MotherCare Country Assessment

El Salvador

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The contents of this report are the sole responsibility of its authors. We apologize for any mistakes, misinterpretations or missed information, and we welcome your comments and corrections.

It is our hope that this assessment and its recommendations lead to new activities that will complement the extremely important work that is already underway in El Salvador to improve maternal and neonatal survival.

ACRONYMS

ACNM - American College of Nurse Midwives

ADS - Salvadoran Demographic Association

APPROCSAL - Asociacion Salvadorena Promotora de la Salud

ASAPROSAR - Asociacion Salvadorena ProSalud Rural

CALMA - Centro de Apoyo para Lactancia Materna, Breastfeeding Support Center

CISI - Interagency Commission for Child Survival

CLAP - Latin American Center of Perinatology

CONAMUS - Comision Nacional de Mujeres Salvadorenas

GOES - Government of El Salvador

IEC - Information, Education and Communication

IMR - Infant Mortality Rate

INCAP - Nutrition Institute of Central America and Panama

IRC - International Rescue Committee

JSI - John Snow, Inc.

LBW - Low Birth Weight

MMR - Maternal Mortality Ratio

MSCI - Medical Services Corporation International

MSPyAS - Ministry of Public Health and Social Assistance of El Salvador

NGO - Non-Governmental Organization

OFASA - ADRA - Adventist Developmental Relief Agency

PAHO - Pan American Health Organization

PATH - Program for Appropriate Technology in Health

PHC - Primary Health Care

PIH - Pregnancy-Induced Hypertension

PROCADES - Asociacion Salvadorena de Promocion, Capacitacion y Desarrollo

PROSAMI - USAID Maternal and Child Survival Project

PVO - Private Voluntary Organization, also referred to as Non-Governmental Organization

TBA - Traditional Birth Attendant

USAID - United States Agency for International Development

WFP - World Food Program

MOTHERCARE COUNTRY ASSESSMENT - EL SALVADOR

SUMMARY

At the request of USAID/San Salvador, a MotherCare Team worked in El Salvador from April 15-26, 1991, to conduct a rapid assessment of the maternal and neonatal health situation. The assessment included an extensive literature review; documentation of the PVO, Ministry of Public Health and Social Assistance (MSPyAS) and international donor agency programs addressing maternal and neonatal health; identification of deficiencies in current activities, as well as opportunities through PVOs and others to expand them. On the basis of this analysis, a series of recommendations were made and a proposal for MotherCare assistance to the USAID Maternal and Child Survival Project (PROSAMI) was prepared. The following paragraphs summarize the assessment's findings and recommendations.

Maternal and Neonatal Mortality: Estimates place El Salvador among the highest priority countries in the Latin American Region for reduction of both maternal and neonatal mortality. The leading clinical causes of maternal death recorded in El Salvador are toxemia, puerperal infection, hemorrhage, and abortion complications. For the newborn, the probable causes include infections (sepsis, respiratory infection and others), birth asphyxia, birth trauma, and low birth weight. These immediate causes of maternal and neonatal mortality are directly related to the health status of women, and to the health care they receive during pregnancy, childbirth and the postpartum period.

Primary Prevention: Health and socio-demographic indicators give some notion of the underlying causes of maternal and neonatal mortality in the country. They include pregnancies in young, unmarried women and older, higher parity women, and the persistence of traditional birthing and neonatal care practices, including breastfeeding practices. Maternal nutrition does not appear to be as serious a problem in El Salvador as in other countries, perhaps due to extensive food aid targeted at pregnant and lactating women. Government and PVO programs addressing family planning and breastfeeding promotion have also been relatively successful. However, very little is known or understood about women's preferences and practices related to maternity care, except that the majority of births in rural areas continue to be in the home with untrained TBAs, relatives or women themselves attending.

Secondary Prevention: Improving the quality and use of prenatal and institutional birthing care could result in earlier detection and management of maternal and neonatal complications. However, families, communities and all levels of the health system must also be ready to handle life-threatening complications when they occur. Health service factors that must be addressed over the short term if maternal and neonatal deaths are to be reduced include limited access to and under-utilization of institutional maternity care, particularly in rural areas; too few trained TBAs in the communities; and the poor quality or unavailability of emergency referral services for complicated births and the treatment of sick women and neonates.

Health Service Factors: The MSPyAS has taken important steps to address these problems by:

- increasing the numbers of trained TBAs and Health Promoters;
- revising the training curricula for both of these community workers;
- revising national norms for maternal and infant care at all levels of the public health system;
- introducing the CLAP Simplified Perinatal History form; and,
- announcing that the MSPyAS will work in close collaboration with PVOs to achieve the national goal of improved maternal and infant survival.

Two new models for improved home birth and referral are also being tested by the MSPyAS, with assistance from UNICEF--the TBA Birthing Center and the Maternity Waiting Home. The Maternity Waiting Home is of special interest because it will improve the potential for referral of women with complications and reduce delays in medical intervention if it is required. A new project planned with World Bank funding should also improve the quality of referral care available to women and neonates in government hospitals and health centers.

PVO Characteristics: The PVOs visited during the assessment can be divided into those that have:

- community-level health programs in five or more communities, and those that have such activities in less than five communities;
- public health trained program staff and those that do not;
- worked with and/or trained TBAs in the past and those that have not; and,
- established systems for training, information collection and the planning and evaluation of their community activities, and those that do not.

All of the PVOs interviewed during the assessment have experience in primary health care, as it is defined by WHO, and all have trained some type of community "promotor" or "volunteer" health worker. Very few, however, have experience either training or working with TBAs. Most of the smaller PVOs are also uninformed about the content of MSPyAS training for TBAs. All of the PVO's appear to have learned and applied important child survival principals as a result of their participation in the conferences and training programs sponsored by the Interagency Commission for Child Survival (CISI)--indicating that this type of training would be an effective way to transfer new information to the PVOs.

The Potential Role for PVOs in Maternal and Neonatal Health Improvement: Because of their grassroots approach, PVOs could be important players in:

- communications campaigns designed to change pregnancy and childbirth behaviors, and/or to teach the danger signs of life-threatening problems in women and neonates and the need to seek medical attention when these occur.
- efforts to inform and work with community leaders to create emergency transportation and referral systems;

- the training, supervision and on-going support of TBAs;
- collection of information about the maternal and neonatal health situation in their areas, i.e. problems, access to primary and referral services, transportation, etc.--information that is not currently available;
- developing and testing new roles in emergency obstetrical and neonatal first aid for TBAs and Health Promoters; and,
- testing appropriate technologies and new concepts in maternal and neonatal care, like the Maternity Waiting Home; and,
- providing staff and examples of established program systems to other smaller PVOs as they embark upon new maternal and neonatal activities.

In order to undertake new maternal and neonatal health activities, most PVOs will need:

- a basic understanding of the problems of maternal and neonatal health in El Salvador and the MSPyAS programs that are designed to address them;
- encouragement, ideas and support that will enable them to add new activities to their current health programs;
- training for their health personnel in maternal and neonatal topics and, in some cases, additional public health trained staff;
- training curricula, educational materials, and information systems, or the means to develop these locally;
- technical assistance for the design of their project interventions.

Proposal for MotherCare Assistance to PROSAMI: On the basis of the above analysis, a two year training and technical assistance project is proposed. PROSAMI would administer this effort in El Salvador, with all local training costs and project support coming from the PROSAMI budget. MotherCare would provide technical assistance at key points for the training of PVO staff and their MSPyAS counterparts; the development of special projects by these PVO-MSPyAS teams; and, the evaluation of these projects. The level of effort required is approximately 12 person months of MotherCare staff and consultant time over a two year period. In-country costs will be calculated by PROSAMI.

Other Recommendations for USAID and PROSAMI Consideration: A number of additional recommendations are made in the report for improvements in El Salvador's maternal and neonatal health strategy. These include:

- developing standard management/treatment protocols for the most common and the most serious maternal and neonatal conditions at each level of the health service;
- focusing more attention in TBA and Health Promoter training on life-threatening danger signs during pregnancy, childbirth and the postpartum and neonatal periods, and on the need for immediate action when these occur;
- testing emergency first aid roles for TBAs and Health Promoters faced with life-threatening maternal and neonatal situations;

- conducting a mortality case investigation of maternal, perinatal and neonatal deaths in the community to better determine the factors (medical, behavioral, financial, logistical) associated with these deaths and designing communications and health service interventions based on these findings;
- conducting a national workshop for the dissemination of the findings of the maternal mortality, TBA practice and conditions of efficiency studies.

MotherCare has experience with a number of the above interventions and could be available to provide technical assistance or reference materials, if these are needed.

MOTHERCARE COUNTRY ASSESSMENT - EL SALVADOR

April 15-26, 1991

I. INTRODUCTION

A. Purpose

USAID/San Salvador requested MotherCare technical assistance in March 1991, to complete a country assessment of maternal and neonatal health problems and services, and to recommend a strategy for training the private voluntary organizations (PVOs) that work with the USAID Maternal and Child Survival Project (PROSAMI) in these topic areas. On the basis of this request, a detailed scope of work was developed for a MotherCare team of two persons, Patricia Taylor, MotherCare Associate Director, and Debra Keith, a consultant to MotherCare from the American College of Nurse Midwives. The scope of work for the assignment is found in Appendix 2 of this report.

The PROSAMI Project is a seven-year project, funded by USAID/San Salvador and administered locally under a technical assistance contract with Medical Services Corporation International (MSCI). PROSAMI's goal is to improve the health status of the rural and marginal urban population by increasing the percentage of this population which has access to basic health services. Towards this goal, PROSAMI will assist up to 50 local PVOs now operating clinics and/or community-based health programs to expand and extend their programs to areas of El Salvador where such services have been weak or nonexistent. The Project has three categories of activities: 1) maternal health/child survival service delivery which will include providing technical assistance, commodities, training and some start up costs to PVOs for health care interventions at the community level; 2) institutional strengthening of PVOs; and, 3) coordination, policy development and research which are expected to provide a forum for policy dialogue with the Government of El Salvador.

PROSAMI was in its ninth month of activity at the time of the MotherCare visit. At this point, over 100 PVOs had been identified throughout El Salvador and PROSAMI staff were involved in the review and selection of the first cycle of PVO project proposals.

B. Activities

The MotherCare Team met with PROSAMI Director, Dr. Elizabeth Burleigh, and with USAID Health and Nutrition Officer, Christine Adamczyk, upon arrival in country. During their two week visit, Ms. Taylor and Ms. Keith also met with a wide range of organizations and individuals to collect information about the health conditions of women and newborns, the governmental and non-governmental programs that are on-going or planned to address these problems, and the programmatic gaps that might be filled through greater PVO, PROSAMI and USAID involvement.

As part of the assessment, a large number of publications and program documents on maternal and early infant health topics and programs in El Salvador were reviewed. The Maternity Hospital of San Salvador, Bloom Children's Hospital, the Ministry of Public Health and Social Assistance (MSPyAS), INCAP and Dr. Jose Douglas Jarquin of the Association of Obstetrics and Gynecology were instrumental in providing the MotherCare Team with information on maternal and neonatal health status. Information about existing and planned programs was gleaned from discussions with USAID, UNICEF, and INCAP representatives; staff of the Salvadoran Demographic Association (ADS); and staff of the Maternal Infant Health and the Community Health Divisions of the MSPyAS.

Interviews were also conducted with a number of the non-governmental organizations that are the potential recipients of PROSAMI's support, many of which are already working to improve maternal and newborn care at the community level. These include: CARITAS of Zacatecoluca, ASAPROSAR, CALMA, Corporacion Ministerios Para Vida, PROCADES, CONAMUS, Fundacion Marco Antonio Vasquez, International Rescue Committee, OFASA, CALMA and the Fundacion Maquilishuatl. Unfortunately, the limited amount of time available for this assessment and the continuing civil unrest in El Salvador made visits to the communities where PVOs are working impossible. In a number of cases, however, PVO promoters and health committee members participated in meetings with MotherCare at the organizations' headquarters.

A complete list of the organizations and individuals contacted is provided in Appendix 3.

II. MATERNAL AND NEONATAL HEALTH STATUS

A. Introduction

As infant and child mortality rates have fallen throughout the Americas over the last decade, the proportion of infant deaths attributed to the neonatal period has risen dramatically. In many countries, including El Salvador, neonatal deaths may now account for from 40% to 50% of all deaths in children under one year of age. Maternal and perinatal mortality rates are also high throughout the region, a fact that is motivating governments, health service agencies and international donors to give new attention to the health problems of women and newborns.

To effectively reduce high rates of maternal, perinatal and neonatal mortality, programs must include:

1. A focused intervention strategy that addresses the leading causes of death and illness in women and infants;

2. A primary health care system that reaches women and families in their communities with:

   - information about the prevention and the signs of life-threatening problems;
   - screening and appropriate care during and after pregnancy;
   - trained birth attendants for normal deliveries;
   - referrals to higher levels of health care for "high risk" pregnancies, births and neonates; and,
   - the means to space and limit pregnancies.

3. An emergency transport network or system that insures that women and neonates with problems can be moved as quickly as possible to the appropriate level of health care.

4. Referral facilities that are equipped, staffed and ready to treat those women and neonates with serious problems and to perform emergency procedures to save their lives, when necessary.

The following analysis attempts to describe the degree to which these conditions exist, or that they are being addressed in El Salvador.

Three studies conducted between 1987 and 1990, on maternal deaths and maternal health services in El Salvador were extremely useful and have been cited extensively. They are:

1. Jarquin, Jose Douglas, "Analisis Clinico y Epidemiologico de 471 Casos de Muerte Materna Ocurridas en los Hospitales y Centros de Salud Del Ministerio de Salud Publica y Asistencia Social de El Salvador 1983-1990" (" Clinical and Epidemiological Analysis of 471 Cases of Maternal Death Occurring in the Hospitals and Health Centers of the Ministry of Public Health and Social Assistance of El Salvador from 1983-1990"), UNICEF, 1990.

2. Mendez-Dominguez, Alfredo and Jarquin, Jose Douglas, "Avaluacion del Rol de La Partera Empirica en El Salvador" ("Evaluation of the Role of the Traditional Birth Attendant in El Salvador"), Salvadoran Demographic Association, 1990.

3. Jarquin, Jose Douglas, "Analisis al Modelo Institucional de Atencion Materna en El Salvador" (Analysis of the Institutional Model for Maternal Care in El Salvador"), MSPyAS, 1989.

While sponsored by different agencies, all three studies have as either their principal or contributing author, Dr. Jose Douglas Jarquin Gonzalez, the current President of the Gynecology and Obstetrics Association of El Salvador. Readers are referred to these documents for additional information on the topics covered below.

B. Maternal Mortality

1. Rates

The Maternal Mortality Ratio (MMR)[1] for El Salvador cited in the UN Demographic Yearbook is 74 maternal deaths/100,000 live births; the official figure published by the Government of El Salvador (GOES) is double that at 148/100,000; and, in a recent publication, PAHO has estimated that the MMR may actually be as high as 300/100,000. While the higher ratios are undoubtedly closer to the actual situation, the validity of all such statistics is questionable since there has never been a population-based study of maternal mortality in El Salvador.

[1] The Maternal Mortality Ratio (MMR) is the number of deaths of women 14-49 years of age that occur during or within 42 days after the termination of a pregnancy, calculated per 100,000 live births. The Maternal Mortality Ratio is an indicator of a woman's risk of death from each new pregnancy, and an excellent barometer of both the health of women of reproductive age and the health care available to them.

Estimates from studies in hospitals and among smaller populations indicate that El Salvador's actual MMR may be close to the ratio of 148/100,000, cited by the GOES (See Table 1). For example, the study of maternal deaths from 1983-1990, in government hospitals and health centers across the country found an in-hospital MMR of 141 per 100,000 live births (Jarquin, 1990). At the end of this period, the study of traditional birth attendants (TBA) also estimated a MMR of 131 per 100,000 from community data, which approximates the official rate(Mendez-Dominguez, et al 1990).

The recent analysis by PAHO, referred to above, bases the relatively high rate of 300/100,000 on existing data adjusted for contraceptive prevalence, the percent of births attended in hospital, the condition of the health services and other reproductive health and health service factors. If this ratio is found to be valid, it means that approximately 600 women die in El Salvador each year of pregnancy-related causes.[2]

As shown in Table 2, these higher estimates leave El Salvador with a MMR that is comparable to the most recent estimates for its Central American neighbors--Guatemala and Honduras. On the basis of its MMR and the condition of its health services, PAHO recently classified El Salvador as a Group One country, or one of ten countries in the Americas for priority intervention to reduce maternal mortality. In general, Group One countries have MMRs over 100 and health service delivery systems that are either seriously deficient and/or under-utilized.

[2] Under-reporting of maternal deaths is common because of misclassification and because of a general lack of information about those deaths that occur outside of a hospital. One study in Guatemala found 50% under-reporting in hospitals alone. (Bocaletti, 1989)

TABLE 1

MATERNAL MORTALITY RATIO (per 100,000 live births)		
All Hospitals (1)	141	
SS Maternidad (2)	98	
Community (3)	131	
PAHO Estimate (4)	300	
GOES	148	
Causes of Maternal Death	**Hospital (1)**	**Community (3)**
Toxemia	25%	--
Infection	24%	--
Hemorrhage	20%	56%
Abortion	8%	11%
Anesthesia	5%	--
Obstructed Labor	4%	11%
Others	15%	11%
Number of Deaths	471	9

Sources of Information:

(1) Jarquin, Jose Douglas, "Analysis Clinico Y Epidemiologico de 471 Casos de Muerte M Materna Ocurridas en Los Hospitals Y Centros de Salud Del de Salud Public y Asistencia Social De El Salvador 1983-1990.

(2) Personal Communication, Hospital de Maternidad, San Salvador, data for 1986-1990.

(3) Mendez-Dominguez and Jarquin, "Avaluacion del Rol de La Partera Empirica en El Salvador" Mayo 1990.

(4) PAHO, "Regional Plan of Action for the Reduction of Maternal Mortality in the Americas", 1990.

2. Causes

The hospital study of maternal deaths mentioned above found **toxemia, infection and hemorrhage** to be the three principal causes of maternal death, for women who die in hospital. In this study, over 69% of hospital deaths were related to these three causes alone. Overall, 85% of all hospital deaths were found to be directly related to pregnancy, 15.1% due to other conditions that are exacerbated by pregnancy (hepatitis, tuberculosis, etc.) and 4% were categorized as being unrelated to pregnancy (suicide, homicide, accidents, etc.) (Jarquin 1990).

From: PAHO, "Regional Plan of Action for the Reduction of Maternal Mortality in the Americas", 1990.

TABLE 2

ESTIMATED NUMBER OF MATERNAL DEATHS AS OF 1990 IN SELECTED COUNTRIES AND TERRITORIES OF THE REGION, BASED ON ADJUSTED RATES OBTAINED FROM FIVE DIFFERENT SOURCES[1]

Country	Adjusted Rate 100,000 live births	Births[2] (000)	Maternal deaths
Argentina (1986)	140	669	936
Bolivia	600	293	1,758
Brazil (1986)	200	4,086	8,172
Canada (1986)	6	371	22
Chile (1987)	67	301	202
Colombia (1984)	200	861	1,722
Costa Rica (1988)	36	80	29
Cuba (1988)	36	181	65
Dominican Republic (1985)	300	213	639
Ecuador (1987)	300	328	984
El Salvador (1984)	300	182	546
Guatemala (1984)	300	350	1,050
Guyana (1984)	200	26	52
Haiti	600	213	1,278
Honduras (1983)	300	189	567
Jamaica (1984)	115	65	75
Mexico (1986)	200	2,569	5,138
Nicaragua	300	149	447
Panama (1987)	60	68	40
Paraguay (1986)	300	150	450
Peru (1983)	300	759	2,277
Puerto Rico	20	78	16
Trinidad and Tobago (1986)	111	31	34
United States of America(1987)	13	3,738	486
Uruguay	36	54	19
Venezuela	200	569	1,138
TOTAL			28,142

1
a) For Argentina the adjustment was based on the underregistration observed in the Córdoba study (Illia 1987).
b) For Brazil, Colombia, Guyana, Mexico and Venezuela the estimated rate for Brazil was used (Laurenti 1988).
c) For Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Peru, the estimated rate for Peru was used.
d) For Canada, Chile, Costa Rica, Cuba, Panama, Puerto Rico, Trinidad and Tobago, United States, and Uruguay the correction was based on the 39% underregistration observed in a study in the United States (Kooning 1988).
e) For Jamaica the figure from a recent study (University of West Indies 1989) was used. For Bolivia and Haiti the rate was estimated on the basis of data from the Bolivian Ministry of Social Welfare and Public Health (1989).

