs requesting assistance to continue and expand maternal and neonatal care activities. The same PVOs having difficulty sharing their experiences with the MPSSP, and in some cases with each other.
7. The basic training of MPSSP nurses and nursing auxiliaries, and probably of doctors, is deficient in the areas of prenatal, delivery and neonatal care.

The following activities directed towards the improvement of maternal and neonatal health and nutrition are suggested:

1. The following types of information-gathering are recommended to increase the awareness of policy makers, planners, providers, and families about the extent and causes of maternal and neonatal morbidity and mortality:
  - a. Anthropological investigation of practices related to pregnancy, birth and neonatal care and of women's life cycle to determine points of possible intervention outside of the health care system.
  - b. Epidemiological investigation based on hospital records, including indicators of maternal nutritional status, infections and their effect on pregnancy outcome, prematurity, low birth weight, anemia and birth injury.
  - c. Two studies that would help expand the understanding of maternal morbidity in Bolivia include a study of anemia in pregnant and lactating women and a study on the prevalence of reproductive tract infections, including STDs, AIDs, and gynecological infections. Anemia and reproductive tract infections have severe negative consequences on pregnancy outcome, as well as obvious negative impact on women's health and productivity. Several individuals who are currently involved and interested in such studies were identified.
  - d. Operations research on the content of prenatal, delivery and postpartum care (including neonatal care) in selected sites, including institutional care (urban) and care provided in the community and/or home (rural).
  - e. An Andean Safe Motherhood Conference is planned for mid-1990 by the World Bank and WHO. The studies above would provide a good documentation for the status of Safe Motherhood in Bolivia. This would be the major advocacy effort to put maternal and neonatal health care on the agenda of policy makers and program officials. It could be followed up by a national conference with more

participants and focused more specifically on program development.

2. To address the urgent need for information at the level of the family and the individual woman, and to increase the utilization of available services, an aggressive communications (IEC) program should be developed. Such a program would focus on health-promotive behaviors during pregnancy and lactation, safe delivery practices, and care of the neonate. Several mechanisms could be used to develop the communications tools specific to the prenatal, birth and post-natal periods and to disseminate them:
  - a. Co-sponsor a series of workshops with the PVO-REC on the above themes, and include as participants, the nine PVOs, the Communications Unit of the MPSSP, and local NGOs. The first workshop would include an introduction to these themes and an assessment of interest. Development of communications materials would then be carried out with the one or two interested PVOs that would carry out the formative research necessary. Workshops with the others could continue based on the research and materials developed in these PVOs. (PVOs that were specifically interested in this area include CARE and Save The Children. Funds of the PVO-REC could be specifically earmarked for such work and dispersed on a competitive basis.)
  - b. Investigate working through the educational systems to spread maternal and neonatal health messages, i.e. literacy program (SENELAP), teacher training program. This could include development of curriculum, teaching materials and training of teachers in the use of the materials. Again, this would necessitate a series of workshops, beginning with an introduction to the subject area, followed by formative research, before proceeding to develop materials.
3. To promote advocacy for and improve the quality of maternal and neonatal health services, special training courses, studies, small projects, etc. could be carried out with the various associations of health workers, i.e. the colegio de enfermeras, the health workers' association, as well as the Pediatrics and OB/GYN Societies.
4. While it is too early after this brief recognizance to propose long-term MotherCare involvement in Bolivia, we do believe that the potential for such involvement exists. To influence national or even departmental policy, such a long-term effort would necessarily involve government personnel and relevant MPSSP departments from planning through implementation. The

involvement of one or more PVOs in such a project area would also be highly desirable. A long-term demonstration effort would be most logically placed in one of the districts to be involved in the USAID bilateral Child Survival project. Epidemiological, anthropological and service system assessments would be the first step in diagnosing the maternal and neonatal health problems in the chosen district. A series of planning meetings or workshops might then be held with MPSSP staff, community representatives and other collaborating institution(s) to introduce the relevant subjects and explore the opportunities for improvement of services and health-promotive behaviors. As longitudinal surveillance would be needed to determine the effectiveness of interventions over time, technical assistance could also be provided for the development of such a system. (A surveillance system of this type is now being developed in Indonesia with support from MotherCare.)

USAID has asked MotherCare to proceed with the planning of a workshop on maternal and neonatal care to be co-sponsored with the PVO-REC. The workshop, which will involve all PVO-REC members as well as other interested NGOs, will provide an up-date on maternal and neonatal health issues, technologies and service delivery strategies. The end product for the workshop or workshop series will be the design of new maternal and neonatal health initiatives that could be funded by the PVO-REC. No date has been set for the workshop.

Potential for additional MotherCare assistance in Bolivia will be determined in the course of the above activity.

## II. BACKGROUND

### A. Objectives

This was an exploratory mission to Bolivia at the request of the USAID Mission to determine the potential for project assistance, both long and short-term, in Bolivia. Specific objectives were:

1. To collect information about the health and nutritional status of women and newborns.
2. To collect information about the programs being implemented and those planned which are directed at improving health and nutrition services, utilization of the same and behaviors related to maternal and neonatal health.
3. To discuss with officials of USAID, the Ministry of Social Welfare and Public Health (MPSSP), PAHO, the World Bank, and the PVOs working in health and nutrition, specific areas in which project assistance could be applied.
4. To determine the potential for long-term project development and the desirability of proceeding with a country assessment as the first step in planning for such a project.

### B. The Lives of Bolivian Women

Most of the information presented below has been gathered from two primary sources:

REACH, 1987; Child Survival in Bolivia: Current Status and Priorities for Action, A report to USAID, La Paz.

UNICEF, 1987; Analysis of the Status of Women and Children. La Paz, Bolivia.

While useful, these references suffer from the fact that much of the information available about women's lives and maternal and neonatal morbidity and mortality is either outdated (1976 census) or based on small or strictly urban samples. Information on mortality, fertility and contraception rates, nutritional status and use of services will be updated by data from the DHS and the Poblacion y Vivienda surveys, to be released by early 1990.

## 1. Education/Work

While progress has been made during the past fifteen years towards an improved position for women in Bolivian society, discrimination related to women's education and paid employment continues, as does their lack of participation in decision-making at all levels (families, communities, and political structures).

Available data do not show that female babies and girls are discriminated against as in Asia, as the ratio between males and females less than 20 years of age is 1.00. Among the 20-65 age group, females predominate; this differential becomes more accentuated after 65.

Illiteracy continues to be a major hindrance for women, despite the fact that important progress in female enrollment in schools and in adult literacy programs has been made. Census data from 1950 and 1976 show a decrease in women's illiteracy (from 77% to 43%). While still twice the illiteracy rate of males (21%) in 1976, it appears that this gap will be considerably less by the year 2000. Morales and Rocado state in their paper for UNICEF, that while growth in male school enrollment has remained static since 1980, female enrollment has grown steadily at 5.1% per year. During the period 1980-84, the authors state that 6 of every 10 students enrolled were female. (No sources given)

Despite improved enrollment, school dropout continues to be a problem for both males and females with over half of the school age population dropping out before 19 years of age. Females are effected earlier and more seriously by drop-out. In 1984, approximately a third of girls (ages 5-9 years) were not in school (compared to 29% of boys). This differential continues with age groups: 38% as compared to 30% of girls and boys respectively in the 10-14 year age group, and 59% to 52% in the 15-19 year age group. Rural differentials are probably more dramatic, but the data are not available.

Women's participation in the informal productive sector has reportedly increased in recent years due to the economic crisis in the early 1980's. In 1987, 19.4% of rural women participated in domestic tasks considered family production, in farm labor 17.4% and in shepherding 11.6%, giving a total participation in productive tasks of 48.4% (Calderon, et al., 1987).

## 2. Fertility Patterns

Marital or cohabiting status by age is not available in the documents reviewed. The 1976 National Statistics Institute found that Bolivia's TFR was 6.7 children per woman. Fertility rises as urbanization declines. In the plains, the TFR was 7.0 and in the altiplano, it was 6.3. A study completed by COBREH in 1983-84, indicated that there had been a slight reduction in TFR in the 10 urban areas surveyed since the time of the 1976 census.

Family planning methods are not widely available in Bolivia, although there is more discussion of child spacing at policy level than previously. Private sector programs provide some methods, but abortion continues to be a major contraceptive.

COBREH's 1983-84 urban study showed 10% or fewer women in Bolivia's larger cities using a modern contraceptive method; approximately 25% of the women interviewed stated that they had previously had one or more abortions. In the 1970's, the MPSSP estimated that treatment of complications arising from illegal abortions accounted for more than 60% of the country's obstetric and gynecological expenses (Population Report, 1977). A hospital study carried out by Barley, et al, in 1988, showed that abortions are usually performed by untrained providers under extremely dangerous conditions.

### 3. Nutrition

The average diet in Bolivia is heavily dependent on imported food supplements. A recent report (REACH, 1988) stated that 75% of the calories of the average diet derives from imported sources. Various groups discussed this food dependency as counter-productive, not only in terms of nutritional status (traditional and nutritious natural foods supplanted by processed foods), but also in terms of development.

Pregnant and lactating women are targeted for the food supplements along with children under five. Very often this distribution is through mothers' clubs which have a long history in Bolivia. Anecdotal reports indicate that food distribution has become the focal point of these organizations, although they originally formed out of community-based needs. Some groups have recently broadened that agenda to include child survival initiatives, (see Caritas).

The nutritional status of Bolivian women remains largely unknown.

#### C. Maternal and Neonatal Mortality and Morbidity

Maternal mortality is not well quantified. While articles and officials quote a 48/10,000 live births maternal mortality rate, no one is sure where the number came from. According to a 1985 PAHO/WHO document, this rate is the highest in Latin America (and 3 times that of Haiti).

In one study with a MMR=25/10,000, (Salinas, W, 1987), the causes of maternal mortality were reviewed in the German Urquidi Maternity Hospital in Cochabamba between 1979-1986. Seventy of the 80 deaths were studied: 44.3% of the deaths occurred during pregnancy; 44.3% during puerperium and 11.4% during birth. Of the 31 pregnancy-related deaths, 45% resulted from infections of induced abortion. During childbirth, infections (?) and hemorrhage were the major causes. Postpartum deaths were caused primarily by infection, a situation associated with the quality of services. The second cause was hemorrhage, which may also reflect the service quality. Infection,

hemorrhage and abortion, in that order, are the main causes of maternal mortality according to this one hospital study.

It is important to note that only 18% of total births are estimated to take place in a hospital setting.

Maternal morbidities are being studied by a variety of individuals and institutions. Most of these studies are being carried out by interested physicians in conjunction with their day-to-day activities, without the resources and perhaps the expertise required for more rigorous scientific design. Systematic studies of anemia, however, have been carried out.

- Zuna et al. conducted research on 2036 pregnant women in Santa Cruz in 1978 and showed that 35.7% were anemic, considering anything less than 11 gr.% constituted anemia.
- In another study investigating the causes of anemia in pregnant women in a Santa Cruz hospital, 25% of 200 women studied were found to be anemic; 24% of the anemic women were classified as grade II (less than 8 gr. of Hb). Iron deficiency was found in 5% of the total pregnant women with another 5% attributable to folate deficiency. The prevalence of hookworm in pregnant women was 33% (Cordozo L. et al. 1985).
- In Cochabamba in 1982, the NIFN and the Univesidad Mayor de San Simon showed anemia in 16.2% of pregnant women with the principle causes due to hookworm infestation and low consumption and absorpction of iron. (Daza, G., 1985).
- As reported below, Dr. Roberto Bohrt of the Social Security's Maternidad 18 de Mayo in La Paz reports that approximately 68% of the pregnant women seen at the hospital are anemic, with 70% of these anemias related to folate deficiency.

None of the other reports we reviewed or individuals we interviewed provided information on the nutritional status of women (other than anemia), although Save the Children stated they had taken heights, weights, age and arm circumference of women in their defined area in Inquisivi in 1987.

We identified three organizations that are currently collecting information on reproductive tract infections in women -CIES, Fundacion San Gabriel, and Social Security Hospital (RTIs, Dr. Bohrt). It was not clear whether the national cervical cancer screening program within the MPSSP is also collecting this information. From an initial sample of healthy, non-pregnant women in La Paz, Fundacion San Gabriel estimates nearly 50% with one or more RTIs, primarily trichomonas (70%) followed by gonorrhoea (15%), and yeasts and syphilis (15% together). Unfortunately, none of these organizations have the laboratory available to look at anything but the above maladies.

#### D. Neonatal Mortality and Morbidity

Several surveys have attempted to estimate infant mortality. A National Demographic Survey in 1974 estimated the national IMR at 164. Surveys since 1980 have been urban-based and show a range of 89-148. (In two different 1984 surveys, department capitals had values of 89 and 128.) 1976 Census data show that the most critical geographic areas are the rural areas of the valleys and the altiplano, and the urban areas of the altiplano. Poor, non-salaried agricultural workers presented the highest IMRs in their respective regions (247.2 and 146.5 in the valleys and plains respectively) (1976 Population Census).

Sources of cause-specific infant mortality data are civil registration and hospital mortality registers. Underreporting is high in both cases with that of the civil registry estimated at 69% for 1981 (NSI). According to the civil registry under 5 deaths made up 42% of all deaths in 1981. The following five primary causes made up two-thirds of the deaths of the under fives:

- infectious intestinal diseases
- other respiratory diseases
- certain disorders originating in the prenatal period
- other bacterial disease
- viral disease

From the 1981 civil registry data, neonatal deaths were estimated to be 44.3% of the infant deaths, with "certain disorders originating during the perinatal period" contributing 28% of the infant mortality. In a study of urban civil registry data, "certain perinatal disorders" were estimated at 8% of the infant mortality (MSWPH-PAHO/WHO, Bolivia, 1984). Hospital data from 1982-83 showed "certain [conditions] of the perinatal period" to contribute 10% to mortality of the 0-35 month age group.

The 1981 Civil Registry shows "hypoxia, asphyxia and other respiratory infections of the fetus and newborn" to be the number one killer of neonates, followed by "other infections and non-specified (including neonatal tetanus), and "slow fetal growth, malnutrition and fetal immaturity" (Table IV-18, REACH, 1988).

Hospital data show "prematurity" to be the leading killer (77%), followed by neonatal tetanus (18%), and then hypoxia (4%). Autopsies on 303 neonatal deaths in a Social Security Hospital in La Paz, between 1963 and 1982 found hypoxia to be the primary cause of death (Patine L. et al.). Low birth weight constituted another important cause of perinatal hospital mortality. Its incidence in maternity hospitals in La Paz and Cochabamba is between 11.6% and 19%.

Neonatal tetanus is suspected of being highly underreported. A 1983 infant mortality study conducted by Toro et.al., in which civil registry statistics in urban localities with 6,000 population or more were reviewed, revealed that tetanus was responsible for 49% of perinatal deaths in urban areas in the plains, and 9.2% in the valleys.

E. Structure, Content and Use of Health Services

1. Ministry of Social Provision and Public Health Structure and Programs

The MPSSP is undergoing a structural revision motivated by the need to rationalize and "flexibly" standardize the allocation and management of services. Under this new system, it appears that the following entities and staffing patterns will be followed: (Does not include Social Security)

Level	Divisions/Facility
Central	Minister  Sub-Secretary Salud Publica  Normative Divisions: Epidemiology Nutricion S. Ambiental Servicios de Salud Relaciones Internacionales Alimentacion Complementaria
	Materno Infantil Comunicacion Social Movilizacion Social Odonotolgia Planificacion Comite Popular de Salud Nacional
Regional	Unidad Sanitaria/Hospital Director Materno Infantil Nutricion Planificacion S. Ambiental Comite Popular de Salud, Etc.
District	Sistema Local de Salud/Hospital Medico Supervisor Medicos Various Enfermeras Auxiliares de Enfermeria Tecnico de Laboratorio Comite Popular de Salud, Etc.
Area	Centro de Salud Medico General Auxiliares de Enfermeria
Sector	Puesto Sanitario Auxiliar de Enfermeria
Comunidad	Responsable Popular de Salud Comite Popular de Salud Partera Empirica

This new system represents the MPSSP's goal for the future, and the framework to which international and national resources will be applied. At the present time, however, there are a variety of types of service and administrative units functioning in the country. One of the principles of this system is the decentralization of operational authority and budgetary control to the regional level or the Unidad Sanitaria.

From our reading and discussions, we identified the following MPSSP programs that address, or could address, maternal and neonatal health improvement:

MCH Division:	Free Childbirth Program PRONIMA III: TBA Training Program In-Service Training for Nurses and Auxiliaries Cervical Cancer Prevention
Nutrition Division:	Vitamin A Supplementation Iron Supplementation
Food Supplementation:	Supplementation for Pregnant/ Lactating Women and Children under 5 years

## 2. Availability and Use of Institutional Care

The availability and coverage of prenatal care is generally unknown. One recent report estimated that only 15-20% of pregnant women in the urban areas use such services (REACH, 1987). Prenatal visits in the maternity hospitals of La Paz, Cochabamba, Santa Cruz and Sucre are reported to be in the range of 1-2 per pregnancy with the majority of visits occurring in the last half of pregnancy. In rural Bolivia, it appears that prenatal care is often not readily available and, even where it is available, that it is seriously under-utilized.

Standards for prenatal care at MPSSP institutions have apparently been established under the free childbirth program, however we were unable to locate a written document explaining them and this program. Dr. G. de Murillo, the director, was unfortunately out of La Paz during our visit.

In passing, we learned that the norms for prenatal care call for all pregnant women to have 5 prenatal visits. According to a recent review of services, however, no criteria exist for assessing obstetric and perinatal risk although some values based on the Nesbitt Scale have been produced but not validated for Bolivian women.

Approximately 18% of all births take place in hospitals, according to 1982 data from the National Statistics Institute. The REACH 1987 Child Survival report states that while the free childbirth program is available through selected maternity hospitals, lab and medication costs are not included and supplies are inadequate. This report also mentions that

hospitals lack "the minimum equipment to guarantee efficient, good quality care" for the newborn and, in many cases, that they are equipped only for normal deliveries.

Under the MPSSP system, the principal health service providers in rural Bolivia are doctors (primarily medical students in rural service) and nurses who are based in hospitals and health centers, and nurse auxiliaries and health technicians who staff the health posts. Most auxiliaries and technicians appear to have minimal training in prenatal, intrapartum or post-partum care. Physicians, who are often young and unfamiliar with the cultures and languages of their areas of assignment, have also been trained in systems that have little relation to the rural reality they encounter.

### 3. Community Participation

A key element of the GOB's health strategy is the mobilization and participation of the community through the Comite Popular de Salud, the Responsable Popular de Salud, the Partera Empirica (TBA) and traditional healers. Training programs have been developed and conducted for each of these groups and more are planned for the future. Outside of the important role that the TBA is being trained to play in the prevention and referral of problems surrounding pregnancy and delivery, it is not clear whether or not other community agents have been actively involved in efforts aimed at improving the health of women and neonates.

### 4. Home Care

We were unable to identify references describing common practices and beliefs during pregnancy, delivery and the post-partum period. While reports imply or people state they have had discussions with women about practices during pregnancy, delivery and the post-partum period, (Bender, 1981; SCF, pers. comm.), we found no written material on this.