2 Estimated births based on population and birth rate data from CELADE (1989).

Data from TBAs suggest a similar pattern, with **hemorrhage, abortion complications, and obstructed labor** reported to be those conditions that kill women who deliver or terminate their pregnancies at the community level. (Mendez-Dominguez, 1990). The results from these two studies are consistent with international data which show abortion complications, toxemia, infection and hemorrhage to be the most common causes of maternal death worldwide.

Socio-demographic and obstetrical factors which are often related to maternal deaths are age, marital status, and parity. In the hospital study, these factors were also thought to be important:

> Age - 56% of all maternal deaths were to women under 19 or over 35, with a high rate of suicide deaths in the younger age group;
>
> Marital Status - 57% of the women who died were in union but not officially married;
>
> Parity - 28.9% of the deaths occurred to primiparous women and 28% to grand multiparous women, with 12% of those who died having had 7 or more births.

Since the total number of births in each category are unknown, no definitive conclusions can be drawn about risk of maternal death based on parity, age or marital status. However, it appears that both first births and births over 5 place women at greater risk of death.

The author of the hospital study categorizes the 471 deaths he investigated as "preventable", "potentially preventable", and "probably not preventable" at the hospital level, according to the following criteria:

> Preventable (35.7%) - deaths that were judged to have been managed inappropriately in the hospital, either due to medical error or lack of resources; situations in which the woman was in the hospital and should not have died from the condition.
>
> Potentially preventable (58%) - deaths that could have been prevented if women had arrived earlier at the hospital i.e., in a less serious condition.
>
> Probably not preventable (4%) - deaths that were from accidents, homicide, suicide, etc.

Because we are focusing on primary care interventions in this assessment, those deaths of most interest are those that the author has classified as "potentially preventable", i.e. hospital deaths that could have been avoided with appropriate recognition and response to danger signs at the family, TBA and community health provider levels.[3] It is important to note that this author is referring to secondary prevention of death from obstetrical complications. There is also a level of primary prevention that we will address later that refers to the prevention of the complications themselves, or keeping pregnant women healthy in the first place.

C. Perinatal and Neonatal Mortality

1. Rates

The FESAL-88 Survey (Demographic and Health Survey) found an Infant Mortality Rate (IMR) of 50 per 1,000 live births for the five-year period between 1983 and 1988. However, the researchers who were involved in the study caution that this may be an underestimate of the actual situation and that the IMR is probably closer to 71 (personal communication). For the purposes of this analysis we will use the higher rate.

Approximately 41% of the infant deaths reported in the FESAL-88 study were in the neonatal period, resulting in an estimated Neonatal Mortality Rate of 29 per 1,000 live births. Neonatal mortality rates resulting from other smaller studies and hospital statistics can be found in Appendix 5.

As with maternal mortality, there are no national data from which to estimate the country's Perinatal Mortality Rate or Ratio. While hospital statistics exist, these cannot be used to estimate a national rate because of the large numbers of births, stillbirths and early infant deaths that occur outside of health facilities. In other countries, with similar proportions of neonatal to infant deaths, the perinatal mortality ratio is often considerably higher than the neonatal rate.

2. Causes

Hospital data give some indication of the clinical causes of both neonatal and perinatal death. As Table 3 demonstrates, the leading causes of death in neonates reported from health facilities are **prematurity/low birth weight, neonatal infection and congenital malformation.** If community deaths were included in this analysis, undoubtedly birth asphyxia and birth trauma would also be included.

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[3] While the health system's response to these danger signs is also extremely important, the adequacy of emergency and referral care has been addressed in other assessments (World Bank February 1991 Mission) and is considered to be beyond the scope of this assignment.

Neonatal Tetanus is still present in El Salvador (23 total tetanus cases were reported in 1990), but it is no longer a leading cause of early infant death.

TABLE 3

INFANT MORTALITY	
Causes of Infant Death (1)	
Neonatal causes	57%
Diarrheal disease	21%
Respiratory conditions	9%
Others	13%
Causes of Peri/Neonatal Deaths in Community (2)	
Fever	35%
Convulsions	10%
Stiff Neck	16%
Diarrhea	3%
Infection umbilicus	13%
Cough or cold	19%
Obstructed delivery	10%
Undetermined causes	55%
Total Deaths	31
(May have had more than one symptom)	

Sources of Information:

(1) Cited in "Situacion de la Nutricion y La Salud en El Salvador" by UNICEF, August 1987. Data attributed to DIGESTYC, 1982.

(2) Mendez-Dominguez and Jarquin, "Avaluacion del Rol de La Partera Empirica en El Salvador", Mayo 1990.

3. Implications

The above information, if applied to the country's estimated 1991 population of 5.4 million and its crude birth rate of 35, results in the following numbers of largely preventable maternal, perinatal and neonatal death:

Total Annual Live Births	-	198,000
Maternal Deaths	-	600
Infant Deaths (71/1,000 live births)	-	14,000
Neonatal Deaths (29/1,000 live births)	-	6,000
Perinatal Deaths (45/1,000 births)	-	9,000

In general, high rates of perinatal mortality reflect poor maternal health status and the inadequate quantity and quality of care provided to women during pregnancy and to women and their infants during the perinatal period. Many of the causes of maternal death, including pregnancy induced hypertension (PIH) and obstructed and prolonged labors, can have a negative impact on infants as well as on their mothers. Because the immediate and underlying causes of maternal and infant death are often related, if not the same, they are treated together in the following discussion.

III. PRIMARY PREVENTION OF MATERNAL, PERINATAL AND NEONATAL DEATHS

Underlying factors that are often associated with maternal and early infant death include: grand multi-parity; adolescent pregnancy; maternal undernutrition and specific nutrient deficiencies (anemia) during pregnancy and lactation; maternal infection, including sexually transmitted diseases; cultural practices and preferences related to pregnancy and childbirth; and, lactation failure. The following sections review the potential contribution of each of these factors to maternal and early infant deaths in El Salvador.

A. Family Planning

Findings from the hospital study of maternal mortality, while inconclusive, give strong indication that age, parity and marital status are important factors in maternal death. Reducing the number of pregnancies in women who are too young, too old, unmarried and or to women who have had 5 or more previous pregnancies could significantly reduce maternal and perinatal morbidity and mortality.

Substantial gains in contraceptive acceptance, and reductions in El Salvador's Total Fertility Rate during the first half of the 1980s (from 6.3 to 4.5 children per woman), were maintained but not increased between 1985 and 1988 (FESAL-85 and FESAL-88). Nationally, 47% of married women of reproductive age were found to be using a contraceptive method at the time of the FESAL-88 survey. While this is a relatively high rate overall, it masks much lower contraceptive prevalence in rural areas where only 34% of women are contraceptive users.

TABLE 4

FERTILITY/CHILD SPACING	Total	SS	Other Urban	Rural
Total Fertility Rate	4.6	3.1	3.8	5.9
Contraceptive Prevalence Rate (modern methods)	46.1	62.7	55.4	33.5
Permanent Method	30.2	38.2	34.7	24.2
Temporary Method	15.9	24.5	20.7	9.3
Women who do not want another child, who are not using FP method	28.0	18.8	20.3	38.6

Source of Information:

Asociacion Demografica Salvadorena, "Encuesta Nacional de Salud Familiar, FESAL-88", 1989.

In El Salvador, contraceptive use is generally initiated after a woman has had two or more children, presumably to limit family size and not for child-spacing purposes. This assumption is borne out by the fact that female sterilization is the most prevalent method of contraception, accounting for 63% of total contraceptive use.

El Salvador has an active government family planning program through its network of health facilities, as well as through the various programs and clinics run by the Salvadoran Demographic Association (ADS). Outreach into urban and rural communities is carried out by Health Promoters and ADS workers. Mass media campaigns and social marketing have been a feature of the national effort to reduce population growth for the past decade and a half. All of these programs are currently focusing increased attention on promotion and contraceptive distribution in the rural areas. The role of community-based PVOs in this effort could be an important one.

B. Maternal Nutrition

There is no information to substantiate a high rate of maternal malnutrition in El Salvador. Recent data provided by INCAP indicate that 12% of pregnant women suffer from iron deficiency anemia, but the source of this information is unclear. An earlier study by the MSPyAS estimated that 42.7% of pregnant women and 16% of breastfeeding women were anemic to some degree; however, if these data are scrutinized carefully, a much smaller group of pregnant women (6.7%) had hemoglobin readings of less than 10g/100 ml. (MSPyAS, "Encuestas Nutricionales de El Salvador, 1978; cited in UNICEF, "Situacion de la Nutricion y la Salud en El Salvador" 1987.) As an indirect indicator of maternal malnutrition, the low birth weight (LBW) rate is often used. LBW rates documented in hospitals in El Salvador, however, are also relatively low (11-14%) by international standards.

While these indicators lead us to believe that maternal nutrition is considerably better in El Salvador than in other countries where MotherCare is working, they undoubtedly mask serious problems among specific population groups, particularly the rural and urban poor and those women who have been displaced from their lands because of the war. A study in the mid-1970s conducted by INCAP found that 80% of families in rural areas consumed less than the minimum daily requirement of calories per capita (2,260 calories) and that 63% consumed less than the minimum quantity of protein per capita per day (60 grams protein). Given the past decade of civil war in El Salvador, there is reason to believe that this situation has worsened in some areas of the country and that it has not changed substantially in the rest.

On the individual level, cultural beliefs about the attributes of specific foods and their relationships to conditions of the body may also be affecting maternal nutrition. In El Salvador, traditional beliefs center on hot and cold body states and hot and cold foods and, as in other cultures, they result in food restrictions during pregnancy, lactation, childhood and illness. A person in one of these states may be denied foods that are believed to be too hot or too cold, or in other words those that will shock the body or throw the balance of the body off too much in one direction or the other. While restrictions on the diets of pregnant and lactating women are undesirable in all situations, it is not clear whether the beliefs described in El Salvador are truly detrimental since they do not appear to restrict the staple foods (beans, rice, tortillas) which are the primary sources of calories, proteins and vitamins for most families. A more important factor in food intake is probably the deficit in food production per capita, which has increased in recent years, especially in areas of conflict.

TABLE 5

LOW BIRTH WEIGHT RATE - <2,500 grams per 1,000 live births	
SS Maternidad (1)	12.2%
St. Ana Hospital (2)	15.8%
Associated Factors:	
Prematurity	84.0% of low birth weight
Small for Gestational Age	31.2% of low birth weight
No Prenatal Care	91.8% of low birth weight
HDP/Toxemia	11.2% of low birth weight
Urinary Tract Infection	11.2% of low birth weight

Sources of Information:

(1) Personal Communication, Hospital de Maternidad, San Salvador, Data for 1986-1990.

(2) Noyola, Noe, "Diagnostico Epidemiologico y Operacional del Bajo Peso al Nacer: Un Estudio Prospectivo", Mayo 1985.

El Salvador has a variety of food supplementation programs supported by USAID and the World Food Program (WFP), one of which specifically targets pregnant and lactating women and children under five years of age. In 1987, it was estimated that over 50,000 metrics tons of food were donated to direct food assistance and, the year before, that approximately 800,000 persons were included in supplementary feeding programs for women and infants, school age children, refugees, persons participating in food-for-work programs, and in other emergency situations (UNICEF, 1987). In addition to the MSPyAS, CARITAS -- El Salvador's largest PVO -- also plays an important role in the distribution of supplementary foods to women and infants (see Appendix 4, CARITAS, Zacatecoluca). While the coverage of these food supplementation programs may be inadequate, the targeting of food supplements to pregnant and lactating women is probably an important reason why maternal nutrition in El Salvador appears to be less of a problem than in other parts of Latin America.

The MSPyAS nutrition-related norms for the care of pregnant and lactating women include:

- routine distribution of ferrous sulfate,
- testing for hemoglobin levels, and
- monitoring of weight gain, and,
- distribution of food supplements to all pregnant and lactating women that meet the criteria for enrollment.

While these are logical and important components of prenatal and postnatal care, we were told that because of lack of resources, hemoglobin readings are taken only on women who are suspected to be anaemic (or at the San Salvador Maternity Hospital, only on primigravidae) and that ferrous sulfate is rarely given in the government's clinics because it is not available.

C. Birthing Practices

Traditional birthing practices can have a major impact on maternal and infant survival. Evolving practices that occur as a result of the introduction of modern medical concepts and the merging of old and new belief structures can also be extremely important.

During this assessment, we located only one study (the study of TBA practices described in detail below) that included information about the techniques and practices related to childbirth in the home, and about the reasons given by women for their choice of birth attendants. While this study provides useful information about whether or not TBAs are practicing what they have been taught in terms of newborn care, it says little about what else might be happening during the birth.

In other countries in Latin America, the inappropriate use of oxytocics (both pitosin and methergin) during the first and second stages of labor have been documented. In Guatemala, the potentially dangerous practice of giving intramuscular injections of pitosin during labor has been linked to increased risk of perinatal death. In numerous other settings, obstetricians have also complained that this practice is directly related to uterine rupture and resulting maternal death. The problem of inappropriate use of oxytocics is a potentially serious one. And, there is every indication that this will not be an easy practice to change, since the demand for something to speed labor appears to be coming most strongly from women and their families, and not necessarily from the TBAs and Health Promoters who are asked to administer the drug.

While there are no data for El Salvador on the use of oxytocics during labor, we must assume that, since the drug is available without prescription in all pharmacies at a very low cost, it is also being inappropriately used in this setting. This is something that should be further investigated.

Other home practices to speed labor, to speed the delivery of the placenta and/or to stop bleeding may also play some role in birth outcome. For example, are massages or external version used to attempt to change the position of the fetus? Is this done before the labor begins or during the labor when it could result in uterine rupture or trauma to the infant? Are there other practices that could cause trauma to mother or infant? What are the cord and infant care practices postpartum? All of these questions are important and should be investigated.

The choice of birth attendant and birth place are elements of birth practice that are also less well-documented in El Salvador than in some other settings. In our conversations with individuals during the assessment, we were able to collect some information about the perceptions and preferences that seem to be affecting these choices.

Women are said to prefer home birth with TBAs for the following reasons:

- modesty and lack of respect for a woman's modesty in health centers and hospitals
- dislike and fear of male health providers
- TBA is a woman and she is known and respected in the community
- cost of hospital or health center care (the cost of a birth in a government center is more or less the same as with a TBA, however, to enroll for hospital birth, women must have prenatal care which means additional cost)
- long waiting times and poor interpersonal treatment in health facilities
- long distance to a health facility with a birthing service, and lack of transport to reach facilities
- fear of episiotomy, which is performed as a routine on all primiparous women

In our discussions, we heard many complaints about the lack of privacy and respect for modesty and its negative effect on the use of available services. Primiparous women, in particular, were said to avoid the health services for these reasons as well as their fear of episiotomy. It is worth mention that these are precisely the women that the MSPyAS targets for hospital birth because of their increased risk of problems. If the MSPyAS is to achieve its goals, it seems obvious that major changes in hospital routine and interpersonal treatment will be necessary. Making institutional birth more culturally acceptable to the at-risk population would most certainly result in improved utilization of services by those who need them most.

D. Breastfeeding

Early and exclusive breastfeeding is important for a number of reasons. Putting the infant to the breast as soon after birth as possible stimulates uterine contractions and can help both in the delivery of the placenta and in the uterus' return to normal, preventing excessive bleeding postpartum. Immediate breastfeeding also stimulates the early production of breastmilk and aids in the establishment of successful lactation, which has significant implications for the infant's well-being through the first year of life. Infants that are breastfed early and exclusively also benefit from the protective antibodies contained in colostrum, and they are spared the potential contamination and infection that can result from prelacteal and supplementary feeds. The length of the anovulatory period postpartum and the consequent protection from another pregnancy also depend on frequent, exclusive breastfeeding during the first months of life.

El Salvador's breastfeeding advocates deserve a great deal of credit for the positive changes that have occurred in the prevalence and duration of breastfeeding over the last decade. In the most recent FESAL survey, 95% of the women interviewed throughout the country said they breastfed their last infant, up from 92% in 1985, and from around 80% in the late 1970s. The mean duration of breastfeeding had also increased from 16 to 17 months over the same period, with very little difference noted between rural and urban areas on these indicators. Rural and urban differentials become more important in terms of the age at introduction of other milks and solids, with urban infants being introduced to foods other than breastmilk earlier than their rural counterparts. None-the-less, the mean age at introduction of solids is 5 months and of other milk, 10 months of age.

Unfortunately, we were not able to find written documentation on the timing of the first breastfeed after birth, the treatment of colostrum or the practice of prelacteal feeding.

TABLE 6

BREASTFEEDING	Total	SS	Other Urban	Rural
Ever Breastfed	95%	93%	95%	96%
Infants given Colostrum	-- Data	Not	Available	--
Mean Duration (in months)	17	14.7	15.8	17.9
Mean Age at Intro of other foods or milks other than breastmilk (in months)	4.8	3.2	4.1	5.5

Source of Information:

Asociacion Demografica Salvadorena, "Encuesta Nacional de Salud Familiar FESAL-88", March 1989.

In conversations with representatives of the breastfeeding promotion group CALMA, however, we were told that traditional practice includes:

- expressing and discarding colostrum because of the belief that it is dirty and will cause the infant harm;
- giving "aguitas" or teas of aromatic herbs soon after birth to clean the infant's stomach;
- giving laxatives to older infants; and,
- giving bites of foods other than breastmilk earlier than 4 months of age.

The rationale for these practices, which CALMA says are changing, is often related to a woman's belief or fear that her own milk is somehow inadequate. Other beliefs relate the drying up of breastmilk and many infant illnesses to the effects of fright, heat, overwork, etc. on the mother's milk.

CALMA (Centro de Apoyo a la Lactancia Materna) is a local PVO that has received support for the past decade from USAID, La Leche League (US) and other funding agencies.

Its programs, which must be credited with much of the successful breastfeeding promotion in El Salvador, have included:

- development of training curricula and training for MSPyAS clinic and community health workers;
- development of training curricula and training for hospital staff throughout the country;
- establishment of Breastmilk Banks in all government hospitals and health centers in the country;
- development and dissemination of educational materials for all levels, including a video, posters, a flip chart and pamphlets that have been used extensively throughout the country;
- constant lobbying at the national level to change hospital and health center policies that undermine breastfeeding; and
- implementation of other demonstration projects, e.g. training of breastfeeding promoters/counselors in urban neighborhoods and rural villages.

CALMA has worked very closely with the Maternal Infant Division of the MSPyAS as well as with other policy-makers in the country. The success of this collaboration is evident--all of the government's norms and training materials we reviewed have special sections devoted to the promotion of breastfeeding, and all of the government's hospitals and health centers are said to have rooming-in and Breastmilk Banks. This is indeed impressive. We should also note that the AID WELLSTART project has trained members of CALMA and other key Salvadoran organizations, and this has probably also added to the success of breastfeeding efforts.

The members of CALMA, a PVO itself, and the WELLSTART trainees could be an important resource to PROSAMI and MotherCare if maternal and neonatal training and project development activities are carried out. Appendix 4 includes more information on CALMA and its programs.

IV. SECONDARY PREVENTION: RESPONDING TO THE CONDITIONS THAT KILL WOMEN AND INFANTS

It is important to note that while the conditions that kill women and newborns are at least partially preventable at the family and primary care levels, once they occur medical intervention is generally required to stabilize and save the life of the woman and/or her infant. In some cases, the symptoms of these conditions may be detectable during the prenatal period, but in many cases they are not detectable or predictable with any measure of certainty before they occur. In these cases, women and their families, and workers at every level of the health service delivery system must be trained and ready to detect and deal with such life-threatening problems.