The extent of the involvement of TBAs in the pregnancy and delivery periods is not well defined. Anecdotal information implies that TBAs are only brought in for the delivery if there is a problem; otherwise, the husband, grandmother, or the woman herself is the primary caretaker. While the MPSSP estimates that approximately 20% of the total births are attended by TBAs, the number of births reported by trained TBAs is significantly less.

TBA training has been ongoing and continues with the PRONIMA III project of the MPSSP, which is funded by UNFPA and supported technically by PAHO (see PAHO). A 1988 evaluation report is available and another report, which should shed more light on traditional practices, is forthcoming based on focus group discussions with TBAs during training. Trainers of the TBAs are the nurses located at regional level, but as mentioned above, the nurses and nurse auxiliaries are not specifically trained for maternal or neonatal care. SCF also reported carrying out TBA training and has some information on their practices (not written up).

Breastfeeding of the newborn has been studied by the National Institute of Food and Nutrition. In 1981, it was observed that 69.9% of children between 6-11 months were breastfed; 88.8% of children of the same age were breastfed in rural areas. Breastfeeding in the rural areas continues to be high between 12 and 23 months of age (50%) while only about a third of urban children of this age receive breastmilk; in the third year, breastfeeding drops dramatically to 2.5% in the urban and 6.2% in the rural areas. Anecdotal information suggests that babies are put to the breast immediately and weaning begins at 4-6 months. However, practices are not well described.

Beyond breastfeeding, there is no information about care of the newborn or the new mother. It is assumed that rural women have little time for recuperation and proceed back to their chores immediately.

### III. TRIP ACTIVITIES

The following sections summarize meetings held with USAID/La Paz, MPSSP divisions, AID-funded PVOs, and other potential collaborating organizations and individuals.

#### A. USAID and Other Donors

1. USAID/ Bolivia - Charles Lewellyn, Public Health Advisor  
Joel Kuritsky, TACS-CDC  
Sandra Wilcox, Population Officer

An initial meeting was held with Charles Lewellyn and Joel Kuritsky, the two individuals who are most closely involved with the PVO Child Survival Projects and the new bilateral Child Survival Integration Project which will be awarded shortly.

During this meeting, we explained the goals and strategies outlined for the MotherCare Project and the types of assistance the Project is designed to provide. We focused on the possibility that Bolivia could be chosen for the development of a long-term demonstration project. They listed the PVOs and the government officials involved in maternal and infant care projects that could be of assistance to us and explained the elements of the new bilateral project as related to MotherCare assistance. They cautioned us that our discussions with Ministry officials should not compromise them in any way, given JFF's position as a competitor for this project.

The bilateral Child Survival Integration Project will initially work in three rural districts, one each in the departments of La Paz, Cochabamba and Santa Cruz. The project will experiment with decentralized planning and implementation of specific interventions designed to respond to the problems identified in each district. It is anticipated that these will include the most common causes of child mortality and morbidity, i.e. diarrheas, respiratory infections, birth-related problems, etc. The project contract with the GOB sets ambitious goals for improving pre-natal care and delivery coverage, as well as follow-up of the new born. The means for achieving these goals are not specified.

Lewellyn suggested that we investigate a wide-range of possibilities for assistance, including assistance to the PVOs involved in Child Survival activities, and assistance to the government for supplementary or missing activities that could result in improved service delivery i.e. production of in-service training materials or training curriculum for maternal health. While Lewellyn seemed to favor activities at the national level that would impact on MPSSP policy and programs, Kuritsky expressed his opinion that if a long-term project is developed, it should be small, not overly ambitious and, most importantly, designed to measure the impact of the interventions on maternal and neonatal health and nutrition. He emphasized the lack of

reliable data available to quantify health problems and, specifically, to measure the effectiveness of the many programs directed at child health.

Sandra Wilcox, the Acting Population Officer directed us to a number of individuals and organizations working in the area of family planning and women's health.

After our return to Washington, we were also able to meet with Mr. Paul Hartenberger, Head of the USAID/La Paz Health Office.

2. PAHO - Dr. Manuel Sotelo, Country Representative  
Dr. Daniel Gutierrez, MCH Advisor  
Lic. Cristina Gardel, Nursing Advisor

According to all sources, PAHO advisors play a key role within the MPSSP. Principal inputs focus on improving district management of health services and extending and up-grading the local health systems, i.e. health posts, medical posts, and health centers.

The PRONIMA III program is a three year (1988-91), maternal and child health effort funded by UNFPA with technical assistance from PAHO. The \$2 million program calls for a variety of activities and subprograms that should be implemented by the MPSSP in 12 districts per year and all 9 departments.

PRONIMA III calls for the training of 400 TBAs each year. Over the years, the MPSSP with assistance from various sources has trained over 1,200 TBAs, however, estimates indicate that only 200 remain in contact with the health system. MPSSP conducted an evaluation of TBA training in 1988. On the basis of that evaluation, the TBA curriculum is being revised. One of the problems with the program has been the lack of budget to train nurses and nurse auxiliaries for their role in TBA supervision and back-up. PAHO will propose to UNFPA that funding be added to the PRONIMA budget for this important activity.

PRONIMA III is also providing budget support to the MPSSP for the interim hiring of some levels of personnel, training in maternal and child health for physicians, and some equipment. PAHO's work with the university to make its curriculum for the training of health provider's more appropriate to the needs of the community was also mentioned.

In the area of maternal health, these advisors mentioned their interest in investigating the potential for living blood banks and emergency referral system. They are also proposing a maternal mortality study that goes beyond the DHS which PRONIMA helped to support. PRONIMA will bring a consultant to develop the protocol for this study, but they are looking for funding for the actual study once designed.

Discussing the serious underutilization of health services, PAHO advisors cited the attitudes of providers, the cultural expectations and practices of the population and difficult transportation as the principal causes.

Sources of baseline data on maternal health recommended by PAHO:

DHS survey  
Population and Housing Survey  
COBREH 1984 urban study (RTI consultant will conduct  
supplementary analysis of data in near future.)

When asked their suggestions for the types of activities MotherCare might become involved in, they mentioned:

1. Training of auxiliary nurses and community level health agents
2. IEC programs to improve knowledge of families and women
3. Family planning, particularly IEC activities
4. Operations research to test strategies for improving utilization of services and overcoming cultural and geographic problems of service delivery.

B. UNICEF - Dr. Oscar Castillo, Health Program Director Lic. Magali de Yale, Nutrition Program

Dr. Oscar Castillo, Health Program Advisor, was out of La Paz and unable to meet with us. Lic. de Yale provided the following information: UNICEF works with the Ministries of Health and Education. In the area of health, specific focus is on EPI, ORT, ARI, Goiter Eradication, Vitamin A and Iron supplementation programs. In each of these areas, different types of assistance are provided, i.e. supplies, development of client education materials, and training.

UNICEF is instrumental in the provision of support for community participation and the Popular Health Committees. Lic. de Yale also described UNICEF's efforts to promote coordination between the GOB and the many NGOs working in the country. A new UNICEF project, PROANDES, working in one of the most impoverished areas of the country (north Potosi, west Cochabamba) will attempt to channel the efforts of all organizations working in this area to improve the quality of life for the population.

UNICEF also provides assistance to the Maternal Child Health Division of the MPSSP for the training of TBAs, in coordination with OPS (PAHO). The level of funding was not specified.

The MPSSP Vitamin A supplementation program supported by UNICEF calls for administering 200,000 International Unit capsules to all children under 5 years twice each year. The iron supplementation program that should be a regular part of prenatal care calls for distribution of iron/folate tablets to all pregnant women, with a regimen of approximately 90 tablets during pregnancy. UNICEF will provide 10,000,000 pills over the next two years to the MPSSP for this program.

UNICEF has worked with CIDEM on the production of health education materials for women and children. It is also preparing an inventory on the NGOs working in health in Bolivia that should be ready shortly.

C. The Ministry of Social Provision and Public Health (MPSSP)

1. MPSSP, Maternal Infant Health Division - Dr. Alvaro Munoz, Director  
Lic. Norma Quispe, Nursing Chief  
and In-Charge of TBA Training

Dr. Munoz will be the MPSSP Manager for the new AID Child Survival Integration Project. At the time of our visit, he was still acting in his previous role as the director of the MCH Division of MPSSP. Dr. Munoz gave a brief description of the MPSSP structure and the place of the MCH Division in it. He also listed the programs under the MCH division including:

Growth and Development and Breastfeeding - Dra. Carmen Casanovas  
Nursing, TBA Training - Lic. Norma Quispe  
Control of Diarrheal Diseases - Dra. Marta Mejia  
ARI Control - Dra. Miriam Lopez  
Free Childbirth - Dr. Alberto de G. Murillo  
PRONIMA - Dr. Castro  
Cervical Cancer Prevention - Dr. Nijoavic, Dra. Calderon

The chiefs of the Nursing/TBA Training and the Cervical Cancer Prevention program were present in the meeting. Our discussion centered on the TBA program and on the training and preparation of nurses and nurse auxiliaries in terms of prenatal, intrapartum and post-natal care. The TBA program appears to be a popular one both with the MCH division and with PAHO. From 1978 to 1987, the MPSSP trained more than 800 TBAs who, during this period, reported attending 17,427 births. An evaluation of the program in 1988, which included interviews with 150 trained and untrained TBAs and mothers who had used their services, showed positive results. As in a previous study in 1982, improvements in the contact and relationships between TBAs and the health system were recommended as were provisions for resupply of TBA kits and supplies.

Reasons given for lack of contact and understanding between the health system and the TBAs include the highly centralized nature of TBA training and the lack of resources for TBA supervision. TBA training has been carried out by regional staff with little participation from the providers who are at the level of service immediately above the TBA. And, while the health post and health center staff should supervise the TBAs work through periodic visits, they are not given either the training nor the resources to do this. Lic. Quispe mentioned that MPSSP has recently requested assistance under PRONIMA III to train nurse auxiliaries and health technicians to supervise and provide back-up to the TBAs. Nurse auxiliary training, in particular, is deficient in the areas of maternal and delivery care. Previously 9 months, the auxiliary training course has recently been reduced to 6 months. Annual in-service training for auxiliaries and nurses which was conducted in years

past is no longer possible because of lack of funds. Thus, this extra training is critical.

When asked how a project like MotherCare might be of use to the MPSSP, Dr. Munoz focused on the unequal allocation of international resources and identified three districts which he said have been neglected both by the international donors and the NGOs. These are Beni, Oruro and Pando. He specifically mentioned the presence of a dedicated MPSSP team in Riberalto, Beni. In terms of content, both Dr. Munoz and Lic. Quispe stressed that the TBA program and the proposed in-service training for nurses and nurse auxiliaries will require additional support outside of PRONIMA III's contribution.

## 2. MPSSP, Epidemiology Division - Dr. Jorge Mariscal, Director

Dr. Mariscal heads the division responsible for the Expanded Immunization Program, and well as the malaria, Chagas and other infectious disease control programs. He was also one of the four team members that prepared the Child Survival Country Strategy for USAID, under a REACH contract. We briefed Dr. Mariscal about the MotherCare Project and asked his opinion about the need for and the MPSSP's interest in the type of assistance we might provide. He stated that there is an immense need for inputs focused on the mother, the birthing process and the neonate, particularly the collection of information that could clarify the magnitude and the causes of problems during these periods. He said he would strongly support participation in this area.

When asked if the problem would be one of compiling and analyzing existing information, he said that while some information exists at the hospital level, the attempts of the Child Survival team to collect information from health institutions was not successful due to problems with the existing information systems. He also emphasized that due to low utilization of services, existing information is seriously biased.

We stated our desire not to duplicate efforts already planned or underway. Dr. Mariscal expressed the opinion that most of the international assistance that will be received by the MPSSP, while significant, will be focused on problems of management and the integration of existing programs, none of which focus sufficient attention on maternal and neonatal care. Therefore, he encouraged us to proceed and offered to discuss the possibility of MotherCare Project assistance with the current Minister of Health.

Dr. Mariscal also pinpointed the need for on-going information related to the results of the MPSSP efforts to improve tetanus immunization coverage. Prior to 1987, when coverage was measured at approximately 3%, the MPSSP norm for tetanus targeted only pregnant women. In 1988, after a REACH consultancy, this norm was changed to include all women of reproductive age and to prescribe, instead of the 3 doses recommended earlier, 5 doses - 2 in campaign at any time during the reproductive period, and 1 booster during each pregnancy thereafter.

Dr. Mariscal requested assistance to establish a surveillance system that would allow the MPSSP to measure improvements in tetanus and other priority diseases over time. Given the low utilization of services and the isolated nature of many areas of the country, such a system would necessarily include more than the traditional sentinel clinics. Dr. Mariscal expressed the need for development of a methodology appropriate for Bolivia. We discussed briefly the possibility of providing assistance and expertise, perhaps from Population Council, for the development of such a system.

3. MPSSP Planning Division/World Bank Health Project - Dra. Carmen de Roca, Director

The planning unit for the World Bank project was established in 1988, under the direction of Dra. de Roca, who is also head of the MPSSP Planning Division. The project total is \$34 Million, \$20 Million from the World Bank and \$14 Million from the GOB. The three components include institutional support (national), development of services (3 districts), and human resources development (national). The development of services is of greatest interest to MotherCare.

The first step in project planning was to conduct a diagnosis of the health system in the three project sites, urban centers of the departments of La Paz, Cochabamba and Santa Cruz. This diagnosis was extensive, addressing the financial, structural, equipment, supply, logistical, personnel and training aspects in each area. Regional teams were formed to carry out the diagnoses and each has prepared a detailed analysis and plan for up-grading service delivery in their area. Plans identify and target undeserved urban and periurban areas and specify the construction and renovation of facilities, as well as the equipment and personnel to be supplied. 165 separate construction or renovation projects are anticipated including the construction of a 40 bed maternity hospital in El Alto and the possible renovation of an existing hospital facility in Cochabamba.

In the process of planning this project, the MPSSP realized the need to rationalize its structure and flexibly "standardize" the types of services and personnel to be provided at each level of the system. The revised structure and functions of each level are contained in the MPSSP "Proyecto Nacional de Salud", La Paz, March 1989. Other attempts will be made under the World Bank Project to develop and standardize important management systems, (i.e. maintenance, information) and national policies such as those related to supplementary feeding and food-for-work programs.

Dr. de Roca's suggestions for MotherCare work in Bolivia included:

1. Work to reduce deaths postpartum and post abortion from infections.
2. Additional assistance for TBA training
3. Improving utilization of prenatal services by coordinating with the distribution of food supplements.
4. Introduce and test growth monitoring of pregnant women and weighing of the newborn in one area.

Dra. de Roca, a nutritionist by training, knows Marcia Griffiths and has experience in the development of tools for family and community nutrition education. She mentioned a calendar she and a colleague developed that allowed the family to monitor and record important events (i.e. prenatal visits) during pregnancy and the first months of life.

D. USAID-Funded Private Voluntary Organizations

1. PVO-Rotating Executive Committee (PVO-REC) - Sr. Mario Telleria, Director  
Sra. Susana Barrera de  
Martinez, Health Education  
Specialist

The PVO-REC is an USAID supported project that channels technical assistance and funding for child survival activities to nine PVOs, all recipients of USAID's earlier Child Survival grants. As the PVO-REC does not exist as a legal organization, the implementing organization for the project is, Save the Children. However, the PVO-REC is structurally, an organization that could stand on its own. The board of directors for the project consists of a member from each of the PVOs. The project staff is headed by Mario Telleria. Four key technical staff are also employed to provide expertise in medical services, health education, and community development.

The PVO-REC has developed educational materials and conducted workshops and seminars that are of interest to all members. Of specific interest to us were materials developed for nutrition education and breastfeeding. Unfortunately, however, we were unable to obtain copies of these. PVO-REC is planning an exposition in the near future that will allow organizations to share their work with others.

In addition to coordinating the development of materials, PVO-REC staff also monitor and provide technical guidance to the USAID-funded projects being implemented by the member organizations. During our visit, for example, staff traveled to the plains to monitor CARITAS' preparations for the expansion of their maternal and infant health improvement project.

One of the most important functions of the PVO-REC in Sr. Telleria's view has been its attempts to link the work of the PVOs with that of the MPSSP. Joint seminars and participation on working groups and panels are, he believes, bringing improved relations and understanding.

Most importantly, PVO-REC is responsible for channeling all new USAID child survival monies to its members. This has apparently been the slowest and most problematic activity, in part due to the nature of the proposals submitted for review. It was not clear to us whether there are upper and lower limits set on these grants. USAID said they would be interested in having MotherCare work with the PVO-REC to help its members do a better job of programming funds in the areas of maternal and neonatal health improvement.

While the PVO-REC would be an excellent vehicle for assistance to the PVOs working in Bolivia, it is not without its own problems. A recent administrative evaluation indicated problems that will undoubtedly be addressed in coming months. We also detected friction and dissatisfaction with the PVO-REC during our meetings with two of its PVO members.

2. CARITAS - Mr. Jose Barrientos, Program Director  
Lic. Enrique Lavadenz, Director Maternal Infant Health  
Improvement Project

CARITAS, a national affiliate of the Catholic Relief Service, is the principal organization distributing PL480 food supplements in Bolivia (60% of the total provided by USAID, according to Lic. Barrientos). The mechanism for this distribution is CARITAS' network of over 3,000 Centro de Madras (Mothers' Club) throughout the country. While formed around the distribution of food rations to pregnant women and children under 5 years of age, the Mothers' Club concept is broader, including both self and family improvement. Mothers' Clubs in various parts of the country are involved in home improvement, income generation, credit and other educational programs provided by CARITAS. For the past several years, CARITAS has been implementing the USAID-funded Maternal and Infant Health Improvement Project. Until recently, a technical advisor for this project was also provided by PRITECH.

The project's original aims were to prevent and treat diarrhea, and to provide nutrition education and routine growth monitoring. Most recently, CARITAS has added the diagnosis and treatment of acute respiratory infections to the interventions, with funding and technical assistance from the MPSSP and PAHO. The program has been implemented in the dioceses of the altiplano and the valley regions, where over 1,200 Mothers' Clubs have been trained. During 1989-90, the project will expand to the plains and another 700 Mothers' Clubs. Each Mother's Club consists of approximately 30 women, mothers of children under 5 years of age. The total target population for this project is approximately, 50,000 women of reproductive age and 100,000 children under 5 years.

Project staffing includes a central level technical group, headed by Lic. Lavadenez, which includes art, data processing, logistics and training staff. At each diocese or region involved in the program, a health coordinator and field supervisors are responsible for training and supervising the Mother's Club activities. In each Mother's Club, a promoter is selected by the group and trained to conduct group meetings, health education, etc. Under the program, Mother's Clubs meet once each week, three times a month for education and discussion and once each month for food distribution.

Lic. Barrientos initiated our interview with a criticism of AID assistance in Bolivia, the gist of which was that AID's assistance to CARITAS had been reduced due to the unequal and unjustifiable allocation of money to other PVOs that are doing much less than CARITAS. He also stated that some of these PVOs have "ruined" the Mothers' Clubs by offering free materials, travel money, etc. His message to us seemed to be that if MotherCare works in

Bolivia, it should work through CARITAS and not with other PVOs that usurp CARITAS' Mothers' Clubs.