The following paragraphs describe the principal causes of maternal, perinatal and neonatal deaths, including the timing of their occurrence, the underlying factors, and their general management. The Reader is also referred to the MotherCare Working Paper, "A Framework for Intervening to Reduce Maternal and Neonatal Morbidity and Mortality", for a more complete presentation on the appropriate response to these problems at each level of health care.

A. Toxemia

Pregnancy-induced hypertension (PIH), including pre-eclampsia and eclampsia, can often be detected prenatally through close observation by a trained health provider. Prenatal screening would include one or more blood pressure measures during pregnancy with action taken if a rise in diastolic blood pressure to 90 or above were noted. Mothers and health providers can also be taught to watch for the warning signs of PIH including, sudden swelling of the hands and face and severe headaches that may cause the woman to see spots and lights. A urine test with a simple dip stick (available through PATH) can also be used to test for the presence of proteinuria, another sign of PIH.

PIH most often occurs after the 20th week of pregnancy. However, many women develop symptoms only during labor and the disease has been known to manifest itself up to 24 hours postpartum. Signs during this phase can include severe headache, swelling and visual distortion. It is important to remember that when severe eclampsia develops during or after a delivery, it presents quickly and, when it does, it must be treated quickly to prevent the death of the mother and/or her infant. When the signs of PIH occur during labor, emergency transport and intervention at the appropriate level of medical care are required. This often means a caesarian section.

If detected and treated prenatally with bed rest, preferably with the woman lying on her left side, most women do not get worse and they are able to have normal deliveries. Given the heavy workload of women in El Salvador, however, women with PIH will need special counseling and support and they may need to get away from their own homes in order to follow the advice for bed rest. A variety of drug therapies can also be used to control PIH, if these are available.

B. Hemorrhage

Hemorrhage, or excessive bleeding, can occur during the pregnancy, delivery and/or postpartum. The predisposing factors and causes of hemorrhage include abortion, ectopic pregnancy, placenta previa, abruptio placenta, obstructed labor, uterine rupture, uterine inversion, uterine hypotonia, and retention of placental parts. Severe anemia also acts as a predisposing factor and is exacerbated by excessive bleeding.

The most frequently reported cause of hemorrhage death in women is postpartum hemorrhage, which is defined as the loss of 500 cc of blood or more from the genital tract following delivery of the baby. Retained placental parts and uterine atony are the most common causes. In the case of a retained placenta, hemorrhage can be prevented or stopped through correct action. Correct action on the part of the TBA would include proper management of labor; putting the baby to breast immediately following the delivery; NOT trying to remove the placenta unless she has been trained to do so; applying uterine massage postpartum; and, if included in the norms, giving an oxytocic either orally or intramuscularly to women with hemorrhage. If transport is available, all cases of retained placental parts and/or excessive bleeding should be referred to the nearest facility equipped to handle these problems. Prior to and during her transfer, a woman who is bleeding should be given liquids, an IV should be started if possible and she should be treated for possible shock.

There is no way to predict retained placenta. In the case of uterine atony, however, predictive factors include multiple gestation (twins), grand multiparity and a previous history of postpartum bleeding. Women with these predisposing factors should be delivered in hospital, if possible. Prolonged labor and maternal exhaustion are also causes of postpartum bleeding. Therefore, if delivery is not imminent after 24 hours of active labor, the woman should be moved to the hospital.

No matter what the cause, if the woman has lost a lot of blood during the delivery or postpartum, she should be transported to the nearest health facility and treated for anemia, tears and possible infection. The risk of infection in anemic women is much higher than in women with normal hemoglobin values.

The occurrence of placenta previa or abruptio placenta is rare but deadly. These conditions can often be detected during the prenatal period because there will generally be bleeding. Once bleeding is detected, a woman should be hospitalized for the rest of the pregnancy and her infant should be delivered by caesarian section. If either of these conditions occur at home in a remote rural area, the woman will not survive.

C. Puerperal Infection (Woman)

Factors related to postpartum infection in women as well as newborns include prolonged rupture of membranes (>24 hrs from rupture to delivery), prolonged and obstructed labors, pre-existing maternal infection, meconium staining and contamination during the birth process. Anemic women are also more prone to infection than woman with normal iron levels.

Vaginal and urinary tract infections, STDs and anemia should be treated during pregnancy to reduce the risk of postpartum infection for the mother and the newborn. Improved birthing practices in home and hospital can also reduce the risk of infection by reducing the potential for contamination. The use of a partogram or a simpler tool to monitor the birth process in the home and in health facilities would also promote the more timely transfer of women with prolonged labor to the hospital and/or to the surgical theater when this is necessary.

Appropriate action to prevent death from postpartum infection includes watching for danger signs--tender abdomen, fever, racing pulse, smelly vaginal discharge, meconium staining at birth--and at the appearance of any of these signs, giving prophylactic antibiotics to both the mother and the newborn. Women with danger signs should be transported as quickly as possible to the appropriate level of care equipped to deal with the problem.

D. Obstructed, Prolonged Labors

Active labors that last for 12 or more hours in a multiparous woman, or for 24 hours or more in a primigravida are considered too long. Such labors may be the result of cephalo-pelvic-disproportion (baby too big to pass through birth canal); the abnormal position of the infant during labor; multiple gestation (twins); and macrosomia, due to diabetes. Chronic undernutrition of the mother can be an important factor in cases of cephalo-pelvic-disproportion (CPD), however, this is felt to be a relatively rare condition in Latin America. A more probable cause of CPD may be macrosomia, as the incidence of diabetes in Latin populations is known to be 3 to 4 times higher than in their white, Anglo-Saxon counterparts.

Malpresentation and multiple gestation can be predicted during prenatal care by checking the position of the fetus, measuring the fundal height and noting how many fetuses are present. This assessment can be and is carried out by TBAs during prenatal care. All women who are diagnosed as having one of these problems should be referred to a facility with back-up C-section and forceps or vacuum extractor capability. The initial stages of labor in such a facility could be managed by the TBA, with higher level providers called-in if problems develop.

Once labor begins, maternal and/or infant death from obstructed labor can be avoided by carefully monitoring the progress of the labor and transferring all women who do not complete active labor within 12 hours of its start and all women who have been pushing for more than 3-4 hours to the same type of emergency care facility described above. Again, a partogram should be used to monitor the labor.

Prolonged and obstructed labors mean higher rates of birth asphyxia, sepsis and or physical trauma for the newborn, all of which can result in death.

E. Prematurity/Low Birth Weight

Prematurity is defined as delivery prior to 37 weeks of pregnancy, of an infant weighing 500 grams or more. Low birth weight infants are those weighing more than 500 grams but less than 2500 grams immediately after birth. Both premature and full term infants can have a low birth weight. Full term infants weighing less than 2500 grams are termed small for gestational age (intrauterine growth retardation). All infants weighing less than 2500 grams are at an increased risk of illness and death. The usual causes of death in low birth weight infants are infection, hypothermia, and respiratory distress.

According to the GOES, the national LBW rate is between 11% and 14% of all live births. A study conducted by Dr. Noe Noyola at the Hospital San Juan Dios in Santa Ana in 1983, found a Low Birth Weight Rate of 15.8% of all births, with over 80% of the LBW related to pre-term delivery. Factors associated with LBW included: five or more births, a birth interval of less than 12 months, and the absence of prenatal care. Maternal pathology including eclampsia and urinary tract infection were also present in a large number of cases. 24.2% of LBW infants in this study died either prior to or during the first week of life; no follow-up was conducted to determine the number of deaths after release from the hospital.

Premature delivery can be precipitated by maternal infection, trauma, heavy workload, and a number of other factors that are still poorly understood. At the first signs of premature labor, a woman should be encouraged to seek medical care, which may include drug therapy and bed rest to extend the gestation and give the infant a chance to develop further before birth.

Intrauterine growth retardation, or fetuses that are small for gestational age, can be detected prenatally through careful monitoring of weight gain and the use of a maternal weight gain chart, if available, or through serial measurements of fundal (uterine) height. If found to be "at-risk" of delivering an infant that is small for its gestational age, women should be given nutritional support (education, food supplements, iron supplements) and counseling to increase their weight gain.

Low Birth Weight infants are at increased risk of hypothermia, respiratory problems and infections of all types, which contribute to their greatly elevated mortality rates. They should be monitored during the first weeks/months of life and their mothers given special counseling in their care and feeding. It is particularly important that low birth weight babies receive breastmilk with its many anti-infective and nutritional benefits.

F. Neonatal Infections (Sepsis, Meningitis, Pneumonia, Tetanus)

Serious neonatal infections kill rapidly. Some such infections are directly preventable, as in the case of neonatal tetanus via maternal immunization and clean delivery. Neonatal tetanus appears to have diminished in El Salvador in recent years. Exposure to other types of neonatal infection (sepsis, pneumonia, meningitis) can also be reduced and an infant's resistance to them can be increased through improved maternal nutrition, cleaner birthing and neonatal care practices, and early and exclusive breastfeeding.

However, there is little known about why certain infants become infected and why others do not, even under similar conditions of birth and postpartum care. While LBW infants are at higher risk of death from several of the above diseases, comparable numbers of infants in the normal birth weight category also contract and die from infection during the neonatal period.

When neonatal sepsis/meningitis/pneumonia occurs, immediate detection and treatment with antibiotics can save an infant's life. One community-based study in Guatemala has shown that early identification and treatment of neonatal sepsis can eliminate most neonatal deaths from infection (Bartlett 1991). This is encouraging news, specifically because it means that with proper training of families, community health workers and referral care providers, many infants that would have died, can be saved.

Parents and health workers should all be aware of the most common signs of serious neonatal infection, which are:

1. lethargy or extreme irritability
2. inability to breastfeed (or suck)
3. fever or hypothermia
4. shortness of breath, chest indrawing for pneumonia
5. convulsions

When these danger signs occur, parents should be taught to seek medical attention immediately. To insure that treatment is begun as soon as possible, it must be as close (physically) to the infant as possible. MotherCare normally recommends that the lowest level of health worker who can be trained to give an antibiotic injection should be given special training to enable him to detect and provide emergency, first aid treatment (injection) for life-threatening neonatal infections. In El Salvador, this may mean that the Health Promoter and the Auxiliary Nurse should receive such special training, as well as the necessary antibiotics. Once treatment is initiated in the community, a sick infant should be transferred without delay to the nearest health center or hospital for more complete diagnosis, continued treatment, and careful monitoring.

In order to substantially reduce maternal and early infant deaths in El Salvador, the available information indicates that the above conditions must be detected and managed appropriately at the earliest possible point in their development. This will depend on the coverage and the quality of prenatal, birthing and postnatal care services, as well as on the woman's use of these services and the family's response to danger signs and emergency situations.

V. HEALTH SERVICE FACTORS

A. The Coverage and Utilization of Health Services

In 1991, there will be approximately 198,000 births in El Salvador. Using the MSPyAS estimates and the results of the FESAL-88 survey, we can conclude that:

- 48.4%, or approximately 86,800 of these births will occur outside of a health facility;
- only 9%, or 18,000 births will be attended by a TBA that has been trained by the MSPyAS;
- the other 68,800 births that occur outside of a health facility will be attended by un-trained individuals (a TBA, a family member, or the pregnant woman herself); if combined, this means that 137,600 women and newborns will be at an unnecessarily high risk of complications and death;
- 67.5% of women who become pregnant will have at least one prenatal visit during their pregnancy and government hospitals and clinics will be the primary sources of such care in both rural and urban areas;
- 68.8% of these pregnant women will have been vaccinated against tetanus by the time of birth;
- urban women, educated women and women of higher socio-economic status will make more use of prenatal, institutional birthing and postnatal care than their rural, less-educated and/or poorer counterparts. (See Table 5 for rural/urban differences on above variables.)

With the exception of tetanus coverage, these rates are much lower than should be expected in a country like El Salvador, where geographic, economic and cultural factors could be assumed to be less severe impediments to the use of care than in many other countries. The reasons for the low coverage of maternity care services are multiple. The following sections describe the organization of these services and some of the factors that may be affecting their utilization and effectiveness.

B. The Organization of Maternal and Neonatal Health Care

According to the national maternal and child health strategy, prenatal, delivery and postpartum services are provided according to the following scheme:

TABLE 7

UTILIZATION OF HEALTH SERVICES AND TRAINED PROVIDERS	Total	SS	Other Urban	Rural
Prenatal Care (at least one visit)	68%	84%	77%	57%
Women who received TT during last pregnancy	69%	72%	75%	65%
Estimated coverage of TT immunization in women of reproduction age (at least 2 doses)				
Place of Birth				
Health Facility	53%	88%	65%	35%
Home with TBA	38%	9%	26%	54%
Home other attendant	7%	2%	7%	9%
Other	3%	1%	2%	3%
Postnatal Care (at least one visit during first month after birth)	17%	16%	15%	19%

Source of Information:

Asociacion Demografica Salvadorena, "Encuesta Nacional de Salud Familiar FESAL-88", March 1989.

Community:

Traditional birth attendants are trained by the MSPyAS to attend normal births, conduct prenatal assessment, recommend clinic visits for prenatal control, and refer all problems.

PVO Physicians/Medical Technologists conduct mobile or fixed facility clinic sessions which include prenatal and postnatal control, immunization, etc.

	Health Promoters and Volunteers are trained by the MSPyAS, various PVOs and the ADS to recognize prenatal and postpartum danger signs, to encourage women to attend prenatal and postnatal control, to assist during vaccination campaigns and to promote and/or distribute contraceptives. They do not play a direct role during birth.
Health Post:	Auxiliary nurse, with weekly back-up from a visiting graduate nurse and/or physician conducts prenatal control and refers all problems. While auxiliary nurses are said to have training in normal delivery, the health post is not normally equipped or encouraged to conduct deliveries.
Health Units:	Auxiliary nurses, graduate nurses and general practitioners conduct prenatal control and refer all problems to Health Centers. Health Units are not equipped to handle normal or emergency deliveries.
Health Centers:	An Obstetrician (staff or consultant) is available to conduct emergency C-sections and high risk prenatal clinics. Normal births and routine prenatal care are also provided.
Regional Hospitals:	Same as Health Center but may have more sophisticated equipment for emergency care.
National Referral Hospitals:	National Maternity Hospital, the Social Security Hospital and Benjamin Bloom Children's Hospital in San Salvador have specialist teams and life-support systems that are unavailable in Regional Hospitals. All three are national teaching hospitals. The Maternity Hospital performs approximately 18,000 births each year or almost 10% of the nation's total. It is used as a facility for both normal and high risk births by the population of Metropolitan San Salvador.

C. The Partera, or Traditional Birth Attendant (TBA)

1. The TBA's Role and Practices

The training of the TBA is the cornerstone of the MSPyAS maternity care strategy in rural areas. The MSPyAS/MCH estimates that there are 3,200 TBAs in the country who have received some sort of government-sanctioned training. Despite this fact, as mentioned earlier, only 9% of the out-of-hospital births in 1989, were attended by trained TBAs. The MSPyAS plans to train additional TBAs annually with UNICEF, USAID and its own funding.

From September 1989, through May 1990, a study examining the role of the TBA in El Salvador was conducted by Development Associates, Inc. This study included a sample of 603 women from rural and marginal urban areas in five regions -- women who had used TBA services -- as well as a sample of 317 TBAs. The findings of the study are summarized below:

- The majority of TBAs are between the ages of 41-60. The younger the TBA the more likely it is that she has received some sort of training in maternal-child health care.

- Approximately 78% of untrained and 56% of trained TBAs are illiterate; however, only 19% of trained TBAs can read and write well.

- Trained TBAs report conducting an average of 24 births per year, while untrained TBAs report an average of only 10 births per year.

- TBAs reported an obstetrical complication rate of 23%. The most common complications included: problems with the umbilical cord, excessive bleeding, pre-eclampsia, premature rupture of membranes, and fever.

- TBAs reported 1.3 maternal deaths/1,000 live births for 1989. It was noted that the numbers of deaths are probably seriously under-reported as none of the untrained TBAs reported any maternal deaths, probably due to fear of the interviewer. The most common causes of maternal death reported by the TBAs were hemorrhage, complication of abortion, and obstructed labor.

- TBAs reported 11.6 neonatal deaths/1,000 live births for 1989. The most frequently cited reasons for neonatal death were fever, rigid neck, infection of the umbilical cord, diarrhea, cough or cold, obstructed labor, and convulsions.

- Among the women interviewed, the most common reasons stated for using a TBA were: 1) no money to pay the health center; 2) more trust in a TBA than a doctor; 3) problems with transport, i.e., couldn't get to hospital in time; 4) TBA is known in the community; and, 5) TBA is a woman.

- The mean age of first pregnancy was 18 years and 70% of the first pregnancies reported were in adolescents between the ages of 13-19.

- In the survey population, 1 in every 3 women reported having a baby die during the perinatal period.

- Of the women interviewed, 60% stated they received prenatal and intrapartum care from a TBA. 95% of primagravidas received prenatal care from a TBA and, of those, 70% were attended by a TBA in labor. Multiparous women usually received much less prenatal care.

- While most women reported receiving 1-2 visits by the TBA during the pregnancy, they also reported waiting to consult a TBA until they had a problem or a concern. Most had their first prenatal visit after the fourth month of pregnancy.

- More than 50% of the TBAs reported that they provide prenatal care to the women they attend at birth. According to the TBAs, a prenatal visit usually consists of checking fetal position and discussing with the woman what will occur during labor and birth. Only 60% of the TBAs reported measuring fundal height and even less listened to fetal heart tones. The majority (95%) of trained TBAs reported asking the woman if she has received her tetanus vaccine.

- Of the women in the study who developed complications during birth, only one-third were referred to a health center. Most of the TBAs stated they did not refer their patients with complications when risk factors were present during pregnancy or labor due to the lack of transport and/or money, as well as to not having a facility close-by. When referrals were made, the most common reasons were said to be hemorrhage, fever, swelling, convulsions, and abnormal position of the fetus. The study did indicate that more trained than untrained TBAs refer their patients with problems.

- The majority of the TBAs reported staying with the pregnant woman throughout her entire labor and birth. Most of the trained TBAs reported checking the height of the uterus, giving massages and checking cervical dilation during labor. When prompted, TBAs reported explaining to the woman how and when to push, protecting the perineum during birth and checking for a cord around the baby's neck. The study points out, however, that only 33% of TBAs mentioned these practices in a spontaneous manner, without probing.

- Most TBAs reported cutting the umbilical cord with scissors, and only 4% of TBAs reported not sterilizing them. The majority of women stated that the TBA did cord care, cleaned and wrapped the baby, treated the eyes and aspirated mucus. Only 11% reported that the baby was weighed.

- About 38% of the women reported being visited 1-2 times in the postpartum period and another 34% said they had 3-4 visits. The majority of the women were visited during the first month postpartum and less than 12% were visited after the first month.

Two-thirds of the TBAs reported visiting their patients on the first postpartum day, while 27% reported not doing a home visit until the third day after delivery. During a home visit, the TBAs reported checking for
infection of the umbilical cord, fever in the mother and baby, and excessive bleeding.

- The women also mentioned that they were taught by the TBA about the importance of a good diet, breastfeeding, and baby care. Only 53% stated they were instructed about when to visit the health center for routine exams of the baby. This same number stated they were instructed on different methods of birth control.

- Of the total number of trained TBAs in this study (83), 73% stated they had not received any refresher course since their initial training. The majority of the TBAs reported that they were trained by a nurse and in general that they thought the training course helped them improve their care of women and babies.

2. TBA Training

According to the Maternal Infant Health Division of the MSPyAS, TBA training is the responsibility of the Health Region, and in each Region a team, made up of an educator, a graduate or auxiliary nurse and a doctor coordinate and conduct training for the TBAs. The basic TBA training course consists of two weeks of theory and one week of practicum in a hospital or health center. There were 34 basic TBA training courses offered in 1990 and 10 so far in 1991. There were no data available on the number of refresher courses held.

The TBA Training Manual was revised and reprinted in 1990. In addition, three supplementary modules for refresher training of TBAs were developed and distributed to the Regions. The TBA Training Manual is given to all TBAs and the new manual is a considerable improvement over previous training materials which were also reviewed during this assessment. Designed for non-literate trainees, the manual is largely pictorial and seems simple enough to be useful. The topics covered include all aspects of prenatal, delivery and postpartum care of the woman and newborn.

Also included are detailed sections to help the TBA decide which women she should attend in the community, and which should be referred to the hospital for delivery (high risk). There is also a section on the danger signs for women and newborns that indicate they should be referred without delay to the nearest health facility. The refresher training modules review these topics, plus the role of the TBA in oral rehydration therapy and immunization programs. Interestingly, the refresher modules also contain a section on the causes of maternal and perinatal/neonatal mortality in El Salvador.

3. Recommendations

While the new TBA training materials are excellent, we identified several weaknesses in content and process that could be addressed in future revisions or supplements. For example:

- Ten pages of the TBA manual are devoted to diseases during pregnancy. In these ten pages, the signs and symptoms which may be indicative of a life-threatening problem (i.e. swelling of hands and face, bleeding) are mixed with common complaints of pregnancy (i.e. nausea, constipation), many of which are bothersome but not life-threatening. This lack of focus on serious complications will undoubtedly confuse the trainer and the TBA, distracting them from the important message that certain conditions require immediate action on the part of the woman and the health services.

- There are many pictures in the new manual but without reading the text it is often difficult to determine what the pictures refer to. Since a large percentage of TBAs are illiterate, this could be a problem in their use of the manual after training. More extensive pretesting of the manual's pictures might be considered before further printing.

- According to the government's norms, the TBA should refer all problems to the nearest health facility. As a result, the basic TBA training curriculum does not include any information about what to do to stabilize a woman or infant while the family is trying to secure transportation, or during the actual trip to the health facility. This type of information could save lives and its inclusion should be seriously considered.

A continuing education curriculum could be developed to address some of these weaknesses. If the government is not able to support TBA refresher training, support could potentially come from PVOs for this type of activity.

D. Health Promoters

1. Role and Training

The GOES strategy for extending primary health services to hard-to-reach rural areas includes the training and support of Promotores de Salud, or Health Promoters. Over the years, Health Promoters in El Salvador have been referred to by different titles, according to the programs or organizations that have trained them. Promoters trained by the MSPyAS from 1976 through 1986, for example, were referred to as Ayudantes Rurales de Salud (Rural Health Workers); those trained from 1986 onwards were called Ayudantes Comunitarios de Salud (Community Health Workers), and those trained by Project Hope and other PVOs working with the MSPyAS had still other titles, even though their job descriptions were essentially the same.

To rationalize and strengthen what had become a weak and confusing system, the MSPyAS formed its current Community Health Department in 1989, and combined all government-sponsored community health worker training programs under this umbrella. At the same time, all community-level workers were designated "Health Promoters" and steps were taken to equalize salaries and standardize information systems, training, etc.

By international standards, El Salvador's Health Promoters are well-trained and compensated (in many developing countries workers of this level are community-supported versus government-supported or they are volunteers). Health Promoters in El Salvador receive 12 weeks of training, covering 13 subject areas and, in addition to their salaries, they are given a uniform and a new pair of shoes each year. The position is considered to be full-time, and the Health Promoter must visit at least 10 houses each day. Approximately 40% of the Promoters were said to be women.

The Health Promoter's role in maternal and neonatal care is primarily promotional. S/he is considered a health educator who should visit women during pregnancy to:

- give advice about prenatal nutrition, hygiene and self-care;
- encourage women to attend prenatal clinics;
- teach the danger signs during pregnancy and the need to go to the health clinic if they occur;
- give advice for and against home birth and convince the woman to go to the hospital if she has been advised to do so;
- reinforce other counseling given at the clinic; and,
- teach the mother how to prepare for birth, whether at home or at the hospital.

During the first week postpartum, the Health Promoter should also visit to:

- check for postpartum and neonatal complications;
- teach about hygiene, nutrition, breastfeeding, family planning and the need for postpartum visits to the health clinic;
- register births and deaths.

Health Promoters are also charged with identifying the TBAs in their communities, giving them orientation about the nearest health clinic's services, and motivating them to send pregnant women and infants to the clinic for registration in the various prenatal, well-child and family planning programs. The Health Promoter manual also includes a special section on breastfeeding promotion and a series of hints for the Promoter about how to overcome traditional beliefs and practices that undermine breastfeeding.

At the end of April, a new training manual for Health Promoters was finalized, as was a new information system that has been designed to help the Promoters target high risk families in each community. Unfortunately, neither the manual nor the information system were available for review at the time of this visit. We were told that the new manual contains more illustrations and a more participatory format for training than the older one, which we review below.

At the time of this assessment, there were 579 government-supported Health Promoters working throughout the country; 280 were being paid the equivalent of approximately US$150 per month by the GOES and the remaining were being paid under the USAID APSISA Project. With the goal of one Health Promoter per Canton, and a total of 2,013 Cantons in the country, the Community Health Division realizes that even though it has been able to increase the number of Health Promoters from 300 in 1989, it will not be able to either train or properly support all of the Health Promoters required without outside help. Because of its own budget restrictions the GOES is committed to absorbing (allocating salaried positions) only 75 new Health Promoters each year. Obviously, at this rate, it will take over 15 years for the government to assure that each Canton in the country has at least one Health Promoter.

The PROSAMI Project was developed to help the GOES achieve its goal of PHC expansion more rapidly than would be possible if only GOES resources were applied to the problem. Through its support, PROSAMI will help existing PVOs to increase the number of communities that have a Health Promoter and a trained TBA. The MSPyAS has embraced this strategy and welcomed the participation of the PROSAMI-assisted PVOs in the training and support of village-level health workers. The MSPyAS was very clear in our discussions that its only concern or requirement is that the PVO programs follow both the national guidelines for selection, training and support of TBAs and Health Promoters, and the recently revised norms for integrated maternal and child health care.

2. Commentary

The comments below are in relation to the old Health Promoter training content and we apologize if any of the points or criticisms have been corrected in the new training manual.

While the old Promoter training manual was extremely comprehensive--perhaps too comprehensive and certainly too tedious in its format for a worker of this level--it did not cover childbirth or the possible problems that the Promoter might be called to help with during or immediately after childbirth. In fact, the Promoter manual is written as if all life-threatening problems can be detected prenatally and managed effectively if only the Promoter will refer women with problems, and these women will go to the hospital to have their births. To some degree, this is also the role of the TBA. But, what happens when the problem is missed prenatally, or the woman refuses the initial referral, or the problem doesn't present until the birth itself? In these situations, do village-level workers have a role to play in the management of problems? If the answer is yes, and we feel that it should be, then the training curricula for Promoters and TBAs should be revised to reflect and prepare them for such a role.

While national policies vary, in order to reduce maternal and perinatal mortality the workers who are most likely to attend or be available at the time of a birth must be trained to perform specific life-saving tasks. Obviously, these tasks will vary according to the level, training and back-up for a particular type of worker. Given the causes of maternal and neonatal death, the delegation of life-saving tasks is essential. Illustrating this point, studies in other countries have shown that the majority of women who die from postpartum hemorrhage, die within two hours of the onset of the problem. (Guatemala, Schieber, unpublished data; Ghana, Nigeria, Program for the Prevention of Maternal Mortality). Obviously, the reaction to this particular problem must be swift and efforts must be made to detect and start the management of bleeding at the level of health care closest to the woman and her family. This is particularly true where 50% or more of the births are in the community, and where communities are more than an hour or two away from the nearest facility that is equipped to handle emergency obstetrical problems.

3. Recommendations

The following list of tasks, which could be delegated to the TBA and Health Promoter in El Salvador, is presented below for discussion:

SUGGESTED EMERGENCY TASKS FOR TBAS AND HEALTH PROMOTERS

In the case of Postpartum Bleeding, the TBA should:

- perform uterine massage
- give ergometrine tablets prophylactically
- put infant to the breast immediately

In the case of Postpartum Bleeding the Health Promoter should:

- give an oxytocic drug intramuscularly
- put infant to the breast immediately

At the first signs of suspected Postpartum or Neonatal Infection, the Health Promoter should:

- give the first dose of antibiotics intramuscularly

In the case of Obstructed or Prolonged Labor, the TBA and Health Promoter should:

- stop inappropriate pushing
- stop use of oxytocics

In all of the above Emergency Situations, both the TBA and the Health Promoter should:

- counsel and motivate the community/family to transfer the patient without delay to the appropriate health facility.

If these tasks are acceptable, training could be revised or developed to impart the necessary knowledge and skills.

E. Graduate Nurses, Maternal Infant Health Technicians, and Auxiliary Nurses

The primary providers of prenatal and postnatal care at the health post, health unit, and health center are Auxiliary Nurses, Graduate Nurses and Physicians. Perhaps because of the long-standing family planning program in El Salvador, both Auxiliary Nurses and Graduate Nurses have received in-service training in reproductive health, antenatal care and childbirth, and they are said to be relatively proficient in these skills.

A new category of worker, the Maternal Infant Health Technician, has been trained in recent years; the Technician's curriculum resembles that of a Nurse Practitioner in the U.S., with a combined specialty in pediatrics and women's health care. These health workers are well-trained, and their training is relevant to the needs of El Salvador. Unfortunately, however, the Technician category is one that has not been integrated into the MSPyAS staffing at the rate originally expected. As a result, few new Technicians are being trained. Many of those who have already graduated are working in the PVOs instead of the MSPyAS clinics -- a definite advantage for the PVOs.

Besides strengthening TBA, Health Promoters and Primary Care provides training. The GOES has taken a number of other steps to improve the quality and the coverage of those maternal and infant health services that are of concern to this assessment. Their efforts are described below:

F. Integrated Norms for Maternal and Infant Care

In an attempt to rationalize the many vertical child survival, family planning and MCH programs at the primary and secondary levels of care, the MSPyAS recently produced a comprehensive program and a set of norms for health care actions that should be directed towards women and infants. This set of materials is organized by reproductive event or problem for women (pregnancy, childbirth, postpartum, family planning, cervical and breast cancer prevention, and infertility treatment) and by age (newborn, under 5 yrs.) and place of birth for newborns (hospital or home). In each section, specific health providers are designated as those who are appropriate or responsible for providing each type of care.

G. Simplified Perinatal History

The MSPyAS has also introduced the Simplified Perinatal History Form developed by the Latin American Center for Perinatology (CLAP), in all government health centers and hospitals in San Salvador, and there are plans to extend the use of this new record throughout the country. This is a very positive step and one that will allow the MSPyAS to collect and evaluate information about maternal and newborn problems, their management and outcomes in a systematic way. The Maternity Hospital of San Salvador has already computerized the data from the records and begun to use it on a routine basis to monitor the performance of its residents and interns. Donor assistance for adaptation, introduction and use of the Form at the regional levels, in health centers and hospitals, could be an important step towards improving both the documentation and the health system's management of maternal and neonatal complications.

While the **Integrated Norms for Maternal and Infant Care** and the **Simplified Perinatal History Form** are important resources, they could be made even more useful if management (or treatment) protocols were also provided for the most common and the most deadly maternal and neonatal problems. The Norms do contain treatment protocols for older infant and child health problems (diarrhea, tuberculosis, skin disease, child malnutrition); however, the treatment protocols that are included for maternal and neonatal problems are generally incomplete. Once a problem is detected, the protocol most often concludes with only the advice to "refer to Levels II and III" and/or to "provide adequate treatment", without giving any reminder or information about what "adequate treatment" might include. We understand that these norms are meant for primary care facilities and clinics and that physicians are expected to treat according to their training; however, given our knowledge of the diversity in medical training in most developing countries, and of changes in the field of maternal and neonatal care, written treatment protocols are highly recommended. Such written protocols are useful not only at the primary care level but at all levels of the health system.

We were told by the MSPyAS Maternal Infant Division that they are planning to develop more complete protocols at some point in the future. MotherCare has been involved in Guatemala in the development of such hospital and health center protocols and would be happy to share these and other examples with the MSPyAS.

H. TBA Birthing Centers

A concept that has been tried in other developing countries, the TBA Birthing Center, is currently being tested in El Salvador with UNICEF assistance. TBA Birthing Centers are one-room facilities (5 meters by 5 meters, according to the plan) that are constructed and equipped to improve the conditions of community births. The current project, which is supported by ISDEM, UNICEF, FIS, MINSAL and FIS, calls for the construction of 10 Centers in 6 high-priority municipalities, all with difficult geographic access. At the time of the assessment, four Centers had been constructed and one additional site was to be inaugurated during our visit.

The expectation that TBA Centers will be used is based on the fact that almost half of the non-institutional births in El Salvador take place at the home of a TBA. The objectives for construction of such a facility in other settings have been to:

- improve the hygienic conditions of birth;
- change the location of births from inaccessible villages and hamlets to more accessible sites on roads, where transport is more easily available in the case of a problem; and,
- extend sanctioned birthing care to more rural communities.

While all three of these may or may not be part of the effort in El Salvador, the document we reviewed mentioned only the first and third objectives -- improving the hygienic conditions of birth, and making trained birthing services more readily available to isolated communities. Depending on the locations chosen for the Centers, the second objective could also apply.

According to the UNICEF Representative, one problem with this project is that the TBA Centers have been located on the property of one of the TBAs in each community, even though there are normally several TBAs. At present, the agreement between the Municipalities and the TBAs seems to be that all TBAs can practice at the Center. UNICEF's concern is that the facility belongs to only one of the TBAs and, since it is located adjacent to her house, that she could conceivably take it away at any time. We are assuming that this problem will be corrected and that UNICEF will proceed with plans to expand this project to additional sites. The long-term goal, according to the UNICEF Representative, is to construct 250 Centers throughout the country.

The costs of constructing and equipping a TBA Birthing Center are relatively low--approximately US $1,000 per Center. Once constructed, the Centers generate their own operating capital, making them financially viable over the long term without continued assistance.

Even though this model appears to be a cost effective alternative for improving birthing care, it is not at all clear to us that TBA Centers will significantly improve maternal or neonatal survival. This is because the causes of maternal and neonatal infections, and deaths from infection, probably have less to do with environmental hygiene than with the personal hygiene and practices of the TBA and the woman herself. A woman's access to emergency birthing care when it is needed is also probably much more important to her survival and the survival of her infant than is the normal birthing care that will be provided at the TBA Centers.

I. Maternity Waiting Home

The Maternity Waiting Home model assures that medically high risk women will have access to a hospital that is staffed and equipped to intervene if this is necessary. In El Salvador, as in other developing countries, hospitals and health centers often serve large and disperse rural populations, with many families living several hours away from these facilities even under the best of weather and transport conditions. If a high risk woman waits until she goes into labor and then tries to reach the hospital, she may or may not make it in time--the discomfort of labor, alone, is often enough to deter her from even trying to do so.

The Maternity Waiting Home is an area of a hospital or health center, or a house nearby, where high risk women can go to wait for the onset of labor. One such Home has been established in the Nueva Concepcion municipality of the Central Health Region of El Salvador, an area with a population of approximately 18,000 people and 900 expected pregnancies per year. The Home's mandate is broader than maternal care, as it provides temporary lodging to:

- high risk women who must have periodic prenatal consultations with physicians at the health center;
- high risk women who must have absolute bed rest and who are not able to achieve this at home;
- women who agree with their TBA that they should have a hospital birth;
- high risk women who have been identified during prenatal care;
- women who are close to term or at term who find themselves in the city, far from their homes;
- newborns of the above list of women;
- children in need of ambulatory care that is not available in their communities; and
- women desiring tubal ligation who live far from the facility or those needing temporary care for their children.

The Home's goals are broad, including expected improvements in the coverage of prenatal care, family planning, institutional birth, postnatal care, and child survival services. The project will run through November 1992, with timestral evaluations by the MSPyAS.

The Maternity Waiting Home model is one that should be effective in El Salvador because, at least in theory, it will help women overcome the geographic and economic obstacles that they say are their reasons for choosing home birth, even in the face of problems. For example, access to a Maternity Waiting Home would improve the chances that women with signs of pre-eclampsia, placenta previa, or premature labor are able to follow advice for bed-rest and hospital birth. Compliance with this type of advice, coupled with appropriate care at the referral level, would logically result in a reduction in maternal deaths.

The only draw-back to the Maternity Waiting Home is that it is relatively expensive -- the estimated marginal recurrent cost is approximately US $5,600 per year per facility. As a result, unless it is very successful at achieving its ambitious goals, the MSPyAS may have difficulty replicating and maintaining it, and other Homes like it, once donor assistance ends.

The Maternity Waiting Home model is one that merits further study by USAID and PROSAMI, as it may be an appropriate type of activity for PVO assistance and, with the help of the PVOs, more active community support.

J. Emergency Obstetrical and Neonatal Services

Health promotion and primary care at the community level can be expected to increase the demand and the need for obstetrical and neonatal referral care at secondary and tertiary levels. Two studies, both by Dr. Douglas Jarquin, have indicated that the government's ability to provide high quality referral care is seriously deficient. In the study entitled, "Analisis al Modelo Institucional de Atencion Materna en El Salvador", Dr. Jarquin rated both the government's health centers and hospitals as having less than 50% of the conditions of efficiency for maternal health care. In the study, "Maternal Mortality in El Salvador 1983-90," he also classified over 30% of the maternal deaths in hospital as "preventable", i.e. those that could have been prevented with improved management of cases at the hospital and health center levels.

At the time of this assessment, a new World Bank project was being negotiated with the GOES to strengthen emergency obstetrical and neonatal care in regional hospitals and health centers by:

- reassigning and adding Physicians, Graduate Nurses, Auxiliary Nurses, Maternal Infant Health Technicians and Laboratory Technicians in many rural facilities;
- training appropriate categories of health providers in emergency obstetrical and neonatal care; and,
- equipping health centers with essential items for emergency obstetrical and neonatal care.

Obviously, if implemented as planned, the World Bank Project will be an extremely important step towards improved maternal and neonatal survival, and one that would be complimented, as well as necessitated, by PROSAMI and MotherCare efforts to increase the demand for this level of emergency care.

VI. PVO ACTIVITIES IN MATERNAL AND NEONATAL HEALTH

A. PVO Characteristics

During the assessment, interviews were conducted with thirteen PVOs, all of which currently have, or have had, primary health care activities in rural areas. Both organizations that had submitted project proposals to PROSAMI for FY91 funding consideration, and those that had not, were interviewed. The objective of the PVO interviews was to determine the level of experience, staffing, and interest that they have as a group in maternal and neonatal care. Interviews were structured to investigate the PVOs' experience working with and/or training TBAs and Health Promoters; the structure and content of the clinical care they provide to pregnant women and neonates; the educational and training materials that they have developed or that they use in the communities; their interactions with the MSPyAS; and, their insights into the problems faced when trying to improve community health knowledge and practice.

The results of individual interviews are presented in Appendix IV of this report. The following paragraphs summarize our findings and impressions of PVO interest and readiness to take on or expand maternal and neonatal health activities.

1. All of the PVOs interviewed have first-hand experience working at the community level with health committees, promoters and/or volunteers. While their approaches are different, most have an underlying philosophy of community self-help and integrated development. Thus, their work in health is often only one of several development activities that they are involved with in the communities. Several of the PVOs, in fact, have added health activities to work in education or cooperatives, based on the needs defined by the communities. We understand that PROSAMI will not only offer assistance to PVOs that are already working in health, but also to those that are working in other development areas that could add health activities.

2. Of the PVOs visited, ASAPROSAR in Santa Ana, Comite Internacional de Rescate in the Para-Central, Central and Orient regions, and Desarrollo Juvenil Communitario (Save the Children) in La Union, have the largest and most advanced PHC and Child Survival programs. (Of these PVOs, only ASAPROSAR has submitted a proposal for PROSAMI assistance in 1991). These programs typically include monitoring of pregnant women and newborns, training for Promoters and some clinical services. All three of these PVOs have worked with TBAs as well as Health Promoters and the Comite Internacional de Rescate and Save the Children have also conducted training courses for TBAs. ASAPROSAR, on the other hand, has identified TBAs and sent them to training courses run by the Regional Health Office.