3. Save the Children Federation - Dr. Marcello Castrillo, Health Program Director

SCF began their Child Survival Program in the province of Inquisivi in 1985. The population is primarily Aymara and the area a subtropical valley. In three areas in the province, Inquisivi (15 communities), Canton Capinata (12 communities) and Curcuata (15 communities), they registered a population of 11,900 in 1988, including 345 infants and a total of 1993 children under 5 years of age. The health programs include immunizations (DPT, OPV and measles), ORT, growth monitoring and mother and child health care. They estimate that 40,000 more people receive indirect benefits from their program.

SCF has constructed 3 health posts in the area, each staffed with a physician, nurse, nutritionist and nurse auxiliary to cover 20-25 communities (population per community = 200-250). One midwife has been selected and trained per community. One health promoter is selected by community members.

Tetanus - In 1987, SCF found that neonatal tetanus claimed a high proportion of the neonatal deaths. Birth injuries and asphyxia were the other major neonatal killers.

The MPSSP standards state that tetanus vaccine should be given to all women of childbearing age. In SCF's target population of 2,218 registered women 15-45 years of age, between January and August, 1988, only 15.7% were immunized with 2 doses of TT; 52.4% received at least one dose. Dr. Castrillo said that one of the reasons for low TT coverage is that women confuse TT immunization with depoprovera. (It is worth noting that despite this fear, 52.7% did receive a first shot; it would be interesting to find out why they missed the second.)

Breastfeeding - SCF has found that breastfeeding of infants in its project area begins immediately at birth and continues to 17-24 months for 60% of the mothers. Since 1987, SCF has provided education on weaning foods to lactating mothers. Recent investigations have found that approximately 74% of mothers begin semi-solids by 4-6 months.

Maternal Health - SCF's Maternal and Child Health Program began in February, 1987, with training for traditional midwives and health promoters in collaboration with the MPSSP-PAHO. An auxiliary nurse continues the interventions in Inquisivi and Curcuata. Their tasks include: training and supervision of the TBAs and HPs; administering TT vaccines to all pregnant women, registering all information on the perinatal form, and providing talks at the community level.

Number of TBAs and HPs trained in 1988 = 17

A recent evaluation found that:

- 73% had acceptable knowledge and skills.
- 38% women (15-45 years) had received talks and orientation on pregnancy and child care.
- 72% of pregnant women received 2 prenatal check ups.
- 63% pregnant women are anemic (conjunctiva color)

SCF estimates the following statistics for its project area:

- Crude Birth Rate = 43.6/1000 population,
- Infant Mortality Rate = 82/1,000 live births,
- Neonatal Mortality Rate = 13.8/1,000 live births.

The above figures come from the 1988 annual report (on file - Bolivia) and are based on information from SCF's routine recordkeeping system. They undoubtedly underestimate the actual situation, as SCF estimates that only 20% of births are attended (and reported) by a midwife or a promoter. The rest are delivered by the husbands.

It is not clear who the TBAs actually are, as Dr. Castrillo mentioned that they all read and write. While the TBAs and HPs have an interesting risk form for observation during pregnancy, this is primarily an educational tool; except for bleeding, they provide little or no follow-up for the problems found.

The main problems associated with childbirth are the use of herbs to accelerate the birth and excessive pushing on the uterus during labor. No obstructed labors are reported. The husband is the decision-maker during birth. To date, there has been one maternal death caused by hemorrhage. There is little to nothing that can be done for such emergencies, he said, as a referral hospital is at least 3 hours away and they may not be able to help. PAHO did a study of the SCF-trained TBAs with focus groups and found that they put the babies to the breast immediately if there is a retained placenta.

SCF carried out a nutrition survey of women in 1987; women's weight, height, age and arm circumference were taken on a sample population. Unfortunately, we did not get a copy of the report nor did we learn much about the results except the statement that there is considerable undernourishment. Iron tablets are distributed to pregnant women; no food supplements are provided to anyone because of the dependency it creates. Materials were developed to educate women about their nutrition.

General Comments - The SCF Program is not a part of the government program; all facilities and personnel are their own. However, the physicians who join are doing their rural work - a requirement for service; hence, they do not select to go to these areas but must in order to complete their training. The nurses have all received 4 years of nursing training in either the La Paz or Cochabamba schools and the nurse auxiliaries 9 months post-high school. These two workers are the real core of the health team.

While SCF has tried to interest the MPSSP in its work, officials have not found the time to participate in evaluations. According to Dr. Castrillo, occasional workshops of PVO and Ministry staff have not proven beneficial because they continue to work separately. According to Dr. Castrillo, UNICEF is trying to bring PVOs, NGOs and the MPSSP together in various fora; PAHO, on the other hand, does not work with the PVOs.

The SCF information system (birth, death, marriage, <5 registers) for Bolivia was developed by Dr. Castrillo during his 2 year stay in Inquisivi. HPs gather information when they see mothers during scheduled weighings and immunization campaigns. The nurse auxiliaries go monthly to the communities to gather this information in their records; it may be on a form or in a diary - whichever is possible for the HP. If there has been a death, a person goes to the home to follow up and get a verbal autopsy. (Note: While the SCF recording system is conceptually excellent, with unique numbers assigned that should enable SCF to track individual conditions and services, we suspect that there are problems with its implementation. Under-reporting has already been mentioned. There may also be problems with semi-literate workers and the completion of the forms. In the 1988 Annual Report, estimates of target groups served, for example, do not always come to the same totals, e.g. numbers of children per age group, or total women of reproductive age.)

4. CARE - Mr. Frank Sullivan - Director  
Mr. Chris Roesel - Sub Director

As their OPG grant ends in a little more than a year, CARE is pursuing two grants, one to continue their PHC work, the other for water. Presently they cover a 55,000 population in 5 regions in the rural part of La Paz. In these areas, they are doing ORT, EPI and growth monitoring. Tetanus is "probably" not a problem except in the valleys. However, there is believed to be a tremendous underreporting of perinatal and neonatal deaths.

CARE's future work will add agricultural production to their child survival and water activities, and another 200 communities in Potosi. Sullivan has discussed adding prenatal care to their tasks but only the group in Tarija is interested; the Potosi CARE staff feel it would be too complicated given their existing work and planned expansion. CARE health program staff include doctors, nurses and auxiliary nurses. They have also trained health promoters (50:50 men:women).

The Tarija area is 66% altiplano, 33% valleys and includes about 100 communities. Possible "prenatal" interventions include:

- growth monitoring to encourage proper weight gain
- iron folate distribution
- promotion of early and continuous breastfeeding

An information system is in place whereby the HP keeps individual data that is aggregated as it is passed up the line, (on file - Bolivia). However, it is not clear if each household member is registered with a unique number or how often a household is visited. There is a lot of migration in the area -both in and out, so denominators are a major problem. The present basis for their denominators is a census taken in 1987 (?).

They do ask the HP to follow up if the child is faltering in growth or has diarrhea.

Research suggested:

- how to identify pregnant women.
- practices during pregnancy and influences on outcomes.
- basic values about foods and certain practices (?).
- causes of perinatal mortality.

NOTE: Chris Roesel had an ICRW grant to look at food supplementation, weight gain during pregnancy and birth weight in a Khmer population in Thailand. Other CARE offices with interest in maternal care -Bangladesh, India.

Care recommended the following anthropologists knowledgeable about Bolivia:

- Cornell University graduate students
- InterAmerican Foundation - Kevin Healey

5. Project Concern International (PCI) - Mr. Wally Chastain, Country Director

Project Concern is reportedly the only PVO that works inside the MPSSP system, having staff assigned as advisors/project managers in the Unidad Sanitarias of Oruru, Potosi and Cochabamba. In Oruru, PCI provides support for MPSSP community health volunteer training and support; to date 127 CHVs have been trained and PCI plans to train 120 more under a 3 year, AID matching grant. CHVs receive 6 weeks of training per year and regular supervision from Unidad Sanitaria and PCI staff. Oruru project management will shortly be turned over to the Unidad Sanitaria, instead of the PCI project manager, as a step towards complete turn over within the next three years.

In Potosi and Cochabamba, PCI has been working under an AID Child Survival OPG. In these areas, PCI provides supplementary support to the MPSSP for CDD, ARI, EPI and nutrition programs. In Potosi, PCI project manager, Dr. Oscar Velasco, has recently initiated a radio program on these topics that PCI hopes to expand during the next year. Potosi and Oruru also receive technical support for a revolving drug supply system started with PCI assistance.

According to USAID, they do not plan to award Child Survival OPGs in the future. This means that PCI and other PVO-recipients of such funding will have to submit proposals directly to the PVO-REC. Mr. Chastain did not explain his current funding sources, but mentioned that PCI activities in Chulimani would have to be closed down due to USAID's decision not to continue funding. He was very critical of the PVO-REC's work to date.

Mr. Chastain was not encouraging about the potential for MotherCare involvement in Bolivia, particularly with the MPSSP. He cited the large amounts of foreign assistance planned for the health sector (\$168 Million in the next few years?), and PCI's experience showing that since this infusion of funding health officials tend not to pay attention to projects or initiatives that do not carry high price tags.

PCI Project Managers, Angela Lutena and Dr. Oscar Velasco, are highly respected. Ms. Lutena, a Peruvian nurse with over 20 years of experience with Project Hope and PCI, is the resident advisor in Cochabamba. Dr. Oscar Velasco, a Bolivian physician, was formerly assigned to Oruru and is now in Potosi.