These three PVOs should be a resource to PROSAMI; all have developed training and community education programs touching on some of the priority topics for reduction of maternal and neonatal deaths; they have also found ways to effectively coordinate the work of TBAs and Health Promoters; and, they have planning and information systems that could be transferred to other PVOs to improve their effectiveness. Most importantly, these PVOs have experienced and well-trained staff who could help in training courses and they could provide on-site technical assistance to smaller PVOs, if this is desirable.

3. The smaller PVOs we visited are, in general, working with only two or three communities each. They have typically started with a mobile clinic session once or twice a week in an underserved area, or with a food distribution or child feeding activity. As a natural evolution of this work, they have expanded their activities to include the training of community volunteers and promoters. Their promoters typically manage a medicine box (botequin) and provide first aid as well as education. Some of the PVOs pay their Health Promoters and all seem to have trained some type of unpaid health volunteer at the Caserio level.

4. None of these smaller programs have trained nor have they developed effective ways for working with TBAs. While they know about and have typically sent TBAs for MSPyAS training from the communities where they are working, they are uninformed about the content of this training and seem baffled by the resistance of some of the trained TBAs to working with them. When the PVOs explain this problem, it sounds as though the TBAs consider the organization that trained them to be their parent group and that they are therefore prohibited from working with another organization, or simply that they prefer not to do so.

5. The smaller PVOs have little technical expertise in public health, obstetrics or pediatrics. Their health teams usually consist of doctors (general medicine), graduate and auxiliary nurses, and "institutional" and community promoters, with the most senior physician taking charge of the health program. (One exception to this is the Fundacion Marco Antonio Vasquez which has two Maternal Infant Health Technicians who are well-trained for primary clinical care of women and infants and for community health work.) Perhaps as a result of this staffing pattern, the work of the smaller PVO seems to revolve around the mobile clinic session. Also, because they lack the larger conceptual framework for the work they are doing, smaller PVOs appear to be learning as they go and, in many cases, they are repeating work that has already been done and could be applied instead of "reinvented" in their areas. They have obviously learned a lot from their almost universal participation in the Interagency Commission for Child Survival (CISI) and in national conferences and workshops on specific Child Survival topics.

Most of these PVOs have no prepared or standardized curricula for training health promoters or volunteers: training is conducted on-the-job, in most cases, as one of several activities on the mobile clinic day. And, while training is based on the needs identified by the health team and the community, it also seems to be dependent on whatever materials may be at hand. The same appears to be true for health education activities.

6. Most of the PVOs, including the larger ones, are working very intensively with relatively small populations. While this can and should be very effective, it is also very costly. When one considers the distribution of maternal and neonatal problems that lead to preventable deaths in El Salvador, the cost-effectiveness of the PVOs becomes an issue. Obviously, reducing mortality is not the only goal, nor perhaps the most important goal for PVOs. However, to make their efforts more cost-effective in terms of maternal and neonatal survival they should be encouraged to expand and restructure their community work and to become more involved at higher levels of the health care system, so that their experience and resources are better utilized.

B. The Role of the PVO in Maternal and Neonatal Health Improvement

A number of the PVOs that are currently working with or planning to work with PROSAMI could play an important role in the effort to improve maternal and neonatal health in El Salvador. Because of their intimate involvement with rural communities, and their grassroots approach to PHC and community development, PVOs are in position to:

1. Develop community education programs that teach about:
   - danger signs during pregnancy, birth, and the postpartum/neonatal periods;
   - the importance of prenatal care, nutrition and self-care during pregnancy;
   - the importance of immediate, exclusive breastfeeding; etc.

2. Provide extra training and support to TBAs and Health Promoters: This could include hosting bi-annual regional meetings for all TBAs. In Nicaragua such gatherings, called "Jornada de Partera Empiricas Capacitadas", have been very successful. These gatherings provide a forum where TBAs can discuss the problems they may have encountered in their communities as well as regional maternal and neonatal morbidity and mortality. They also provide important opportunities for continuing education.

3. Identify TBA "leaders", or senior TBAs from the communities who could be trained to assist with basic and refresher training for other TBAs.

4. Identify and promote traditional "non-dangerous" birth practices and take action in the community to change those that are potentially "dangerous" to the health of mothers and infants.

5. Work with communities and the health system to improve access to emergency obstetrical and neonatal referral services by:
   - improving coordination of available public and private resources;
   - establishing referral and counter-referral protocols between PVO and government clinics and workers;
   - mobilizing community leaders to provide emergency transport; and,
   - lobbying health facilities and politicians to increase emergency transport and communications between villages and referral facilities.

6. Provide supplementary support for, and encourage communities to contribute to the support of, new interventions -- i.e., TBA Birth Centers and Maternity Waiting Homes-- that may improve the quality of maternal and neonatal care and/or access to such care.

7. With the MSPyAS, help to develop and test an expanded role for Health Promoters, TBAs and Nurse Auxiliaries in the management of obstetrical and neonatal emergency situations.

8. Provide special assistance to health center and hospital "patronatos" (Community Boards of Directors) for the acquisition of basic equipment and supplies for emergency maternal and neonatal care.

In order to play a more active role in maternal and neonatal health, most of the PVOs visited during this assessment would need:

- a better understanding of the maternal and neonatal health problems in their areas;
- training for health program staff in a variety of topics;
- technical assistance for the development of specific project activities (IEC, training of staff and volunteers, birth centers or maternity waiting homes); and,
- basic equipment and supplies for primary maternal and neonatal care.

PVOs may or may not require special funding to add a maternal and/or neonatal focus to their on-going activities, depending on the scope of the new activities and the outside support that is available to the agency. To assure that PVO activities are cost-effective and properly supported within the organization, prerequisites for PVO involvement in the activities that will be described below should be:

- the PVO is working in 10 or more communities, or with a population of 8,000 or more;
- the PVO has health providers on staff who have had previous MCH and/or public health training; and,
- the PVO's project areas have reasonable access to a health center or a hospital that is equipped, or that will be equipped under the World Bank Project, to handle obstetrical and/or neonatal emergencies.

VII. PROPOSAL FOR MOTHERCARE ASSISTANCE TO PROSAMI

A. Goals and Objectives

1. Increase PVO knowledge of maternal and neonatal health problems in their project areas and of the factors associated with death in these population groups.

2. Increase the number of PVOs that have written plans of action addressing maternal and neonatal health improvement.

3. Increase the number of sites where PVOs are actively working with:

    - TBAs;
    - teams of TBAs and Health Promoters;
    - local health facilities, and
    - others to improve maternal and neonatal health.

4. Improve the communication and collaboration between the PVOs and the Regional Health Offices (i.e. improve the referral-counter referral of high risk women and infants between PVO and government health facilities, and increase the number of planning and evaluation activities related to maternal and neonatal health improvement in which PVO and government officers participate).

B. Description of Suggested Activities

1. **Maternal and Neonatal Health Seminar for PVOs and MSPyAS Counterparts** (1 day, November 1991)

This would be a one-day, awareness-raising seminar for PVO health program directors and, if possible, counterparts from the Regional Health Offices in their project areas. It would be sponsored by PROSAMI, with MotherCare technical assistance, and it would require the active participation of the Maternal Infant Division of the MSPyAS during its planning and implementation. 20-30 PVO representatives and their MSPyAS counterparts would be invited to participate, for a maximum of 50 participants. The schedule for the day-long session would include:

- Short presentations by national experts on the problems of maternal and neonatal health in El Salvador and the government programs that are addressing these problems (possible resource persons, Dr. Douglas Jarquin, Materno Infantil MSPyAS, Dr. Noe Noyola);
- A presentation on the technologies and approaches that are being tried in other countries to address similar problems (MotherCare representative);

- A small group exercise structured to generate the participants' ideas about gaps in existing programs and new activities that could be initiated with PVO involvement;
- A final presentation by PROSAMI and MotherCare describing a special program of training and technical assistance that will be offered to interested PVOs.

This short seminar would have a number of purposes. It would generate interest in maternal and neonatal health activities among the PVOs and serve as a type of "needs assessment" to guide PROSAMI and MotherCare in the development of further training and technical assistance activities that might be directed towards the PVOs. If the MSPyAS counterparts participate, it would also help to strengthen the relationships between the PVOs and their regional counterparts--relationships that are important if we expect future collaborative activities between them.

At the close of the seminar, those PVOs that are interested in starting or enhancing their maternal and neonatal health activities would be asked to submit a brief concept paper to PROSAMI for a project that they would like to develop. Concept papers will be due within a month and all concept papers that meet PROSAMI and MotherCare criteria (which will be defined very loosely) will be accepted. The corresponding organizations will then be invited to send 2-4 staff members and their counterparts to the first maternal and neonatal health training program described below.

2. Training of PVO-MSPyAS Teams
(7-10 days, February 1992)

This training workshop would be planned by the MotherCare Consultants, who would stay in-country for a 2-3 week period following the November seminar to make the necessary logistical arrangements and identify and work with local resource persons to prepare a training plan, collect available materials and develop outlines for training sessions. The Consultants and MotherCare staff in Washington would continue the production of training and reference materials over the following two months and the Consultants would return to El Salvador in early February to make final preparations for the training. At this time, a 2 day preparation meeting would be held with the local resource persons who will participate in the training.

The final content of the workshop, as well as its length, location and structure, would be determined during the November MotherCare consultancies. On the basis of information collected in this initial assessment, workshop content would most probably include the following topics:

SUGGESTED TRAINING CONTENT

1. Maternal and perinatal mortality in El Salvador: rates, causes, associated risk factors.

2. Addressing the Causes of Death: Review the primary and secondary prevention of conditions that kill women and neonates:
   - Pregnancy-Induced Hypertension
   - Hemorrhage
   - Maternal Infection
   - Prolonged and Obstructed Labors
   - Neonatal Infections
   - Low Birth Weight/Prematurity
   - Hypothermia
   - Birth Trauma, Hypoxia, Asphyxia

   Behaviors that are associated with improved survival and health for women and neonates.
   - Family Planning
   - Nutrition during Pregnancy
   - Birth Practices
   - Breastfeeding

3. National Norms for Screening, Treatment and Referral of Women and Neonates

4. Educating the Community:
   - Teaching women and families to recognize danger signs, use preventive services, and practice positive health behaviors
   - Training Health Promoters and volunteers

5. Training and Working With TBAs:
   - MSPyAS Training Program
   - TBA Birth Centers

6. Counseling and Referring Women and Neonates:
   - Barriers to Acceptance of Referral
   - Improving Access to Referral Care:
     - Emergency Communications and Transport
     - The Maternity Waiting Home: Case Study

7. Assessing the Maternal and Neonatal Health Needs in Your Area
   - Review and Adaptation of a Protocol for Use by PVO and MSPyAS teams
   - Field testing of instruments by participants

3. Community Maternal and Neonatal Health Assessments
(March-May 1992)

Following the training workshop, PVO and MSPyAS teams will return to their project areas and, over the next three months, each team will conduct a rapid assessment of maternal and neonatal health problems and services. For the most part, the assessment tools provided to the PVOs will be designed to include information that can be collected in the course of their regular work. Ideally, the assessment will include interviews with pregnant women and women who have delivered in the community and in the hospital, as well as interviews with any families that have experienced a maternal or a neonatal death during the past year. An inventory of the health services available to each of the PVO's targeted communities will also be completed.

While the assessments will provide useful information for PROSAMI and MotherCare, the principal purpose of this phase of activity is to reinforce the training course and to actively involve the Teams in planning their own activities. Active involvement in the assessments will produce PVO and MSPyAS Teams that are better informed and motivated to work together to improve maternal and neonatal health.

4. Project Planning Workshop
(3-days, June 1992)

During this workshop, the PVO--MSPyAS Teams will present their assessment findings and their initial plans to address the problems they have identified. MotherCare, PROSAMI and MSPyAS consultants will be on hand to critique each Team's report and work with them to develop project plans or proposals. The principals of project planning and proposal writing will be covered at this time as well. The end result of this workshop should be 6-10 proposals that, with minimal additional technical assistance for their development, will meet PROSAMI's FY 1992-93 criteria for project assistance.

5. Monitoring and Technical Assistance
(2 TA visits, in January 1992 and June 1993; and other TA as needed)

PROSAMI will monitor the maternal and neonatal health activities initiated by the PVOs. In addition, MotherCare will be available to provide specialized technical assistance to individual PVOs or, if a common need is identified, to a group of PVOs in a mini-workshop setting. At the end of the first year of activity, such a mini-workshop might be held to evaluate the maternal and neonatal activities that are underway at that point, and to help the PVOs plan for the second year of activity. MotherCare technical assistance visits would be approximately 2-3 weeks in length, depending on the specific assignments.

C. Management and Funding of Proposed Activities

MotherCare technical assistance for the training and project development activities described above would include approximately:

11/91-2/92	4 person months	(2 consultants for 3 weeks each in-country and 5 weeks each in the U.S.) to attend the initial maternal and neonatal health seminar, conduct in-country planning for the training workshop, and develop the training modules and materials
2-3/92	2 person months	(2 consultants for 4 weeks each in-country) to complete final preparations for training workshop, orient workshop resource persons and conduct training of PVO-MSPyAS Teams
6/92	3 person months	(2 consultants for 3 weeks each) to conduct the project planning workshop with PVO-MSPyAS Teams
7/92-9/93	3 person months	(at least one technical assistance visit plus evaluation mini-workshop)
	12 person months	Total Level of Effort

An estimated budget for this technical assistance to PROSAMI and USAID/San Salvador is being prepared and will be sent to the Mission under separate cover.

Given PROSAMI's mandate to provide technical and financial assistance to local PVOs, and the availability of funding for training and project support under the PROSAMI project, there should be no need for MotherCare involvement in the funding of local training or PVO costs. It is MotherCare's understanding that once we have agreed to a set of activities and the number of PVOs to be involved, PROSAMI will assume responsibility for local funding and all other forms of assistance to the PVOs that may be related to MotherCare's work with them. Follow-on assistance for PVO projects, of course, will be at the discretion of PROSAMI.

The duration of this assessment was not sufficient to allow for the development of a detailed local cost budget for the activities proposed. PROSAMI is in a much better position to calculate local item costs than we are here in Washington. Therefore, calculation of the local cost budget is left to PROSAMI.

VII. OTHER RECOMMENDATIONS FOR USAID AND PROSAMI CONSIDERATION

A number of recommendations have been made in the body of the report, which we repeat in abbreviated form here, while also adding several other suggestions for possible activities and MotherCare assistance. These recommendations are based on the need to:

1. Develop standard management/treatment protocols for the most common and the most serious maternal and neonatal complications at each level of the health service.

As explained earlier, the norms developed recently by the MSPyAS for integrated maternal and child health care include management protocols for diarrhea, skin disease, ARI, immunization and tuberculosis. On the other hand, norms for maternal and neonatal care most often end with the advice to "provide appropriate treatment", with no explanation of what that treatment should be. Presumably, this is left up to the attending nurse or physician. Jarquin's study of the conditions of efficiency in government hospitals and health centers found that most facilities did not have or use treatment protocols and that most physicians had not received any continuing education since their assignment to the facility. In other words, there is no reason to believe that they are up-to-date in their knowledge, nor that their basic training, which for most did not extend beyond general medicine, focused sufficient attention on appropriate treatment of priority maternal and neonatal conditions.

The MSPyAS told us that they plan to develop such protocols in the future, possibly with technical assistance from PAHO and APSISA. MotherCare has been working with INCAP and the Ministry of Health of Guatemala on protocol development for management of high risk maternal and neonatal conditions at each level of the health system--TBA, health post, health center and referral hospital. Similar work will also be started soon in Bolivia and Uganda. MotherCare would be happy to make the Guatemalan norms available to the MSPyAS upon request. If funding is available, consultants familiar with the process and content of the norms could also be provided.

2. Focus more attention in TBA training on the identification and need for immediate response to life-threatening complications of pregnancy, childbirth and the postpartum and neonatal periods; ways to teach women and families about these danger signs; and the possible role of the community in assuring that women and neonates receive necessary medical care.

In the TBA training curriculum, information about life-threatening conditions is mixed with information about the discomforts and bothersome, but not life-threatening, problems of pregnancy and early infancy. And, in almost all cases, the only advice given to the TBA is to refer the patient. As the primary provider of maternity care for most Salvadoran women, the TBA has a major role to play not only in the identification and referral of problems but also in informing and mobilizing communities to save lives. Such an additional focus could be added

to TBA training through the development of a training module on emergency obstetrical and neonatal conditions and a refresher training course. This module could also be used during basic training for newly trained TBAs. The development of training and counseling materials that could be used by TBAs in their communities might also help them to motivate and teach women and their families.

3. Test expanded roles for TBAs, Health Promoters and Auxiliary Nurses in emergency obstetrical and neonatal first aid.

Women and neonates will continue to die from conditions that cannot necessarily be predicted or prevented unless those health providers closest to them when life-threatening problems occur are trained to stabilize them prior to their transfer to referral facilities, and/or to start treatment when a patient is several hours away from the nearest facility. The delegation of first aid and treatment responsibility to the lower levels of health providers is a policy decision that will require discussion and agreement within the MSPyAS. By testing an expanded role for TBAs, Health Promoters and Auxiliary Nurses in emergency care, PVOs could work with the MSPyAS to arrive at job descriptions that are rational and feasible with the available human and material resources. Technical assistance would be necessary to develop and evaluate such pilot programs.

4. Conduct an investigation of maternal, perinatal and neonatal deaths that occur outside of health facilities to better understand the factors (medical, behavioral, financial and logistical) that are associated with these deaths; use the findings of this study to design communications and health service interventions to improve survival.

A study of perinatal and neonatal mortality is called for in the new ADS project with USAID/San Salvador. We discussed this study with ADS and have offered to provide them with protocols and instruments for the study of intrapartum and neonatal mortality which were developed by Dr. Alfred Bartlett of INCAP and have been used with MotherCare support in Guatemala, Bolivia and Bangladesh. This study protocol calls for investigating deaths through in-depth interviews with family members. Working backwards, the interview schedule combines elements of the standard verbal autopsy to determine a probable cause of death, with questions related to birth practices as well as the family's perceptions and behaviors when faced with a life-threatening event or illness. This technique can be used effectively with case-control or case study research designs, depending on the level of resources available and the intended use of the study's results. It has also been used to investigate maternal deaths.

MotherCare has found this type of mortality investigation to be a very effective diagnostic tool no matter what the research design. Besides providing important data on cause of death in the community, the resulting case studies seem to give almost immediate focus to prenatal, perinatal and neonatal health interventions at the community level. This is because they focus attention on points in the decision-making process at which families and health providers fail to

take actions that could prevent death, while also helping to identify the barriers they face when attempting to take such action. These are, of course, also the points at which interventions are likely to be the most effective.

MotherCare will be publishing Working Papers on the use of this Mortality Investigation technique for diagnosing the clinical and underlying causes of maternal and early infant deaths outside of health facilities. If ADS is interested in using the protocol described above and requires technical assistance to do so, MotherCare could potentially provide a consultant to work with them on the adaptation of the protocol and instruments. Again, this would depend on the availability of funding.

5. Disseminate existing information on maternal mortality in El Salvador, the role of the TBA in maternal care, and the actual conditions of efficiency of obstetrical and neonatal services in health centers and hospitals throughout the country.

In our discussions with officials, PVOs and donor agencies in El Salvador, it was clear that a lot of work had already been done to document maternal health problems and the deficiencies of the health system's repone to these problems. Unfortunately, very few people seem to have even the knowledge that the three studies mentioned earlier in this report are available, let alone an understanding of their scope and findings. Among the donor agencies, in particular, this type of information is extremely important. While we were told that the findings of the maternal mortality and conditions of efficiency studies had been presented in a national conference, it was not clear that the audience at this conference covered all of the groups that could benefit from or act on the information. As such, we suggest that a day-long symposium for donor agency representatives and other involved parties--including representative from the largest PVOs--be conducted to present and discuss the findings of the three studies mentioned and any others that address important maternal and neonatal health issues.

APPENDIX 1

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APPENDIX 2

SCOPE OF WORK FOR MOTHERCARE ASSESSMENT - EL SALVADOR

MOTHERCARE PROJECT ASSESSMENT: EL SALVADOR

SCOPE OF WORK

Background:

USAID/San Salvador has recently implemented a maternal health/child survival project (PROSAMI) which will provide support to private voluntary organizations (PVOs) working in El Salvador. The goal of the project is to improve the health status of the rural and marginal urban population by increasing this population's access to basic health services. The project purpose is to expand community-based maternal health-child survival services to those areas of El Salvador where such health services are weak or nonexistent. During the seven year project, PROSAMI will provide training, commodities, technical assistance and some financial support to 35-50 PVOs. The project will also support training for approximately 60 additional PVOs working in community health services. The PROSAMI project proposes to initiate training for the PVOs in perinatal, neonatal, and postpartum maternal care and has requested assistance from the MotherCare Project for the design and, possibly, the implementation of this training.

Specific Activities:

A MotherCare assessment team will work with PROSAMI and USAID/San Salvador to identify opportunities for expanding and/or improving the maternal, perinatal, and neonatal care provided by PROSAMI's PVO partners. This will include documenting the current activities and services of a carefully selected group of PVOs, and assessing their staffing patterns, training needs, and linkages to other health programs and emergency referral facilities. The assessment will also address those community-level maternal and infant health programs that are being implemented by the Ministry of Health, particularly as these are related to the programs of the PVOs. As part of the assessment, the MotherCare team will present a series of recommendations for assistance to the PVOs, including a training plan and a proposal for further MotherCare assistance.

The specific activities to be carried out by the MotherCare team will include:

1. A literature review and preparation of a summary of available information on perinatal, neonatal and maternal health problems in El Salvador, as well as on the programs that address them: This activity will begin prior to travel and continue throughout the assignment, with the summary included as part of the final assessment report.

2. Extensive discussions with USAID and PROSAMI to determine their priorities for the assessment and their analysis of the potential problems and opportunities.

3. Interviews with from 10-15 PVO directors (or medical directors, where they exist), to be selected because of their interest or involvement in maternal and neonatal health service delivery: Interviews will cover an

organization's current services, location, staffing, community-level activities, other resources, relationships to governmental and other non-governmental organizations, and its perceived needs and opportunities for expanding and improving its services. Examples of educational and training materials developed by the individual PVOs will be collected for future analysis.

4. Site visits to a minimum of 5 PVO project sites and indepth interviews with PVO staff and volunteers: These visits should also include interviews at the nearest government or non-governmental referral care facilities.

5. Interviews with Ministry of Health officials in charge of TBA and health promotor training programs, as well as the donor agencies that are providing funding for these programs.

6. Preparation of the assessment teams's written findings and recommendations, and discussion of these with USAID and PROSAMI: This written presentation will include ideas for organizing training and other types of technical assistance activities in support of the PVOs; it will also include a draft training plan, if this is desirable.

7. Preparation of a proposal for further MotherCare technical and/or project assistance: A concept paper will be prepared as part of #6 above and presented prior to the MotherCare team's departure from El Salvador. Based on USAID and PROSAMI input, a complete proposal will be prepared in Washington and sent to USAID within a month of the visit.

Ms. Taylor will act as the team leader. The two consultants will decide between themselves how to divide the scope of work so as to maximize their individual expertise and the limited time available to them.

Products:

The Consultants will prepare a written trip report which will include: 1) a literature review and summary of available information on perinatal/neonatal/maternal health problems in El Salvador and the programs that address them; 2) the assessment team's written presentation to AID/San Salvador including findings, recommendations and a draft training plan for PVOs; and 3) a proposal for further MotherCare technical and/or project assistance.

The draft report (with the exception of the complete proposal) will be submitted to MotherCare within ten working days after returning to the U.S. and will be revised, if necessary, and resubmitted no later than two weeks after the receipt of MotherCare's comments. As stated above, the proposal for MotherCare assistance will be prepared and sent to USAID within a month after the consultants' return to the U.S.

APPENDIX 3

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APPENDIX 4

SUMMARY OF PVO INTERVIEWS

PVO MATERNAL AND NEONATAL HEALTH ASSESSMENT

1. **ORGANIZATION:** CARITAS, ZACATECOLUCA

2. **DIRECTOR:** Sr. Luis Hernandez, Director

3. **PERSON INTERVIEWED:** Sr. Hernandez and Srta. Barahona, Supervisor

4. **MAILING ADDRESS AND PHONE:** Catedral de Zacatecoluca, Calle General Rafael Osorio #8, Zacatecoluca

5. GENERAL GOALS OF ORGANIZATION AND LOCATION OF ACTIVITIES

CARITAS Zacatecoluca was registered as a local organization approximately 3 years ago. With a project staff of 6 persons--the Director and 5 Field Educators--CARITAS has established Nutrition Centers in 34 rural communities. In each community there is a group of 10 people who form a "Directiva"; two Directiva members have been trained in each community under the UNICEF Child Survival Program as "Agentes Comunitarios Pastoral (ACP), or Church Community Health Agents, similar to Health Promoters. In addition, CARITAS has home gardening, sewing and literacy projects in Zacatecoluca and the rural villages.

6. DESCRIPTION OF THE ORGANIZATION'S HEALTH RELATED ACTIVITIES

CARITAS Zacatecoluca's principal health projects include:

a. Food Supplementation Program with USAID/PL480 assistance - 10,000 beneficiaries are receiving food supplementation through this program, supplementation that includes 12 pounds of food per enrolled unit or person per month. One unit is defined as one child or one pregnant or lactating woman. Supplementation consists of:

- 4 lbs. flour
- 3 lbs. rice
- 2 lbs. soy, or corn soy blend flour
- 1 lb. oil
- 2 lbs. beans

Enrollment is limited to a maximum of 2 children and one woman per family. Rations are distributed monthly with participation in group education sessions required. Education class topics include cooking with soy, infant development, breastfeeding, hygiene and general nutrition. Children must be weighed every three months. Each child receives a growth chart on which his/her weight is plotted.

b. Child Survival Project funded by UNICEF - This project includes the training of community health agents in each community using the UNICEF, CARITAS Manual, "Manual de Supervivencia y Desarrollo Infantil". Under this project, families are provided with medicines for deparasitization and vitamins; children receive prophylactic doses of vitamin A and pregnant and postpartum women are given iron.

Nutrition centers meet monthly and each center is visited monthly by one of the CARITAS Supervisors.

CARITAS does not work directly with Health Promoters, or TBAs but has proposed to with PROSAMI assistance.

7. LOCATIONS AND TARGET POPULATIONS FOR HEALTH RELATED ACTIVITIES

CARITAS Zacatecoluca is working in 18 municipalities, in 34 different sites. As mentioned earlier, 10,000 women are enrolled in the nutrition centers, and over 360 individuals have been trained as members of Directivas. The area covered is served by approximately 7 different Unidades de Salud, all of which feed into the Zacatecoluca Health Center. Many of these communities are among the most isolated in the country. The area has also been severely affected by the continuing civil conflict. Prior to the war, 60-70% of the employment was in cotton; because cotton fields and trucks had been burnt early in the conflict, very few farmers or plantation owners continue to plant cotton. With fields lying fallow, many families have no ready source of income and/or male family members have migrated to the city and elsewhere, leaving women and children to fend for themselves.

8. NUMBER AND TYPES OF STAFF AND VOLUNTEERS WORKING IN MCH

The entire staff of CARITAS Zacatecoluca consists of the Director, a social scientist, and 6 Field Educators, mostly young women who have been hired and trained by the Director.

9. STATUS OF EXISTING FACILITIES/EQUIPMENT REQUIRED FOR MCH

CARITAS has one large warehouse/office facility in Zacatecoluca and a sewing workshop located nearby. The organization does not have any of its own clinics or community facilities. Communities donate space for monthly activities.

10. ORGANIZATION'S RELATIONSHIP WITH THE MSPyAS

CARITAS appears to have a good relationship with the MSPyAS. There is very little overlap between their programs and the Director told us that he is sometimes able to help the hospital's patronato with purchase or donation of medicines/equipment when these are lacking.

11. IS THIS ORGANIZATIONS INTERESTED IN STRENGTHENING OR ADDING MATERNAL NEONATAL ACTIVITIES?

Yes. CARITAS Zacatecoluca submitted a proposal to PROSAMI to train TBAs in all of the 34 sites where it is working. According to the Director, there are no MSPyAS-trained TBAs in any of these sites. In order to train and support the TBAs and to improve referral between the CARITAS-assisted communities and the MSPyAS hospital, CARITAS is proposing to hire a full-time Maternal Infant Health Technician who would be responsible for this new activity. In addition, CARITAS is proposing to train Health Promoters, establish early stimulation centers for infants, add a medicine supply to each community, and add water systems.

12. MOTHERCARE'S ASSESSMENT OF THE ORGANIZATION'S CAPABILITY TO UNDERTAKE NEW MATERNAL/NEONATAL HEALTH IMPROVEMENT ACTIVITIES AND THE TYPES OF ACTIVITIES RECOMMENDED

Of all of the PVOs we visited, CARITAS Zacatecoluca is probably in the best position to add maternal and neonatal care activities simply because of the number of communities in which it is working. At the same time, CARITAS has no clinical health program or medical staff, and therefore may have trouble embarking upon the course it has set without adding more than one Maternal Infant Health Technician. The training of TBAs that CARITAS proposes is very appropriate to the needs identified in the overall assessment. However, the CARITAS staff are not fully aware of the MSPyAS curriculum or its program for training TBAs, or of what it would take to mount a similar effort. Therefore, their proposal is probably too ambitious and not necessarily in sync with the MSPyAS strategy.

CARITAS is one of the PVOs that might very effectively assist in the establishment of a maternity waiting home and the promotion at the community level of its use.

Because of its intimate grassroots involvement and previous experience with community health promotion, CARITAS could also be considered for a model education program targeting women, their husbands and their community leaders with information about the danger signs of life-threatening problems and the need to seek medical attention when they occur.

13. TECHNICAL AND MATERIAL ASSISTANCE THE ORGANIZATION WOULD NEED IN ORDER TO ADD THESE ACTIVITIES SUCCESSFULLY?

Orientation to the MSPyAS TBA training curriculum and strategy, and to TBA training resources that should be available through the Regional Health Office.

Health professionals who have training in normal obstetrics and/or neonatal and infant care.

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Training and educational materials for use with TBAs, Health Promoters and community groups.

Training in maternal and neonatal health topics and promotion for its Field Educators.

Technical assistance to assure that the design of its project makes sense.

Technical assistance for design of IEC strategy and materials and/or maternity waiting home design.

14. OTHER COMMENTS

CARITAS provided some useful information about pregnancy and birth practices:

- massages are given to alleviate discomfort during pregnancy and labor
- pregnant women do not eat acid foods
- after birth, women often cover their entire bodies and plug their ears to avoid illness
- for the 40 days after birth, women eat only tortillas, cheese, and chocolate
- newborn infants are swaddled and kept covered
- colostrum is expressed and discarded
- when infants are sick with diarrhea or fever, mothers do not breastfeed; also, sick woman will not breastfeed
- opposition to family planning in this area

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PVO MATERNAL AND NEONATAL HEALTH ASSESSMENT

1. **ORGANIZATION:** CENTRO DE APOIO DE LACTANCIA MATERNA, CALMA

2. **DIRECTOR:** Lic. Ana Josefa Blanco de Garcia

3. **PERSON INTERVIEWED:** Lic. Blanco de Garcia and Lic. Josefina

4. **MAILING ADDRESS AND PHONE:** Urb. Buenos Aires No. 3,
Calle Berlin No. 139
San Salvador, El Salvador
Tel: 25-5468, 26-3854

5. GENERAL GOALS OF ORGANIZATION AND LOCATION OF ACTIVITIES

CALMA was founded in the late 1970s, by a group of breastfeeding mothers who were concerned about the breastfeeding situation in El Salvador. At that time, the decline in breastfeeding, the rise in bottle-feeding and the detrimental effects of both of these phenomena were being well-documented throughout Latin America. CALMA was originally funded by USAID and the AID Washington Office of Nutrition through a project with La Leche League. Over the years, CALMA has grown, adding activities, completing them and going on to new ones, but never losing sight of its objective--the promotion of breastfeeding.

6. DESCRIPTION OF THE ORGANIZATION'S HEALTH RELATED ACTIVITIES

CALMA has a number of on-going health and nutrition activities at the national level and in and around the town of Izalco, where CALMA operates a training center and a rural health education project.

CALMA's activities have included:

- development of training curricula and training for MSPyAS clinic and community health workers;
- development of training curricula and training for hospital staff throughout the country;
- establishment of Breastmilk Banks in all government hospitals in the country;
- development and dissemination of educational materials for all levels and establishments, including a video, a flipchart, posters and pamphlets that have been used extensively throughout the country;

- constant lobbying at the national level to change hospital and health center policies that were undermining breastfeeding; and
- other demonstration projects, like the training of Breastfeeding Promoters/Counselors in urban neighborhoods and rural villages.

CALMA has worked very closely with the Maternal Infant Division of the MSPyAS and other policy-makers in the country. The success of this collaboration is evident.

CALMA has also worked on the development of a national Code for the Sale of Breastmilk Substitutes; however, despite intense lobbying, this Code has not yet been passed. CALMA's Director attributes this fact to opposition from the local infant formula subsidiaries. Passage of the Code is one of CALMA's current objectives.

Activities in the Izalco training center include a number of primary health care and child survival interventions, in addition to breastfeeding promotion. Working in 16 cantons of 4 nearby municipalities, CALMA staff train groups of promoters and village women about pregnancy, child development, oral rehydration therapy, ARI, immunization, family planning and traditional medicines. At the time of our visit, a training course for CALMA volunteers from surrounding communities was underway at the center. CALMA has also conducted studies on vitamin A and breastfeeding practices.

CALMA does not provide basic training in childbirth for TBAs, but it does work with TBAs in the communities and includes them in its training programs.

7. LOCATIONS AND TARGET POPULATIONS FOR HEALTH RELATED ACTIVITIES

Since CALMA works at a national policy and programming level, the exact size of its target population is not easily calculated. In Izalco, CALMA works with 16 communities of between 100 and 300 persons each.

There is an Unidad de Salud in Izalco and the hospital in Sonsonante is approximately 4 kilometers away from Izalco. The average distance from Izalco to the 16 communities was not known.

8. NUMBER AND TYPES OF STAFF AND VOLUNTEERS WORKING IN MCH

	San Salvador	Izalco
Director	1	
Technical Coordinator	1	
Technical Collaborator	1*	
Local Coordinator		1**
Promoters	2*	4**
Secretary		1**
Volunteers		6-8 per community

* recently released because of lack of funds
** soon to be released because of lack of funds

9. STATUS OF EXISTING FACILITIES/EQUIPMENT REQUIRED FOR MCH

The Izalco Center is a typical house with its living areas converted to training and office space. It is very appropriate for the type of educational work CALMA is doing. CALMA does not provide medical services, there is no need for clinic equipment.

10. ORGANIZATION'S RELATIONSHIP WITH THE MINISTRY OF HEALTH

Excellent. Every MSPyAS training curriculum we reviewed during this assessment included breastfeeding as a prominent topic. Every hospital and health center with maternity care has a policy of rooming-in and breastfeeding promotion and both the MSPyAS Maternal Infant Division staff, and the Hospital staff mention the contribution of CALMA spontaneously. CALMA and the MSPyAS have co-authored educational materials and jointly sponsored awareness-raising and training workshops. CALMA is currently conducting refresher training sessions for MSPyAS health providers.

11. IS THIS ORGANIZATIONS INTERESTED IN STRENGTHENING OR ADDING MATERNAL NEONATAL ACTIVITIES?

CALMA is very interested in expanding and maintaining its activities in maternal and infant health. CALMA submitted a proposal to PROSAMI for 1991 funding but, because the proposal did not meet PROSAMI's criteria for selection, CALMA was eliminated from funding consideration at the first cut. This is unfortunate since CALMA's current funding ends in July 1991, and there are few hopes of organizational support from other sources. Therefore, like several of the other PVOs we interviewed during the assessment (Ministerios Para Vida and IRC), CALMA is in the very real danger of disappearing because of a cutoff in funding.

The project proposed by CALMA to PROSAMI was an interesting one. As explained, it would have created a demonstration clinic where health providers, counselors and educators could receive hands-on training in lactation management and breastfeeding promotion. While focusing on breastfeeding training, the clinic would also provide a full range of prenatal, postnatal, and infant services. This type of comprehensive maternal and infant health service would have two purposes: first, it would place breastfeeding in the broader reproductive context in which it belongs; secondly, the clinic would be designed to generate funding on a fee-for-service basis, funding that would be used to support the clinic and, if possible, to raise additional funds for CALMA's other activities.

12. MOTHERCARE'S ASSESSMENT OF THE ORGANIZATION'S CAPABILITY TO UNDERTAKE NEW MATERNAL/NEONATAL HEALTH IMPROVEMENT ACTIVITIES AND THE TYPES OF ACTIVITIES RECOMMENDED

If its potential for income generation can be proven, the demonstration clinic that CALMA proposes could be an excellent model for AID support. If this type of project does not fit PROSAMI's mandate, then we would recommend that support be considered from another AID project.

CALMA is a specialty PVO. It does not fit (nor should it necessarily try to fit) the model of the PVO that PROSAMI has targeted for funding, i.e., a PVO that is working at the community level to expand a range of PHC and Child Survival services. At the same time, CALMA has developed considerable expertise in what it does best--the promotion of breastfeeding--and, unlike many of the smaller, community-based PVOs, it has learned how to influence and provide assistance at a policy-making level. This is an important skill and one that does not come easily.

Breastfeeding is an important element of maternal and infant health and survival, and in the past year it has received increased attention within AID's Offices of Health, Population and Nutrition. In fact, it is considered so important that a new centrally-funded cooperative agreement will be awarded with the sole function of supporting organizations and projects that promote breastfeeding. If the current PROSAMI approach does not allow for the funding of CALMA, then perhaps the new centrally-funded AID project will be able to provide the support that CALMA needs to continue its important work.

13. TECHNICAL AND MATERIAL ASSISTANCE THE ORGANIZATION WOULD NEED IN ORDER TO ADD THESE ACTIVITIES SUCCESSFULLY?

Technical assistance to develop a business plan and cash flow projections for the model clinic.

Funding.

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14. OTHER COMMENTS

CALMA provided useful information on practices and beliefs surrounding breastfeeding. These are included in the text of the report.

PVO MATERNAL AND NEONATAL HEALTH ASSESSMENT

1. **ORGANIZATION:** COMITE INTERNACIONAL DE RESCATE, INTERNATIONAL RESCUE COMMITTEE (IRC)

2. **DIRECTOR:** Michael Cavallaro

3. **PERSON INTERVIEWED:** Dr. Jose Ines Angel, Director of Medical and Educational Programs

4. **MAILING ADDRESS AND PHONE:** Apartado Postal 1824, Centro de Gobierno, San Salvador, El Salvador C.A.
Tel: 22-4334, 22-6630

5. GENERAL GOALS OF ORGANIZATION AND LOCATION OF ACTIVITIES

International Rescue Committee's health program is active in 20 rural communities in the Oriente and Paracentral Regions, and in 3 urban barrios in San Salvador. Besides providing primary health and nutrition services, the organization has housing construction and improvement projects, community infrastructure construction projects, home gardening and small agricultural production projects, environmental sanitation projects and community credit and banking projects.