D. Other Potential Collaborating Organizations and Individuals

1. CIES - Ms. Berta Pooley, Director

CIES has 8 clinics for mothers and children in La Paz city, El Alto, and in rural La Paz. While 30-40% of their clients come for family planning (pills, condoms, foam, CUTs), 40% come for women's health care. They serve primarily the middle and lower classes. The charge for a first visit is 2 Bolivianos and 1 Bol. for a revisit. A pap smear costs 8 Bol. An innovative

aspect of CIES work is its close link to the Centros Obreros, or workers unions in the La Paz area.

Typically, women come to the clinics only when they are sick (e.g. hemorrhage, vaginitis). They would like to change this visitation pattern and see more women coming for preventive services.

They have a lab in their El Alto clinic which can do pregnancy tests, VDRL, blood, pap smear, and AIDS exams (Elisa from MPSSP) as well as tests for gonorrhea, candida and trichomonas. They report finding a lot of infection but could not provide percentages. They feel women are not embarrassed to come for such tests.

In the last year, the CIES clinics served 4400 MCH patients and 3050 new contraceptive users. The clinics are staffed by doctors and auxiliary nurses - no nurses. Their auxiliary nurses provide counseling about family planning. They also give out brochures about where to find them but not about self care or self detection as they find women do not appreciate it (?). They work closely with the doctors in the neighboring clinics and train health promoters. A nicely designed flipchart on reproductive health prepared by CIES was observed in several other clinics during our visit.

Ms. Pooley stated that finding answers to the following questions would help to improve their services:

- What should be done for women with vaginitis?
- What should be done with women who are malnourished? They feel that the lack of food is a woman's biggest problem.
- What could be done to help communities re nutritional habits?
- What behaviors and customs should they be aiming to change?

She also mentioned needing assistance for developing their clinic information system, i.e. determining what kinds of information should be asked and by which workers? MSH may provide this assistance.

CIES now has 52 staff, whereas they had only 5 two years ago. Funding is coming from:

- Population Council (INOPAL project to see if clinics are more used if located in unions or outside)
- FPIA
- Pathfinder

2. Dr. Javier Goitia C. (the son)  
Dr. Javier Goitia T. (ex-minister 1971, 1983-85; PAHO advisor in Peru)

Dr. Torres Goitia C. is an author of the REACH sponsored Child Survival in Bolivia document written in 1987, and a well-respected pediatrician. He suggested two major areas to work in:

- Improve what is already done in terms of services and education.
- Learn what people are doing through focus groups with the popular health committees, grandmothers and TBAs.

Two possible ways to derive this latter information were suggested. We could work through the Pediatric Society or the newly formed Andean Institute of Social Medicine.

The Pediatric Society has a national directory in La Paz and one in each of the nine departments of the country. They meet yearly for information exchange. This year the meeting is August 24-26 in La Paz and will concentrate on immunizations, the handicapped and infectious diseases. While the Society is very much involved in policy, it does not set policy or standards; this is done by government.

The Andean Institute of Medicine has recently been formed by the previous Health Minister, Dr. Javier Torres Goitia T. (1971, 1983-85), Dr. Torres Goitia C. and others, including Lic. Edi Jimenez (Proyecto San Gabriel), Dr. Guillermo Cuentas (social science and medicine), Rodolfo Erostigy (economist-advisor to labor unions), and Carmen Velasco (early learning specialist and Dr. Torres Goitia C.'s wife). From the father we received a draft describing this organization (on file). It is a NGO but linked to the university as a means to provide teaching and to carry out studies. Dr. Goitia, the elder, helped to develop the popular committees and feels strongly that information should be given to communities through these committees to stimulate demand for services. The institute has already received/is receiving a commitment for funding from UNICEF for developing training materials for the Popular Health Committees (the university professors will do the training) and from UNFPA for studies on adolescent health.

The Popular Health Committees are not sponsored by the MPSSP but respond to social unions of workers (ie. Union of Peasants, Mothers' Clubs). They were strengthened in the early 80's to identify and solve health problems (especially diarrhea, goitre, Chagas, EPI) in their communities. The Health Committees members are the leaders of the communities. The Responsible Popular de Salud is a community selected worker who liases with the Popular Health Committees and the MPSSP. Two members of the Popular Health Committees sit at the Central Office of the MPSSP. Dr. Goitia C. is advisor to the Popular Health Committees on children and drug policies.

According to Dr. Torres Goitia C., no statistical data are available on neonatal problems but they could be pulled together within a month. He suspects that prematurity is high - around 25-30%, and that infections play a major role in neonatal mortality, as does tetanus in the valleys and jungles. There is a lack of supervision of home deliveries and a lack of any attention to them. Deliveries are performed by the physicians in the hospitals; there are no nurse-midwives. At home, the grandmothers or TBAs perform the deliveries. Nurses or nurse-auxiliaries are not trained for high risk assessment. The rural mother carries the baby on her back everywhere but the urban mother may leave the baby alone.

Dr. Torres Goitia C. invited the MotherCare Project to present the project at the upcoming Pediatric Congress, August 24-26. There will be representatives from Bolivia, Ecuador, Columbia, Chile and Argentina.

Other suggested contacts:

- Dr. Pedro Yasik, pediatrician at San Gabriel who has had studies on the Kangaroo Mother (1 year funded by UNICEF and presented at the 1987 Congress of Pediatrics).
- Good group of pediatricians in Cochabamba although not yet working on neonatal health.
- Dr. Roberto Bohrt, OB/GYN with Social Security; studies on anemia (contacted).
- Pediatricians in Santa Cruz working on neonatal health but have not yet written about (contact - Eduard Robera - Bolivia Pediatric Association in Santa Cruz).
- CENETROP, Tropical Institute in Santa Cruz looking into tetanus (not contacted).
- Potosi, Oruru, Sucre; maternal problems are very distinct but services are poor. However, they have strong popular organizations.
- Popular Health Committee in Potosi is very strong.
- Oruru Unidad Sanitaria - Maternal Infantil Dept. is strong.
- Tarija, only 3 pediatricians and not good attention for pregnancy.

3. Social Security Maternity Hospital 18 de Mayo, La Paz - Dr. Roberto Bohrt

Dr. Bohrt carried out a study of anemia in 1981 on 60 pregnant women using a specific biochemical assay, the FIGLU test. He found that the primary cause of anemia was not due to iron deficiency but to folic acid deficiency (megaloblastic anemia). Since then, he has not had the reagents to replicate the test, but has counted red blood cells and compared that with the hematocrit of approximately 1000 pregnant women between 1985-1987, and again feels that his results indicate megaloblastic anemia as the predominant form.

The women Dr. Bohrt has tested are typically in their last trimester (earlier than 28 weeks they go elsewhere) and from the working class. Foliates are in green vegetables, livers etc. (similar to iron) which are not eaten often. Women should have 1 mcg/day and when pregnant 2-3 mcg/day of folic acid. Treatment is 20 mcg/day for 20 days if deficiency is found.

According to Dr. Bohrt's work, approximately 64% of pregnant women are anemic, 70% of the anemias are megaloblastic, 30% normocytic anemia.

Dr. Bohrt is also studying infections from premature rupture of membranes (PROM). He has found trichomonas and monilia. Samples for culture are sent to another Social Security Hospital but because most results are negative, he is questioning whether the test is carried out appropriately. They are also doing the sniffing test and KOH followed by microscope. He is studying approximately 200 pregnant women; a control is run on a sample of non-pregnant women.

Dr. Bohrt feels that vaginal secretions acquired during pap smear would be useful for detection of trichomonas, fungus and bacterias. Studies from the rural areas could be fixed with hair spray and sent to the lab. Approximately 0.8% of pap smears are positive for cervical cancer.

Dr. Bohrt mentioned that the annual OB/GYN Congress will be held in Trinidad, Beni, September 18-21, 1989. He is preparing the above study for presentation.

The proposal Dr. Bohrt has prepared for Partners of the Americas for a 3 month study of anemia in other parts of Bolivia is on file. We shall try to find out if it will be funded.

Suggested contact:

- Dr. Alberto de la Galvez Murillo of the MPSSP is head of the free childbirth program. He is considered very good and bright. He recently prepared a paper on low birth weight but we did not get a copy.

4. PROSALUD - Self-Financing Primary Health Care  
Project Rafael Indabura - USAID Project Manager

The pilot for PROSALUD, a self-financing project, started in Santa Cruz in 1983-84. Initially, three cooperatives were to develop the project, but they could not work together. Between 1984-85, USAID managed the project, advertised for physicians and other clinic staff, hired the team and did a great deal of team building. When USAID and the team felt they were ready, they looked for potential clinic sites. Their initial selections were poor, but they had started to build their credibility and a management system that would allow for steady growth. Now PROSALUD operates 10 clinics, (5 urban, 5 rural) and they are in the process of constructing 6 new ones in the urban area.

Their prices are as follows:

- First visit, 6 Bol.
- Follow-up visit, free
- Delivery, 100 Bol.
- Pediatric, 8 Bol.
- GYN, 6 Bol.
- All medicines are extra

All follow-up visits are free to encourage follow-up. Dentists, GYNs, and Pediatricians are paid a commission per patient equal to 50% of the amount charged; family doctors until recently have been paid a salary but may also receive commission in the future. This reduces fixed costs while acting as an incentive to the physicians and is advantageous particularly when activities are getting underway and receipts may not be sufficient to cover salaries.

The monies accrued above clinic costs are used to cover administrative costs and as an incentive payment to clinic staff. Clinics that do not meet their targets for the month, are not eligible to receive this incentive until they have continually reached their targets for two consecutive months.

In order to determine the feasibility for new clinics, a survey is done in the area to assess market size and potential demand. In each case, the community is actively involved in establishing prices. Financial projections are then done to estimate clinic operating costs, and a break even point is calculated. The break even point (or, the number of consultations required to cover operating costs) is then analyzed and compared to the clinic's productive capacity and the potential demand. If the venture appears feasible, an aggressive marketing plan is developed and services are initiated.