6. DESCRIPTION OF THE ORGANIZATION'S HEALTH RELATED ACTIVITIES

Clinics: IRC operates 23 clinics and, in March 1991, provided over 3,500 consultations in these sites. Target populations of children under 5 yrs. of age, pregnant and lactating women have been calculated and IRC estimates that it is monitoring and providing services to over 80% of each of these vulnerable groups. Clinic services include prenatal, postnatal and well-child care, including immunization. In March, IRC estimated that it had completely immunized 90% of the pregnant women in its clinic areas with Tetanus Toxoid. Clinics also manage Vitamin A distribution, ORT and family planning, as well as educational activities in the community.

Nutrition Centers: IRC operates 4 nutrition centers, serving one meal a day to 161 malnourished women and children. These centers also have home gardening and small animal projects.

Health
Training: Courses in PHC are given to organizations and community groups. Topics include family planning (with help from ADS), sanitation, and disease prevention. Courses vary in length depending on the content and group. A basic 15 day course has been developed in which 10-15 participants are taught how to improve their own homes first, then to extend their efforts to at least 5 other houses in the community.

TBA
Training: IRC conducts a 1-week course for TBAs. In 1990, 26 TBAs received this course.

7. LOCATIONS AND TARGET POPULATIONS FOR HEALTH RELATED ACTIVITIES

The estimated population of the 23 communities where clinics are located is over 6,200, including 346 breastfeeding women and 95 pregnant women in March 1991.

8. NUMBER AND TYPES OF STAFF AND VOLUNTEERS WORKING IN MCH

Physicians - 2
Nurses - 6 (5 Graduate, 1 Auxiliary)
Maternal Infant Technicians - 0
Promoters - 12
Other - 200 Volunteers in 14 communities

9. STATUS OF EXISTING FACILITIES/EQUIPMENT REQUIRED FOR MCH

We did not visit the IRC clinics. The staff did not complain about either the facilities or the equipment they have on hand, leading us to believe that they are adequate for the primary health care they provide.

10. ORGANIZATION'S RELATIONSHIP WITH THE MSPyAS

IRC characterizes its relationship with the MSPyAS as good. Immunization programs are coordinated, with the MSPyAS providing the vaccines and educational materials and IRC providing personnel, transport and community contacts. IRC routinely provides its service statistics to the MSPyAS.

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11. ORGANIZATION'S INTEREST IN STRENGTHENING OR ADDING MATERNAL NEONATAL ACTIVITIES?

The organization is not necessarily interested in expanding its work, but in maintaining it after the planned pullout of IRC international support in January 1992. The Salvadoran IRC is currently in the process of establishing itself as a local PVO, eligible to raise and accept funding from a variety of sources. Given the rapidly approaching pullout of the IRC, this organization could be facing trouble in the near future. Despite their obvious need for funding, IRC did not submit a proposal to PROSAMI for this year. We found this strange, but the staff explained that they had been so busy with the implementation of their program that they had not had the time to complete a proposal. There may be something else going on in this situation--i.e., anticipation of other funding--that we were not able to discern in this short visit.

12. MOTHERCARE'S ASSESSMENT OF THE ORGANIZATION'S CAPABILITY TO UNDERTAKE NEW MATERNAL/NEONATAL HEALTH IMPROVEMENT ACTIVITIES AND THE TYPES OF ACTIVITIES RECOMMENDED

This organization appears to be extremely well organized and competent to take on additional maternal and neonatal health activities, as well as to expand its programs to new areas. Its health service delivery model is a very rational one (although probably also a very expensive one) and a great deal of effort has obviously gone into systematizing norms and protocols for care, training curricula, information systems, educational materials, etc. IRC should be encouraged to participate in any MotherCare-PROSAMI programming and training efforts, both as a beneficiary and as a potential resource.

In addition to providing high quality prenatal and postnatal services in its clinics, IRC could conceivably develop a community-focused IEC campaign on maternal and neonatal health topics and test it in IRC-assisted communities.

IRC could also help to develop new TBA refresher training courses; mechanisms for improving Health Promotor and TBA collaboration; and/or, pilot activities to test an expanded role in emergency obstetrical and neonatal care for these two types of community worker.

13. TECHNICAL AND MATERIAL ASSISTANCE THE ORGANIZATION WOULD NEED IN ORDER TO ADD THESE ACTIVITIES SUCCESSFULLY?

When we asked IRC what they would like from PROSAMI, they asked for:

- educational materials, films, slides, etc.
- training for their staff in non-formal education techniques
- solar powered lamps for their TBAs
- minimal other equipment for the TBA

They would also benefit from (and be able to use better than most PVOs) technical assistance for the design of new types of maternal and neonatal interventions.

IRC has a very dedicated group of health professionals. In order to take on new activities, it seems that their primary need is for continued funding. Organizations facing financial problems are rarely able to act creatively nor are they willing to assume new responsibilities when their base of activities is being cut. Hopefully, IRC will not find itself in this position.

14. OTHER COMMENTS

IRC provided some useful information about pregnancy, birthing and postpartum/neonatal practices:

- many more women are attending their own births than is recognized; birth is considered normal, so it is not considered to be a high risk event;
- postpartum food restrictions which were previously very strong are now changing;
- neonatal tetanus has declined a lot in the last decade; when TBA's in one study said that infants died from stiff neck, this may have been referring to birth trauma, not tetanus;
- it is common for women to begin pushing at the beginning of labor.

PVO MATERNAL AND NEONATAL HEALTH ASSESSMENT

1.	**ORGANIZATION:**	CONAMUS
2.	**DIRECTOR:**	Lic. Isabel Ramirez
3.	**PERSON INTERVIEWED:**	same
4.	**MAILING ADDRESS AND PHONE:**	Apartado Postal 3262, Centro de Gobierno, San Salvador

5. GENERAL GOALS OF ORGANIZATION AND LOCATION OF ACTIVITIES

CONAMUS was started in 1986, to provide shelter, care and counseling to victims of domestic violence and sexual abuse. The organization has two projects, the Centro para el Desarrollo de la Mujer (Women's Development Center) and the Clinica de la Mujer (Women's Clinic). The Women's Development Center conducts training and income generation activities for battered women and has a communications center that produces a radio program, a quarterly magazine and pamphlets that inform women of their legal rights in the face of physical abuse and of the services offered by CONAMUS. The organization receives women referred from throughout the country and has facilities to house women and children in need of temporary shelter and/or protection.

In addition to its facilities in San Salvador, CONAMUS has also formed groups of volunteers in Metapan, Santa Ana, Comalapa, Costa del Sol and Ilobasco. Twenty promoters have been trained in these locations as mental health and women's rights counselors. In addition, projects that respond to the needs of the women (potable water, vegetable gardening, grain mill, income generation) have been started in several of the locations; an important goal is the eventual formation of women's cooperatives.

CONAMUS seeks to meet the varied needs of battered women and women in general by offering them counseling, information, health care, training and other means to improve their lives. The organization's funding comes from women's groups throughout El Salvador and from the Presbyterian Church in the U.S. CONAMUS is affiliated with CLADEM, the Comite Latino Americano de Derechos de la Mujer, which is based in Peru.

6. DESCRIPTION OF THE ORGANIZATION'S HEALTH RELATED ACTIVITIES:

The CLINICA DE LA MUJER was originally started to treat the injuries, both mental and physical, of battered women and their children. Because women also needed reproductive health counseling and services, the CLINIC added a daily clinic session (2 hours each day) which offers prenatal control, nutrition supplementation through an agreement with CARITAS,

screening for cervical cancer, family planning, and laboratory tests. CONAMUS charges a token 5 Colones fee for a consultation which includes lab exams and basic medicines; however, this does not begin to cover the cost of even the exams which are sent out for analysis at a private clinic. The clinic is located in a small three room apartment, on the third floor of a modest commercial building, where from 75-100 women were reported by the Director to receive care each week; approximately 50% of these women use the reproductive health clinic.

CONAMUS has also organized health education sessions in its rural centers; 12 women in Comalapa were said to be under-going training sessions in women's health topics at the time of this visit. The strategy and curriculum for this training are not clear.

7. LOCATIONS AND TARGET POPULATIONS OF HEALTH RELATED ACTIVITIES

It is not possible to estimate the coverage of CONAMUS' services since the size of their target population (battered and abused women) is unknown. Lic. Ramirez cited two studies: the first estimated that of every 200 women, 114 have been physically beaten by their husbands or partners at some point in their union; the second, a review of cases at the San Salvador Maternity Hospital, found that 28 women admitted to the emergency room in 1989 had died of causes related to beatings.

8. NUMBER AND TYPES OF STAFF AND VOLUNTEERS WORKING IN MCH

CLINICA DE LA MUJER: 1 OB/GYN part time
1 psychologist
1 receptionist
Various promoters (more legal than health)
6-10 women in each area

Only the OB/GYN has received special training in maternal health topics.

CONAMUS has only 10 paid staff members for all of its activities in communications, legal counseling, reproductive health, mental health, and the formation and training of groups of women in San Salvador and in the districts: all other professional services are donated by volunteers.

9. STATUS OF EXISTING FACILITIES/EQUIPMENT REQUIRED FOR MCH

The CLINICA DE LA MUJER is extremely small and, while centrally located in the northern sector of San Salvador, access appears difficult because of its position on the third floor. The equipment available looked very basic, but in good condition.

10. CHARACTERISTICS OF THE ORGANIZATION'S RELATIONSHIP WITH THE MINISTRY OF HEALTH

The Director stated that there is no direct relationship with the MSPyAS. CONUMUS acts as a catalyst, however, by helping its affiliated women's groups organize to solicit MSPyAS assistance for specific projects and needs. In the future, CONAMUS will try to improve relationships with the referral facilities of the MSPyAS. At present, the Director stated that women referred from the Clinica de la Mujer with positive Pap tests are often given appointments months later and that high risk women sent to special clinics are also made to wait for long periods.

11. IS THE ORGANIZATION INTERESTED IN STRENGTHENING OR ADDING MATERNAL NEONATAL ACTIVITIES?

Yes, however, CONAMUS did not submit a proposal to PROSAMI this year because it did not have the minimum of 10 rural communities required. CONAMUS has plans to add and/or strengthen the following components of its educational and clinical activities:

1. Expand community health training: CONAMUS wants to train 10 health promoters in the rural areas where it is working and to add one part time physician in each location to provide reproductive health services.

2. Increase cervical cancer screening and family planning services.

3. Add sex education and AIDS prevention education to its current programs.

CONAMUS is also working with its community women's groups to build houses or centers in their communities where women can gather for training and other activities.

While item #1 might be fundable by PROSAMI, CONAMUS is concerned that, by taking on too much additional work, it will lose its focus on the integrated needs of the women it works with.

12. MOTHERCARE'S ASSESSMENT OF THE ORGANIZATION'S CAPABILITY TO UNDERTAKE NEW MATERNAL/NEONATAL HEALTH IMPROVEMENT ACTIVITIES AND THE TYPES OF ACTIVITIES RECOMMENDED

CONAMUS currently serves a very special group of women who are desperately in need of care and support. Taking on the provision of health services for a larger population might not be desirable simply because it could dilute CONAMUS' highly intensive interventions with battered women. However, feminist organizations like CONAMUS have become important

providers of women's health care in other countries and, if this is their interest and they receive support to expand, one could expect a very high quality of service from their clinics and promoters.

CONAMUS also has talent and valuable experience in the development and production of informational materials for use in counseling and community education. Cartoon-style posters in the CONAMUS office and large, attractive billboards in San Salvador call attention to the need to "democratize" the home as well as the society. And, the CONAMUS' magazine and educational pamphlets are informative and attractive. While CONAMUS has not produced materials for non-literate populations nor health materials specifically, the organization should be seen as a potentially important resource in this area.

13. TECHNICAL AND MATERIAL ASSISTANCE THE ORGANIZATION WOULD NEED IN ORDER TO ADD THESE ACTIVITIES SUCCESSFULLY?

CONAMUS plans to present a proposal to PROSAMI next year. In addition, the Director mentioned the following types of non-project assistance that would be of use in the area of maternal and neonatal health:

- training courses for community leaders in maternal health and sanitation
- reference materials and access to the PROSAMI library
- help to establish a better relationship with the MSPyAS hospitals so that they receive and give priority to clients referred by CONAMUS

If CONAMUS expands its clinical and educational services into other towns, it will need:

- Clinic protocols for maternal and neonatal health, including family planning
- Assistance to develop health-related messages and materials for non-literate as well as literate audiences
- Training curricula and materials for courses for promoters in maternal and neonatal health
- Training courses for its provider/trainers

14. OTHER COMMENTS AND INFORMATION:

Most of CONAMUS' clients deliver at home, either alone or with a TBA. Preference for home birth was said to be related to over-crowding at the hospital and the poor attention received by patients as a result, and to the low socio-economic status of clients who are often reluctant even to call a TBA because she will charge from 15-25 Colones. The same reasons were given for the low use of prenatal care and TT immunization.

In general, the Director feels that lack of education is the most important problem for her clients. This makes the level of self-care very low. With education and counseling, however, CONAMUS has been able to gain acceptance for family planning and to increase the use of its clinical services.

The most common reproductive health problems of women coming to the Clinica de la Mujer were said to be vaginal infections. No information on STDs was available.

PVO MATERNAL AND NEONATAL HEALTH ASSESSMENT

1. **ORGANIZATION:** FUNDACION MARCO ANTONIO VASQUEZ

2. **DIRECTOR:** Dra. Mabel de Ramirez

3. **PERSON INTERVIEWED:** Dra. Mabel de Ramirez
President, Health Committee and Clinic
In-Charge from Project Area in Ahuachapan

4. **MAILING ADDRESS AND PHONE:** 31A Calle Pte y 21A Avenida Nte. #1205, Col. Layco, San Salvador

5. GENERAL GOALS OF ORGANIZATION AND LOCATION OF ACTIVITIES

This PVO was founded in 1988, and is working exclusively in the western portion of the country with communities that are unserved by other health programs. It currently has activities in the Municipalities of Cojutla, Ahauchapan; El Congo, Santa Ana; and, San Matias, La Libertad. A new health committee is also being formed in Caresal, Sonsonante. In addition to its health activities, the PVO conducts training in business administration for local cooperative and it has established a revolving credit fund for purchase of agricultural products.

6. DESCRIPTION OF THE ORGANIZATION'S HEALTH RELATED ACTIVITIES

The Fundacion's health activities are centered around weekly mobile clinics in Ahuachapan and Santa Ana. In each site, a physician and two Maternal Child Health Technicians conduct a clinic session which includes general medicine, prenatal control, well-child care and health education and training sessions for local residents. From 20-60 patients are seen during each clinic session.

Health committees have been formed in each site; the Fundacion works closely with the health committee members to plan and conduct community activities. The Committee President we interviewed told of his efforts to canvas the Caserios for women and children needing vaccination. The staff also talked of their efforts to weigh children, and a recent request to CARITAS for the creation of food supplementation programs in the areas where the Fundacion is working.

The Fundacion with government-trained health promoters, but has not worked in any demonstrable way with TBAs. In each community, besides the volunteer health committee members, an individual who is responsible for the "clinic" has also been trained and given a small supply of medicines by the Fundacion. None of the community volunteers are paid--this was said to be a problem because it is difficult to maintain their motivation and efforts.

The Fundacion's educational activities with the community include counseling during consultations and group health talks using materials supplied by the MSPyAS and ADS. The Fundacion receives its contraceptive supplies from ADS.

7. LOCATIONS AND TARGET POPULATIONS FOR HEALTH RELATED ACTIVITIES

Estimated at 6,000 people in the area of the Ahuachapan program, and 1,000 in the Sta. Ana area; but the individuals interviewed did not have exact estimates.

The nearest hospital to the Sta Ana area is 40 kilometers away, in Sonsonante.

8. NUMBER AND TYPES OF STAFF AND VOLUNTEERS WORKING IN MCH

PHYSICIANS - 1 physician with training in obstetrics and gynecology
MATERNAL INFANT TECHNICIANS - 2 well-trained and motivated
SOCIAL PROMOTORS - 2
OTHER - Administrative

9. STATUS OF EXISTING FACILITIES/EQUIPMENT REQUIRED FOR MCH

Again, we were not able to visit the field sites. We were told that the Ahuachapan clinic, in particular, is extremely small, with no place to conduct an exam or a health talk.

10. ORGANIZATION'S RELATIONSHIP WITH THE MINISTRY OF HEALTH

The Fundacion is a member of CISI and coordinates with the MSPyAS to some degree on vaccination, growth monitoring and nutrition programs. They use MSPyAS educational materials, as do most of the PVOs visited.

11. IS THIS ORGANIZATIONS INTERESTED IN STRENGTHENING OR ADDING MATERNAL NEONATAL ACTIVITIES?

The Fundacion is currently trying to expand its activities to two additional municipalities, one in La Paz and the other in Sonsonante. It was not clear whether or not they have submitted a proposal to PROSAMI for this year, or whether they want to do so in the future.

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12. MOTHERCARE'S ASSESSMENT OF THE ORGANIZATION'S CAPABILITY TO UNDERTAKE NEW MATERNAL/NEONATAL HEALTH IMPROVEMENT ACTIVITIES AND THE TYPES OF ACTIVITIES RECOMMENDED

This organization could expand its health activities to other sites. It is well-staffed--the Maternal Infant Technicians are well-prepared for community work. However, the Fundacion's system of working in communities that are scattered throughout half the country, and working out of San Salvador in mobile units, will not be cost-effective.

13. TECHNICAL AND MATERIAL ASSISTANCE THE ORGANIZATION WOULD NEED IN ORDER TO ADD THESE ACTIVITIES SUCCESSFULLY?

Funding for local staff salaries and for the purchase of basic clinic and primary care equipment in each location.

Help to coordinate more effectively with the MSPyAS health facilities.

Training curricula for Health Promoters.

Orientation to and ideas for working with TBAs in the communities.

Educational materials on maternal and neonatal health topics.

A standardized information system for maternal and neonatal health activities.

14. OTHER COMMENTS

The health committee member stated that the continuing civil conflict often means that women in labor with problems can not be moved during the night. In his community, which is 40 kilometers away from the nearest hospital, they have a system for contacting the Red Cross (Cruz Roja) by telephone from a place that is several hours walk from the village, and then the Red Cross sends an ambulance to move the patient.

PVO MATERNAL AND NEONATAL HEALTH ASSESSMENT

1. **ORGANIZATION:** CORPORACION MINISTERIO PARA VIDA

2. **DIRECTOR:** Dr. Mario Morales

3. **PERSON INTERVIEWED:** Dr. Mario Morales
Lic. Calderon, Social Worker

4. **MAILING ADDRESS AND PHONE:** 1A Calle Pte. y 23A Avenida Norte #215
Tel: 22-1594

5. GENERAL GOALS OF ORGANIZATION AND LOCATION OF ACTIVITIES

Ministerio Para Vida was founded in 1985 as an inter-denominational Christian organization dedicated to social service. The organization currently operates a clinic in San Salvador and until recently it had community health activities in two rural communities, one in Colima, Cuzcatlan, and the other in Canton Porfiado, La Paz. Prior to focusing in these two communities, Ministerio had sporadic food distribution and community health activities in other communities; however, the decision was made in 1989 to work more intensively in only two areas in order to improve the effects of the organization's work.

Ministerio Para Vida was originally funded by churches and organizations affiliated with the ministries of Jimmy Swaggart and Jim Baker. With their well-publicized problems came the abrupt cut-off of funding to Ministerio. The organization has been trying to recover from this cut-off for the past year, during which it has closed its community health program (all staff have been let go or absorbed into the San Salvador clinic) and turned activities in Colima and Porfiado over to the local promoters it trained.

6. DESCRIPTION OF THE ORGANIZATION'S HEALTH RELATED ACTIVITIES:

Ministerio's San Salvador clinic is a large facility, with four in-patient beds, 2 recovery room beds, an operating room, 6 out-patient consulting rooms, 2 rooms for dentistry, X-ray equipment, a well-equipped laboratory and a well-stocked pharmacy. The facility also includes a large church/training facility, administrative offices and storerooms.

The clinic is staffed by specialists in internal medicine, obstetrics and gynecology, pediatrics and surgery, as well as general medicine residents. It provides prenatal, postnatal and well-child care in the outpatient area and attends normal births and performs caesarian sections, as needed. Approximately 200 patients are seen each day at the clinic, which is now said to be completely self-financing through service fees. Fees have been established at approximately 50% of those in the private sector, but well above those charged in local government hospitals. While this has resulted in the survival of the organization, it has also had a dramatic effect on

the composition of the population that Ministerio now serves. While in the past Ministerio served the very poor, it now -- out of necessity -- serves a lower middle and middle-class clientele.

In the communities of Colima and Porfiado, Ministerio had a very active community health program that included twice-weekly visits by multi-disciplinary teams. These teams were assembled based on the day's activities and included physicians, nurses, social workers, educators and an agricultural extension agent, all members of Ministerio Para Vida's rural health staff. Teams conducted clinics during these visits and trained local health promoters. Special programs and child survival activities included growth monitoring, prenatal control, immunization, nutrition supplementation and latrine construction. Ministerio also conducted special studies of nutritional status, birth weight, and food consumption patterns.

A total of 45 promoters were trained over the period of time that Ministerio worked in these Cantones; three to four in each community were paid (C 200/month) to enable them to devote additional time to their work. Training for promoters was said to resemble that of the MSPyAS Ayudante de Salud. Ministerio was not involved in training for TBAs, but worked with them in the communities to identify pregnant women and neonates.

Unfortunately, because Ministerio's active involvement in the program had been stopped, all of the educational and training materials used with the promoters and communities, and all of the reports and statistics from specific investigations, had been packed away and consequently were not available at the time of this visit.

When Ministerio Para Vida closed its community program earlier this year, the salaries of one health promoter in each of the Cantones were assumed by local organizations--in one community the promotor is now paid by the church, and in the other, by the local cooperative. Other volunteer promoters continue their work with support from the ADS and other organizations.

Ministerio also conducts training in health topics (natural family planning, diarrhea, etc.) for church pastors and the director reports good results in convincing them that the Christian mission extends not only to the soul, but also to the physical well-being of the individual. This type of training is on-going.

7. LOCATIONS AND TARGET POPULATIONS OF HEALTH RELATED ACTIVITIES

Locations are mentioned above. Each of the Cantones has approximately 2,000 people. Colima is approximately 7 kilometers from the nearest MSPyAS clinic (Unidad de Salud) and 12 km. from the nearest hospital. Porfiado is 3 kilometers from an Unidad de Salud and 20 kilometers from the nearest hospital. Both are 58 kilometers from San Salvador.

8. NUMBER AND TYPES OF STAFF AND VOLUNTEERS WORKING IN MCH

As mentioned above, the organization has eliminated its rural health program and relocated or released the staff that had been involved in it. In the past, the size of the technical team working in the community health program appeared to fluctuate based on the availability of funds.

In the San Salvador clinic there are 8 physicians, 1 graduate nurse and 9 auxiliary nurses, plus administrative staff.

9. STATUS OF EXISTING FACILITIES/EQUIPMENT REQUIRED FOR MCH

The urban clinic is a large, well-stocked facility. We did not visit a Canton clinic.

10. CHARACTERISTICS OF THE ORGANIZATION'S RELATIONSHIP WITH THE MINISTRY OF HEALTH

Good. Ministerio Para Vida worked with the MSPyAS on immunization campaigns and coordinated with the other community and maternal child health programs of the MSPyAS. MSPyAS educational materials were also used in promotor and community training

11. ORGANIZATION'S INTEREST IN STRENGTHENING OR ADDING MATERNAL NEONATAL ACTIVITIES?

Yes. They did not submit a proposal this year because they were in the process of dismantling their program and understood that PROSAMI wanted proposals for at least ten locations, which they did not have.

Dr. Victor Rivera said that he had asked PROSAMI for the format for next year's proposal and that if they were to receive funding they would pull staff that was previously assigned to their community program from the clinic to cover the work.

If funded by PROSAMI, Ministerio would presumably follow the same type of community development/health model used in its first two communities.

12. MOTHERCARE'S ASSESSMENT OF THE ORGANIZATION'S CAPABILITY TO UNDERTAKE NEW MATERNAL/NEONATAL HEALTH IMPROVEMENT ACTIVITIES AND THE TYPES OF ACTIVITIES RECOMMENDED

If it were staffed and organized appropriately, and the institutional memory of what was done in Colima and Porfino does not disappear, Ministerio Para Vida would probably do a very

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good job in new communities. The organization has no particular strengths in community-level maternal or neonatal services, however, and would need assistance to strengthen this area of its work.

13. TECHNICAL AND MATERIAL ASSISTANCE THE ORGANIZATION WOULD NEED IN ORDER TO ADD THESE ACTIVITIES SUCCESSFULLY?

In addition to support for professional salaries and administrative personnel who would work on the rural project, Ministerio would need:

- Orientation to MSPyAS training for TBAs
- Appropriate protocols for use by promoteres in the diagnosis, treatment and referral of priority maternal and neonatal conditions
- Training for trainers of promoters and those working with TBAs to upgrade skills in maternal and neonatal health care

- Educational materials focusing on the priority maternal and neonatal morbidities and mortalities
- Standardized records for the monitoring of pregnancy, birth and the neonatal/postpartum period

14. OTHER COMMENTS:

The individuals interviewed stated that they thought many women were delivering themselves at home, without even the aid of a TBA.

The organization's efforts have resulted in the elimination of malnutrition as one of the top 10 causes of death in the two Cantones. The next problem to be tackled, they said, was ARI because it is one of the principal causes of infant and child death.

PVO MATERNAL AND NEONATAL HEALTH ASSESSMENT

1. **ORGANIZATION:** PROCADES, ASOCIACION SALVADORENA DE PROMOCION, CAPACITACION Y DESARROLLO

2. **DIRECTOR:**

3. **PERSON INTERVIEWED:** Dra. Maria Esmeralda Solano, Physician
Sra. Estella de Garcia, Auxiliar de Enfermeria

4. **MAILING ADDRESS AND PHONE:** Avenida "B" No. 213, Colonia El Roble
San Salvador, El Salvador
Tel: 25-1002

5. GENERAL GOALS OF ORGANIZATION AND LOCATION OF ACTIVITIES

This large organization has a variety of activities in the city of San Salvador and in the outlying communities. The underlying philosophy of its work is integrated child development and community self-help. In addition to its health and child survival activities, other PROCADES programs include low-cost housing for victims of the earthquake, tutoring and other educational programs for young children, mental health counseling, family gardens and youth groups organized around conservation of the environment. PROCADES also produces a television show, "Tierra de Infancia" (Land of Children), that airs twice each week. The organization's funding comes from Radda Barna (Swedish), Red Cross (Swiss), CARITAS (Holland), AID, the Canadian Embassy, COSUDE (Swiss) and CARITAS of El Salvador.

6. DESCRIPTION OF THE ORGANIZATION'S HEALTH RELATED ACTIVITIES:

PROCADES operates a permanent clinic north of San Salvador in the community of Ayutuxtepeque, and another twice-weekly mobile clinic west of the city in El Capulin, Las Moras. The clinics provide general medicine, pediatric, prenatal, postnatal, and family planning care, as well as immunization in coordination with the MSPyAS, diarrheal disease control and screening for cervical cancer (Ayutuxtepeque clinic only).

This PVO has attempted to work with TBAs in the past, having selected a group and sent them to the nearest MSPyAS clinic for training. However, their experience in this instance was less than satisfying. Only one of the group of training candidates was accepted by the Unidad de Salud; the others were sent home because they had had no previous experience attending births. The criteria for training of TBAs was apparently not clear to PROCADES prior to their involvement and this experience not only hurt their credibility in the community but also their confidence. Once trained by the MSPyAS, TBAs are said to relate to the government clinic and to be unwilling to coordinate with PROCADES.

Some of the activities that PROCADES includes in its health program are: growth monitoring and communal kitchens where young children are fed on a daily basis; demonstrations on the use of soy in the diet; home gardens; and the production of traditional medicines (PROCADES has been taught about traditional medicines by APROCSAL).

PROCADES uses MSPyAS health education materials. Its clinic records include patient charts and a daily register of patient by type, diagnosis, and treatment.

7. LOCATIONS AND TARGET POPULATIONS OF HEALTH RELATED ACTIVITIES

PROCADES works in the communities or Caserios around each of its clinic sites. Each clinic location was said to have 5 Caserios with an average population of 300 in each.

8. NUMBER AND TYPES OF STAFF AND VOLUNTEERS WORKING IN MCH

Staff of PROCADES health program include:

3 physicians, general medicine
1 graduate nurse
1 auxiliary nurse
3 institutional promoters
2 community promoters

These staff work as part of a multi-disciplinary team in the communities. The larger team is made up of 7 professionals, including a psychologist, sociologist, and a teacher. None of this group appear to have special training in maternal or infant health care. Unfortunately, the individuals interviewed knew very little about the management of their program.

9. STATUS OF EXISTING FACILITIES/EQUIPMENT REQUIRED FOR MCH

Clinics were not visited.

10. CHARACTERISTICS OF THE ORGANIZATION'S RELATIONSHIP WITH THE MINISTRY OF HEALTH

PROCADES coordinates with the MSPyAS on its immunization activities and has received health education materials for use in its clinics. The individuals interviewed, however, stated that they were not appreciated or recognized by the Ministry. Since PROCADES statistics are mixed with those of the government's clinic, there is no way for anyone outside the clinic to know how much or what the PVO is contributing in its areas of influence. The individuals interviewed mentioned the recent statements of the Minister of Health in support of improved

coordination with PVOs; they expressed hope that this would lead to better coordination in the areas where they work.

11. IS THIS ORGANIZATIONS INTERESTED IN STRENGTHENING OR ADDING MATERNAL NEONATAL ACTIVITIES? WHAT WOULD THESE INCLUDE IN TERMS OF SERVICES?

PROCADES has submitted a proposal to PROSAMI which would extend its health activities into 10 new communities. In each of these communities it plans to replicate its current health program and to work more intensively with local promoters and TBAs.

The two young women interviewed were not involved in the preparation of the proposal to PROSAMI, and neither of them were particularly well-informed about what would be done with PROSAMI funding or where it would be done.

12. MOTHERCARE'S ASSESSMENT OF THE ORGANIZATION'S CAPABILITY TO UNDERTAKE NEW MATERNAL/NEONATAL HEALTH IMPROVEMENT ACTIVITIES AND THE TYPES OF ACTIVITIES RECOMMENDED

This is a well-funded and apparently stable organization which could probably expand its current health activities successfully to other communities.

It does not appear to have either trained public health staff nor does its medical staff have any particular strength in either obstetrics or pediatrics. Without staff who can guide maternal and neonatal health activities, and/or significant assistance from outside the organization, this PVO is liable to waste a great deal of time and energy "reinventing the wheel" and missing important opportunities for meaningful action.

13. TECHNICAL AND MATERIAL ASSISTANCE THE ORGANIZATION WOULD NEED IN ORDER TO ADD THESE ACTIVITIES SUCCESSFULLY?

If this group is to expand its current maternal and child health activities, it will need:

- An experienced public health/maternal child health program director
- Training for its medical and community development staff in maternal and neonatal screening and in appropriate treatment and referral protocols for priority conditions.
- Assistance in planning activities that respond both to the community's felt needs for health care and the epidemiological factors that should guide prenatal, birth and post-natal care.
- An information system that allows for the systematic monitoring and evaluation of its maternal and infant health activities.

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14. OTHER COMMENTS:

According to the two staff members interviewed, women prefer home births because:

1. hospital's are full of men;
2. they dislike being examined by men and feel that in the Maternity Hospital in San Salvador everyone that comes through the room does a vaginal exam with no concern for a women's modesty or discomfort;
3. they are afraid of episiotomy, which is routinely performed on all primigestas in MSPyAS hospitals in San Salvador; and,
4. they have no confidence in the services and are not willing to pay the 15 colones required for a prenatal consultation.

Alcoholism and extreme poverty are serious problems in the communities where PROCADES works.

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APPENDIX 5

HOSPITAL DATA ON MATERNAL AND NEONATAL MORTALITY

HOSPITAL DE MATERNIDAD
SAN SALVADOR, EL SALVADOR, C. A.

TELS.- 71-2742
22-2883
21-0127
21-0128

Pat & Deborah file

Direc. No. 104-91

17 de abril de 1991.-

ORIGINAL
RECIBIDO-PROSAMI
FECHA: 04-17-91

Copy to me.

Sra.Elizabeth Burleigh,PhD
Directora
Proyecto de Salud Materna y Supervivencia
Infantil
Presente.-

Estimada Sra. Burleigh:

De acuerdo a nuestra conversación del día 15 de los corrientes, le estoy remitiendo los datos estadísticos de este Centro, solicitados por Ud.-

Sin otro particular y en espera de que esta información sea de utilidad, me suscribo.-

Atentamente,

HOSPITAL DE MATERNIDAD - San Salvador - DIRECTOR

Dr. Miguel A. Guidos Serrano
SUB-DIRECTOR

MAGS/cca.-

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Causas Maternas de Muertes Directas e Indirectas
Hospital de Maternidad 1986- 1990. San Salvador.

	Total	1986	1987	1988	1989	1990
1- Eclampsia	18	6	4	3	5	-
2- Preeclampsia Grave	7	-	5	1	1	-
3- Sepsis Puerperal	21	9	4	3	4	1
4- Hem.ant.pto,Abruptio y Placenta Prev	4	3	-	-	-	1
5- Ruptura Uterina	2	-	-	1	-	1
6- Atonia Uterina	1	-	-	-	-	1
7- Embolia Pulmonar Obstetrica	4	2	1	-	1	-
8- Shock Hipovolemico	2	-	1	-	-	1
9- Hemorragia Intrac.	2	2	-	-	-	-
10 A.C.V.	4	1	-	1	1	1
11 Neumonia Basal	1	-	-	-	-	1
12 Apendicitis Rota + Embarazo	1	1	-	-	-	-
13 Paro Cardiorespir.	4	-	2	-	-	2
14 I.R.A.	3	1	1	-	1	-
15 Septicemia Encefalitis tifica	2	1	-	1	-	-
16 Intoxicacion Fosforada.	3	1	-	1	-	1
17 Encefalopatia Hipóxica.	1	-	-	-	-	1
18 Absceso Tuboovarico post-part.	1	-	-	1	-	-
19 Hepatitis Viral	1	-	-	1	-	-
20 Cardiopatia Mitral + Embarazo.	1	1	-	-	-	-
21 Estatus Epileptico + Emb. de 28sem.	1	1	-	-	-	-
22 Traumatismo Vario + Embararazo.	1	1	-	-	-	-
23 Decorticacion por anestesia.	1	-	-	1	-	-
24 Aborto Septico	1	1	-	-	-	-
25 Aborto Septico + Intoxica.Fosforada	2	-	-	1	1	-
26 Abort.Sept.Provoc.	2	-	1	-	-	1
27 Abort. Inc.+Hepati	1	-	-	1	-	-
28 Acretismo Placentario.	1	-	-	-	1	-

Depto. de Estadística y Doc. Médicos.

HOSPITAL DE MATERNIDAD
San Salvador

CUADRO COMPARATIVO TASAS DE MORTALIDAD

	1986	1987	1988	1989	1990
NO DE EGRESOS OBSTETRICOS	23,141	22,815	25,590	23,427	22,442
NO DE MUERTES MATERNAS	30	19	15	16	13
TASA DE MORTALIDAD MATERNA	0.13%	0.08%	0.06%	0.07%	0.06%
NO DE NACIDOS VIVOS	18,620	18,189	20,446	18,661	18,576
NO DE RECIEN NACIDOS FALLECIDOS	343	348	374	335	335
TASA DE MORTALIDAD NEONATAL	1.8%	1.9 %	1.8%	1.8%	1.8%
NIÑOS NACIDOS CON BAJO PESO	2,298	2,202	2,487	2,297	2,273

HOSPITAL DE NIÑOS BENJAMIN BLOOM

MORTALIDAD 1990

D I A G N O S T I C O	TOTAL < 28 DIAS	TOTAL GENERAL PACIENTES FALLECIDOS
B.N.B., enfermedad pulmonar, obst. crónica y afecciones afines, IRA, y otras enfermedades vías respiratorias	8	111
Sepsis neonatal	38	65
Anomalías congénitas	33	62
Enfermedades inflamatorias del Sistema Nervioso Central	9	55
Enfermedades infecciosas y parasitarias + G.E.A.	1	43
Enfermedades del período perinatal	43	43
Desnutrición + anemia	-	38
Tumores malignos y benignos	-	19
Enfermedades del aparato digestivo, intestino y peritoneo	-	17
Trauma intracraneal	-	12
Quemaduras	-	10
Enfermedad del corazón, cerebrovascular y aparato circulatorio	-	10
Otras enfermedades del Sistema Nervioso Central	-	10
Enfermedades del aparato genitourinario	2	9
Intoxicaciones	1	9
Defectos de coagulación, púrpura y otras	-	6
Enfermedades víricas	1	6

cont. Mortalidad/90

D I A G N O S T I C O	TOTAL < 28 DIAS	TOTAL GENERAL PACIENTES FALLECIDOS
Hernias cavidad abdominal	5	5
Desequilibrio hidroelectrolítico + Deshidratación	-	5
Síndrome convulsivo y otros síntomas generales	-	4
Tuberculosis	-	4
Poliomielitis	-	2
Enfermedades bacterianas	-	2
Sífilis y otras enfermedades venéreas	-	1
Hipertensión arterial y pulmonar	-	1
Fiebre reumática	-	1
Diabetes	-	1
Fracturas	-	1
Traumas múltiples y efectos tardíos	1	1
Complicaciones quirúrgicas y otras causas externas	-	1
TOTAL FALLECIDOS		554

HOSPITAL DE NIÑOS BENJAMIN BLOOM
MORBILIDAD, 1990

D I A G N O S T I C O	TOTAL < 28 DIAS	TOTAL GENERAL PACIENTES HOSPIT.
B.N.B.,enfermedad pulmonar, obstr. crónica y afecciones afines, I.R.A., y otras enfermedades de las vías respiratorias	138	1720
Anomalías congénitas	150	1129
Enfermedades infecciosas y parasitarias + G.E.A.	57	776
Enfermedades del aparato genitourinario	5	501
Hernias cavidad abdominal	8	486
Tumores malignos y benignos	-	468
Enfermedad ocular y anexos	5	380
Apendicitis	-	298
Fracturas	1	279
Enfermedades inflamatorias del Sistema Nervioso Central	32	247
Traumatismo intracraneal	-	245
Quemaduras	-	226
Enfermedades del período perinatal, sepsis y otras	222	224
Traumas múltiples y efectos tardíos	1	213
Enfermedades de la piel y otras afecciones	8	211
Enfermedades del aparato digestivo, intestino y peritoneo	4	209
Artropatías y trastornos afines	2	188
Heridas	-	178

Cont. MORBILIDAD/90

D I A G N O S T I C O	TOTAL <28 DIAS	TOTAL GENERAL PACIENTES HOSPIT.
Desnutrición + anemia	8	146
Síndrome convulsivo y otros síntomas generales	-	134
Defectos de la coagulación, púrpura y otras	-	133
Intoxicaciones	7	125
Otras enfermedades del Sistema Nervioso Central	1	124
Sepsis	72	121
Enfermedades víricas	3	85
Complicaciones quirúrgicas y otras causas externas	1	79
Enfermedad del corazón, cerebrovascular y aparato circulatorio	3	75
Cuerpos extraños	-	63
Tuberculosis	-	53
Enfermedades bacterianas	3	45
Poliomielitis	1	29
Enfermedad del oido	-	28
Diabetes	-	21
Sífilis y otras enfermedades venéras	7	19
Fiebre reumática	-	16
Desequilibrio hidroelectrolítico + deshidratación	-	13
Otras enfermedades metabólicas y trastornos de la inmunidad	-	5

CONT. MORBILIDAD/90

D I A G N O S T I C O	TOTAL 28 días	TOTAL GENERAL PACIENTES HOSPITAL.
Hipertensión arterial y pulmonar	-	4
Hipotiroidismo.	-	2
TOTAL EGRESOS		9298