PROSALUD uses the "initial visit" as its service unit for evaluation of costs and receipts. This unit includes all revisits as well as other types of visits. PROSALUD calculates its costs per unit of service to be 4.25 Bol. The average receipt is 6 Bol per service unit, leaving a margin of 1.75 Bol.

PROSALUD has tried a number of payment schemes in addition to direct payment by the client:

1. Prepayment Scheme: Unfortunately, projections did not take into account abuses of the system. They found that participants in the prepayment scheme used the system much more frequently than expected. Thus, variable costs for medicines, which were given free under the plan, were much higher than the system could support. As a result, this scheme was stopped.
2. Modified Prepayment Scheme: PROSALUD is currently studying a system that would allow participants to prepay up to a specific level of visits; above this level, they would be charged the established rate.
3. Differed Payment Scheme: With industry and commercial firms. This scheme was tried, but they found they had too much business and the quality of services declined. When they have the 6 new clinics running, they will again try this scheme.

Two women have been hired for marketing and promotion who are considered very good. They were given initial insights by a short-term advisor. Roy Brooks of MSH was a long-term advisor to PROSALUD. JSI/REACH Cost-Financing Director, Gerald Rosenthal, has also worked with this project.

Seventy-five percent of PROSALUD's clients are 0-4 years old. In one clinic, they had 140 prenatal visits in 1988, or 103% of their target. This means that 41.48% of the pregnant women in the area had prenatal visits.

Only the cumulative number of consultations by type were available at the USAID office. The information system is, however, very well developed and it is probable that individual clinics could say how many women had received how many prenatal visits, at what points during pregnancy. Of concern to PROSALUD, is the fact that tetanus immunization coverage is low - 53% of target in 1988; why this is so is not yet known. Rafael also did not know if TT is given at a prenatal visit.

PROSALUD is very concerned about the quality of the care they provide, as the utilization of their services depends on it. While they have carried out or are carrying out approximately 11 studies to assess the quality of their other services, they have not studied their prenatal and delivery care. Rafael indicated that such a study might be of interest in the future.

5. CIDEM - Centro de Investigaciones Sobre El Desarrollo y Educacion a la Mujer  
Sonia Montano - Director  
Virginia Ayou

Ms. Montano was not in La Paz on the day of our visit; Lic. Ayou provided the following information:

CIDEM, founded in 1984, focuses its work on the periurban, low income areas of La Paz and El Alto. The organization provides health services at a clinic located in El Alto, and legal services and information to women through trained promoters. It also conducts academic studies on the status of women and provides advisory services to the government and international development agencies. At the time of this visit, CIDEM had been contracted to carry out a study investigating the impact of food supplementation on the lives, productivity and participation of urban women. It was also involved in an effort to redesign adult education programs to make them more appropriate and responsive to women's needs; in the preparation of a history of the women's movement in Bolivia; and, in the production of a video dealing with women's participation in the country's labor and political systems.

CIDEM has produced a series of booklets on topics related to pregnancy, childbirth, family planning and women's rights. The series, designed for use by promoters and educators with women in urban and peri-urban areas, appears to be the only comprehensive set of materials addressing women's health needs. While the booklets were produced in large numbers and distributed, it is not clear how widespread this distribution has been, nor if there are plans to re-print and increase distribution.

CIDEM is planning a study of the reproductive health and sexuality of migrants using their El Alto clinic. This study will look at gynecological problems, cultural beliefs and practices, sexual behavior and care during pregnancy and delivery.

CIDEM would obviously be a desirable collaborator on any IEC effort. The organization's experience in the development of such materials for urban women could most likely be easily transferred to address rural problems. There is, however, some question as to whether CIDEM would be interested in working with USAID assistance.

6. Fundacion San Gabriel - Dr. Lizzelotte de Baragan, Director  
Lic. Edi Jimenez, Administrator

The Fundacion San Gabriel is an NGO working in two districts of the Department of La Paz, with a target population of approximately 190,000. The organization operates an 80 bed hospital and 9 ambulatory clinics that specialize in MCH services. It also administers supplementary feeding program sites that distribute food for approximately 2,100 children per day. The hospital is self-financing, charging minimum fees from clients and operating under contracts with the industrial unions (Centrales Obreros).

Other activities of the Fundacion include women's education and promotion through 15 popular education centers, a technical training center, legal and social counseling, a credit plan and a communications unit. Financing for the Fundacion comes from a variety of sources including client fees, Protestant and Catholic church organizations (Miserio, Centro Evangelico, CARITAS), agreements with the Bolivian government for personnel and through the National Emergency Fund, European donors and personal donations for special programs.

The Hospital San Gabriel has carried out or is carrying out several programs that are directed towards maternal and neonatal problems. Dr. Yasik carried out an operations research project in 1986/87 with UNICEF funding, to determine the feasibility of the Kangaroo Mother technique for care of premature, but healthy newborns. The study followed 30 cases for one year and found that, besides being less costly, the technique produced positive psychological development and lower rates of infection in the newborn. The results of the study were presented in 1987 at the Bolivian Pediatric Congress. Dr. Yasik continues to use the technique at the hospital and is reportedly seeking additional funding to allow him to promote it in other hospitals in Bolivia. While less costly in terms of hospital days, the technique is reportedly much more labor intensive than traditional treatment. Dr. Yasik's team consisted of himself, a psychologist, a nutritionist and a social worker who spent considerable time training and following-up mothers once they returned to their homes.

The hospital's Women and Family Program provides gynecological, abortion prevention and family planning services (IUD, pills, condoms, diaphragm, and foaming tablets). The director of the program reports that 98% of inquiries are for IUD insertion and 2% for other methods, although only approximately 50% of those who inquire actually return to receive a method. As part of their cancer screening program, they have analyzed over 500 smears for vaginal infections and STDs. They have been surprised to find that the rate of infection is extremely high, with less than 20% of exams considered normal. 86% of smears found to be positive for infections are said to be from women with no perceived symptoms; 49% of smears show what the investigators have termed as STDs including trichomonas (70%), gonorrhea (15%), syphilis and yeast (15% together); less than 5% of positives were found to have PID. Most of the hospital's clients are married, and it appears that the highest incidence of infection is in the lowest socio-economic group. The hospital has over 1,800 smears at this point and could do additional analysis. Their ability to detect and differentiate important pathogens, however, is limited due to inadequate laboratory technology.

#### **IV. CONCLUSIONS**

There are significant resources being invested in the Bolivian health sector by USAID, the World Bank, UNFPA, UNICEF, PAHO, the InterAmerican Development Bank and other international donor agencies. Most of this assistance focuses on improving and integrating the management of existing MPSSP programs and on up-grading health facilities at the district and area levels.

The potential exists within these programs, particularly the bilateral USAID Child Survival initiative, to develop interventions that focus on the prenatal, delivery and post-natal periods. Much less attention is paid to women's and infant's health, both in written documents and in actual programs, than to interventions directed towards the survival of older children.

A number of gaps in knowledge and services that could be addressed through the MotherCare Project were detected during this initial visit. These include:

1. Lack of epidemiological information about the extent and causes of maternal and neonatal mortality and morbidity, including nutritional status. The DHS, now underway in Bolivia, will help to fill this gap with regard to rates of maternal and neonatal mortality, contraceptive prevalence, extent of health services use during the prenatal period, and type of assistance at birth. It will also give a rough estimate of tetanus immunization coverage but will not provide information about the causes of maternal and neonatal mortality and morbidity, the nutritional status of women nor the types of care sought during pregnancy and delivery.
2. Lack of understanding of the cultural beliefs and practices that influence behaviors during pregnancy, delivery and the neonatal period, including utilization of health services.
3. Institutional prenatal and delivery services designed around a Western model that is unrelated to the actual problems experienced by Bolivian women and their perceptions of appropriate care. While norms exist for prenatal, intrapartum and post-partum care, little information is available about the content of the services that are actually provided.
4. Very low level of knowledge and awareness on the part of women and their families about reproductive physiology, the need for prenatal care, the danger signs of pregnancy and delivery, safe birthing practices, and the care of the neonate and post-partum mother.

5. Very low utilization of existing maternal and neonatal services, due to the above and other related factors.
6. PVO programs providing prenatal, delivery and neonatal care having difficulty sharing their experiences with the MPSSP, and in some cases with each other. These same PVOs requesting assistance to continue and improve their efforts.
7. Training of MPSSP nurses and nursing auxiliaries, and probably of doctors, deficient in the areas of prenatal, delivery and neonatal care.

## V. RECOMMENDATIONS/POTENTIAL FOR MOTHERCARE INVOLVEMENT

The following activities directed towards the improvement of maternal and neonatal health and nutrition are suggested:

1. Development of the awareness of policy makers, providers, communities, and families of the extent of maternal and neonatal mortality and morbidity, and the nutritional status of mothers, is a first step toward developing commitment in this area. Information is required, however, to set the stage for these audiences. Hence, short-term assistance for the following types of information-gathering is recommended.
  - a. Anthropological investigation of practices related to pregnancy, birth and neonatal care and of women's life cycle to determine points of possible intervention outside of the health. Organizations and individuals that could be enlisted in this effort include Joseph Bastien, Duncan Pedersen, CIES, CIDEM.
  - b. Epidemiological investigation of maternal and neonatal mortality and morbidity based on hospital records, including indicators of maternal nutritional status, infections and their effect on pregnancy outcome, prematurity, low birth weight, anemia and birth injury. Data should be collected from sites where such may be available, including from PVOs like Save the Children, Hospital San Gabriel, the Social Security Hospitals, MPSSP Regional Hospitals, Children's Hospital, etc. Such a study might be carried out under the auspices of the Pediatric and OB/GYN Associations or through individual consultants.
  - c. Two studies that would help expand the understanding of maternal morbidity in Bolivia include a study of anemia in pregnant and lactating women and a study on the prevalence of reproductive tract infections, including STDs, AIDs, and gynecological infections. Both studies could be carried out in selected sites (e.g. departmental capitals; USAID focus district(s) - urban and rural samples). Anemia and reproductive tract infections have severe negative consequences on pregnancy outcome, as well as obvious negative impact on women's health and productivity. Individuals identified that are currently involved and interested in such studies include Dr. Roberto Bohrt of the Social Security Institute's Maternidad 18 de Mayo in La Paz (anemia), and the director of Fundacion San Gabriel's Programa Mujer y Familia (infections).

- d. Operations research on the content of prenatal, delivery and postpartum care (including neonatal care) in selected sites, including institutional care (urban) and care provided in the community and/or home (rural). Such research might be designed to test the use of alternative service providers; the introduction of new technologies for monitoring weight gain, assessing risk during pregnancy, or managing births; community and health personnel training strategies; etc.
  - e. An Andean Safe Motherhood Conference is planned for mid-1990 by the World Bank and WHO. While the exact time and place of this conference has yet to be set, the studies above would provide a good documentation for the status of Safe Motherhood in Bolivia. This would be the major advocacy effort to put maternal and neonatal health care on the agenda of policy makers and program officials. It could be followed up by a national conference with more participants and focused more specifically on program development.
2. To address the urgent need for information at the level of the family and the individual woman, and to increase the utilization of available services, a first tack would be the development of a communications (IEC) program. Such a program would focus on health-promotive behaviors during pregnancy and lactation, safe delivery practices, and care of the neonate. Because Bolivia's population is both culturally and linguistically diverse, this would not be an easy task. There are, however, numerous organizations in Bolivia that have experience in this area. Several mechanisms could be used to develop the communications tools specific to the prenatal, birth and post-natal periods and to disseminate them:
    - a. Co-sponsor a series of workshops with the PVO-REC on the above themes, and include as participants, the nine PVOs, the Communications Unit of the MPSSP, and local NGOs. The first workshop would include an introduction to these themes and an assessment of interest. Development of communications materials would then be carried out with the one or two interested PVOs that would carry out the formative research necessary. Workshops with the others could continue based on the research and materials developed in these PVOs. (PVOs that were specifically interested in this area include CARE and Save The Children. Funds of the PVO-REC could be specifically earmarked for such work and dispersed on a competitive basis.)

- b. Investigate working through the education systems to spread messages, i.e. literacy program (SENEJAP), teacher training program. This could include development of curriculum, teaching materials and training of teachers in their use of materials for mothers. As above, this would necessitate a series of workshops, beginning with an introduction to the subject area, followed by formative research, before proceeding to develop materials.
3. Work with the colegio de enfermeras, and the health workers' federation to improve knowledge and skills related to maternal and neonatal care and to strengthen these organizations to enable them to play a more active role in advocacy for services and continuing education. While the PRONIMA Project of the MPSSP/PAHO will train nurses and nurse auxiliaries to assist with the training and supervision of TBAs, there is no provision for up-grading their training to enable them to handle difficult cases referred by the TBAs. It is also not clear whether these cadres of workers are adequately prepared during basic training for their prescribed roles in prenatal, delivery and post-natal care. The general opinion of those interviewed is that they are not.
4. While it is too early after this brief recognizance to propose long-term MotherCare involvement in Bolivia, we do believe that the potential for such involvement exists. To influence national or even departmental policy, such a long-term effort would necessarily involve government personnel and relevant MPSSP departments from planning through implementation. The involvement of one or more PVOs in such a project area would also be highly desirable.

A long-term demonstration effort would be most logically placed in one of the districts to be involved in the USAID bilateral Child Survival project. Epidemiological, anthropological and service system assessments would be the first step in diagnosing the maternal and neonatal health problems in the chosen district. A series of planning meetings or workshops might then be held with MPSSP staff, community representatives and other collaborating institution(s) to introduce the relevant subjects and explore the opportunities for improvement of services and health-promotive behaviors. Dependent on local needs and resources, project interventions might include an IEC campaign; the introduction of new appropriate technologies for primary and secondary level care; innovations in the training of TBAs, other traditional practitioners and community health agents; locally appropriate referral systems; etc. As longitudinal surveillance would be needed to determine the effectiveness of interventions over time, technical assistance could also be provided for the development of such a system. (A surveillance system of this type is now being developed in Indonesia with support from MotherCare.)

## **VI. PROPOSED FOLLOW-UP**

At this point, the most promising opportunity for MotherCare assistance in Bolivia is the work proposed above with the PVO-REC. This would include MotherCare sponsoring a workshop or a series of workshops with the PVO-REC for its members, and potentially other interested non-governmental organizations working in health. The workshop would provide an up-date on maternal and neonatal health issues, technologies and service delivery strategies and be designed to result in the development of pilot projects and funding proposals. Projects would be submitted to the PVO-REC for review and funding, if accepted.

We believe that the studies proposed above would be of great use to all those involved in planning and implementing child survival programs and will explore the potential for Mother Care support for them. We will also seek other sources of possible funding for their execution.

The potential for long-term MotherCare Project involvement in Bolivia will be determined by political and programmatic changes anticipated during the coming months. The results of the recent presidential election will be decided in early August. Once the change at the top is made, it will be followed by the assignment of new leaders in many areas of government, including the health ministry. Thus, despite the enthusiastic reception of MPSSP officials, pursuing this line of involvement is premature. USAID's interest in a long-term effort will depend on the directions taken under its new bilateral Child Survival Integration Project. The technical assistance contract for this project will be awarded shortly. Once activities are underway, it should be possible to determine the potential for a maternal/neonatal health demonstration activity, assisted by MotherCare, in one or more of the project districts.

### **Specific Follow-up Required:**

1. Contact and work with the PVO-Rotating Executive Committee to plan the proposed workshop.
2. Identify and contact potential consultants and staff to work with us on the workshop and its follow-up.
3. Continue to investigate potential support for the studies mentioned above (anemia, infections, low birth-weight), including technical expertise and funding. Maintain contact and, if desirable, request study proposals from the individuals and organizations identified.
4. Maintain contact with the principal organizations and individuals contacted during this visit, providing each with a written description of the MotherCare Project and the types of assistance available.

5. Participate in the Bolivian Pediatric Society and OB/GYN Association's national meetings, if appropriate.

APPENDIX A

INDIVIDUALS AND ORGANIZATIONS CONTACTED

PVO Rotating Executive Committee

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Susanna Barrera de Martinez (PVO REC - PRITECH/AED)

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UNICEF

Dr. Oscar Castillo, Health Program Director (not in town)

Lic. Margali de Yale, Nutrition

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USAID

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Charles Lewellyn, Public Health Officer

Joel Kuritsky, CDC Technical Advisor in Child Survival

Sandy Wilcox, Acting Population Officer

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Rafael Inoburo, PROSALUD Program

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MPSSP, MCH Division

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CARE

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Project Concern (PCI)

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Save the Children

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World Bank Health Project

Dra. Maria del Carmen da Roca, Director  
Dra. Rosaria Andre, Technical Coordinator  
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Instituto Boliviano de Seguridad Social

Dr. Roberto Bohrt, Maternidad 18 de Mayo  
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Fundacion San Gabriel

Lizzelotte de Barragan, Director (not seen)

Lic. Eddi Jimenez

Telephone: 331813, 331815, 328491, 331816, 331114

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Centro de Investigaciones Sobre El Desarrollo  
y Educacion a la Mujel (CIDEM)

Dr. Jamier Goitia C. (sons)

Dr. Javier Goitia T. (ex-Minister of Health, PAHO advisor, contact through  
PAHO)

## APPENDIX B

### INDIVIDUALS AND ORGANIZATIONS NOT CONTACTED

Individuals and projects that might be of interest for future investigation are:

- Breastfeeding group: A team of providers has visited Wellstart and we were told that they are interested in conducting breastfeeding promotion activities. They are currently headed by Dr. Carmen Casanovas.
- Kangaroo Mother: Dr. Yasik of the Fundacion San Gabriel received UNICEF funding for one year to introduce and test the Kangaroo Mother Technique for care of well, premature babies. He continues to use and promote this method, although the funding has stopped. The report of his study, presented to the 1987 Annual Pediatrics Congress, was well received but because of the lack of funds he was not able to follow-up with other interested facilities.
- Pediatrics Association: According to Dr. Torres Goitia (C.), pediatricians have not concentrated on the neonatal period. In his opinion, there is interest and need in this area due to the high mortality in this age group.
- MPSSP Communications Division, Lic. Marisol San Jinez, Director
- MPSSP Nutrition Division, Dra. Gladys Pozo, Director  
Telephone: 37-5478
- MPSSP Free Childbirth Program, Dr. Alberto de la G. Murillo, Director
- OB/GYN Association, President Dr. Alfredo Dulong
- Foster Parent's Plan (Plan de Padrinos), Sr. Duval Martinez, Director, Diane Everaert, Child Survival Program Coordinator  
Telephone: 35-3028
- Unidad Sanitaria La Paz, Dr. Javier Sandoval, Director, Dr. Juan Carrazas, Human Resources Director, Formerly MCH Director, Maria Luiga Mendezoval, TBA training,  
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- Andean Rural Health, Nathan Robison, Director  
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3 blocks beyond Plaza Espana, front Plazita  
Andrez Bello

- Food for the Hungry
- CIEC - Dr. Coco Valasco, Mr. Erik Roth
- CENETROP - Dr. Edgar Riviera, study on newborns
- UNFPA - Ing. Waldo San Martin - Country Representative
- Instituto Boliviano de Seguridad Social, Dr. Cesar Paredo  
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